OWNER:
CLAYTON PROPERTIES GROUP INC DBA BROHN HOMES
6700 VAUGHT RANCH ROAD
SUITE #200 AUSTIN, TX 78730
(512) 334-6775

ENGINEER:
GRAY ENGINEERING INC.
8834 N. CAPITAL OF TEXAS HWY., SUITE 140
AUSTIN, TEXAS 78759
(512) 452-0371
FAX (512) 454-9933

SURVEYOR:
BGE, INC., TBPE F-1046
101 W LOUIS HENNA BLVD, SUITE 400
AUSTIN, TEXAS 78728
(512) 879-0400

NOTES:

1. ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER. APPROVAL OF THESE PLANS BY THE CITY OF ELGIN DOES NOT REMOVE THESE RESPONSIBILITIES.
2. UNDER NO CIRCUMSTANCES WILL THE CITY BE OBLIGATED TO ACCEPT STREETS, ROADWAYS, ALLEYS, CURBS, GUTTER/ DRAINAGE SYSTEMS, SIDEWALKS, STREET LIGHTS, AND/OR RELATED IMPROVEMENTS WITHIN THE DISTRICT FOR OWNERSHIP, OPERATION, AND MAINTENANCE UNTIL SUCH TIME OF FULL-PURPOSE ANNEXATION. WITH RESPECT TO SUCH STREETS AND ROADWAYS WITHIN THE DISTRICT, THE DEVELOPER SHALL DESIGN AND CONSTRUCT THE STREETS AND ROADWAYS SOLELY TO THE CITY'S APPLICABLE STANDARDS AS MODIFIED BY THE DEVELOPMENT AGREEMENT, THE DISTRICT WILL BE OBLIGATED TO ACCEPT, OPERATE, AND MAINTAIN THE STREETS AND ALL OTHER COMPONENTS THEREOF, INCLUDING BUT NOT LIMITED TO CURBS, GUTTER/DRAINAGE SYSTEMS, SIDEWALKS, AND STREET LIGHTS.
3. THIS SUBDIVISION IS LOCATED WITHIN THE CITY OF ELGIN'S CORPORATE LIMITS, ONLY FOR THE LIMITED PURPOSE SET FORTH IN CITY OF ELGIN ORDINANCE NO. 2021-05-18-13, WITHIN BASTROP COUNTY AND TRAVIS COUNTY.
4. THIS PROJECT IS LOCATED IN THE LOWER COLORADO-CUMMINS WATERSHED AND ARE CLASSIFIED AS A SUBURBAN WATER SUPPLY WATERSHED.
5. THIS PROPERTY LIES IN PROPOSED UNSHADED ZONE "X" (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN) AS DELINEATED ON THE FLOOD INSURANCE RATE MAPS FOR BASTROP COUNTY, TEXAS, AND INCORPORATED AREAS, MAP NUMBER 48021C0075E, EFFECTIVE JANUARY 19, 2006, AND PER CLOMR NO. 21-06-2267R AND LOMR NO. 24-06-2254P, EFFECTIVE APRIL 23, 2026.
6. THIS SUBDIVISION IS IN AND SERVED BY AQUA WATER SUPPLY CORP. CCN FOR WATER SERVICE.
7. THIS SUBDIVISION IS IN AND SERVED BY THE CITY OF ELGIN CCN FOR WASTEWATER SERVICE.

THIS SUBDIVISION CONSTRUCTION PLAN WAS APPROVED BY THE CITY OF ELGIN ON THE _____ DAY OF _____, 20___.

REVIEWED BY:

_____ _____
CITY ENGINEER, CITY OF ELGIN, TEXAS DATE

_____ _____
AQUA-WATER SUPPLY CORPORATION DATE

_____ _____
DISTRICT ENGINEER DATE

_____ _____
CITY DEVELOPMENT SERVICES DIRECTOR DATE

REVIEW OF THE PLANS BY THE DISTRICT IS LIMITED TO WATER, WASTEWATER AND DRAINAGE AND DOES NOT INDICATE A REVIEW OF THE ADEQUACY OF THE DESIGN FOR THE FACILITIES, IN APPROVING THESE PLANS. THE DISTRICT MUST RELY ON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.

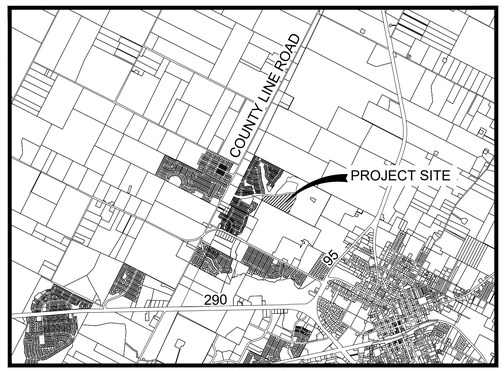
SUBDIVISION CONSTRUCTION PLANS FOR

HARVEST RIDGE SECTION 5

STREETS, DRAINAGE, WATER, AND WASTEWATER IMPROVEMENTS

ALTESSA MUNICIPAL UTILITY DISCTRICT

SEPTEMBER 19, 2025



SCALE: 1" = 4000'

NO.	DATE	SHEETS	REVISION DESCRIPTION

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4	FINAL PLAT (SHEET 2 OF 2)
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6	TYPICAL STREET SECTIONS
7	BLUEBERRY LANE (STA. 1+00 TO 9+00)
8	BLUEBERRY LANE (STA. 9+00 TO END)
9	BUMBLEBEE DRIVE (STA. 1+00 TO END)
10	BERRY BEND (STA. 1+00 TO 7+00)
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THESE PLANS ARE RELEASED UNDER THE AUTHORITY OF J. ADAM BERRY, PE, ON 01/13/2026, FOR THE PURPOSES OF REVIEW AND ARE NOT TO BE USED FOR BIDDING OR CONSTRUCTION

I , NATHAN KELLY, P.E., DO HEREBY CERTIFY THAT THE PUBLIC WORKS AND DRAINAGE IMPROVEMENTS DESCRIBED HEREIN HAVE BEEN DESIGNED IN COMPLIANCE WITH THE SUBDIVISION AND BUILDING REGULATION ORDINANCES AND STORM WATER DRAINAGE POLICY ADOPTED BY THE CITY OF ELGIN, TEXAS.

SUBMITTED BY:

_____
NATHAN KELLY, P.E. DATE
GRAY ENGINEERING, INC. TBPE NO. F-2946

GRAY
GRAY CIVIL, INC.
512-452-0371
gray-civil.com
8834 N. Capital of Texas Highway, Suite 140
5316 W. US Highway 290 Service Road, Suite 220
TBPELS FIRM #2946

PROJECT NO. 1636-11996 HARVEST RIDGE SECTION 5

H:\PROJECTS\1636 - BROHN HOMES\11996 - HARVEST RIDGE - SEC 5\CAD\SHEETS\11996-C-COVR.DWG DATE: 1/7/2026 11:14:52 AM BY: DPEREZ-GUERRA

GENERAL NOTES:

1. THE DEVELOPMENT OF THE PROPERTY SHALL BE REVIEWED AND APPROVED IN ACCORDANCE WITH THE DEVELOPMENT AGREEMENT BETWEEN THE CITY OF ELGIN, TEXAS, AND CLAYTON PROPERTIES GROUP, INC., DOING BUSINESS AS BROHN HOMES, EFFECTIVE AUGUST 6, 2019, RECORDED UNDER RESOLUTION NO. 2019-08-06-28 OF THE OFFICIAL PUBLIC RECORDS OF BASTROP COUNTY, TEXAS, (THE "DEVELOPMENT AGREEMENT") TOGETHER WITH ALL AMENDMENTS THERETO, AND SHALL GOVERN THE REVIEW AND APPROVAL OF ALL PRELIMINARY PLANS, SUBDIVISION PLATS, SUBDIVISION CONSTRUCTION PLANS AND OTHER APPROVALS WITH RESPECT TO THE PROPERTY.
2. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF ELGIN SUBDIVISION CODE AND CONSTRUCTION STANDARDS MANUAL EXCEPT AS NOTED BELOW AND APPROVED BY THE CITY.
3. IF BLASTING IS PLANNED BY THE CONTRACTOR, A BLASTING PERMIT MUST BE SECURED FROM THE CITY OF ELGIN PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION. BLASTING WILL NOT BE PERMITTED WITHIN 15 FEET OF ANY EXISTING UTILITY LINES OR STRUCTURES WITHOUT PRIOR WRITTEN CONSENT OF THE ENGINEER.
4. ANY EXISTING UTILITIES, PAVEMENT, CURBS, SIDEWALKS, STRUCTURES, TREES, ETC., THAT ARE DAMAGED OR REMOVED SHALL BE REPAIRED OR REPLACE BY THE CONTRACTOR AT NO COST TO THE OWNER.
5. THE CONTRACTOR SHALL VERIFY ALL DEPTHS AND LOCATIONS OF EXISTING UTILITIES PRIOR TO ANY CONSTRUCTION. ANY DISCREPANCIES WITH THE CONSTRUCTION PLANS FOUND IN THE FIELD SHALL BE BROUGHT IMMEDIATELY TO THE ATTENTION OF THE ENGINEER.
6. MANHOLE FRAMES, COVERS, VALVES, CLEANOUTS, ETC. SHALL BE RAISED TO FINISHED GRADE PRIOR TO FINAL PAVING CONSTRUCTION.
7. THE CONTRACTOR SHALL GIVE THE DEVELOPMENT SERVICES DEPARTMENT 48 HOURS NOTICE BEFORE BEGINNING EACH PHASE OF CONSTRUCTION AT (512)-281-5724.
   A) DEVELOPMENT SERVICES SHALL BE CONTACTED PRIOR TO:
      1) PRE-CONSTRUCTION MEETINGS;
      2) BEGINNING EACH PHASE OF CONSTRUCTION;
      3) TESTING OF WATER AND/OR WASTEWATER LINES; AND
      4) FINAL WALK-THROUGH OF FACILITIES
   B) REVIEW OF THE PLANS BY THE DISTRICT IS LIMITED TO WATER, WASTEWATER, AND DRAINAGE AND DOES NOT INDICATE A REVIEW OF THE ADEQUACY OF THE DESIGN FOR THE FACILITIES. IN APPROVING THESE PLANS, THE DISTRICT MUST RELY ON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.
8. ALL AREAS DISTURBED OR EXPOSED DURING CONSTRUCTION SHALL BE REVEGETATED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. REVEGETATION OF ALL DISTURBED OR EXPOSED AREAS SHALL CONSIST OF SODDING OR SEEDING AT THE CONTRACTOR'S OPTION. HOWEVER, THE TYPE OF REVEGETATION MUST EQUAL OR EXCEED THE TYPE OF VEGETATION PRESENT BEFORE CONSTRUCTION UNLESS OTHERWISE REQUESTED BY THE PROPERTY OWNER.
9. PRIOR TO ANY CONSTRUCTION, THE OWNER OR CONTRACTOR SHALL CONVENE A PRE-CONSTRUCTION CONFERENCE BETWEEN THE CITY OF ELGIN, HIMSELF, THE ENGINEER, OTHER UTILITY COMPANIES, ANY AFFECTED PARTIES AND OTHER ENTITIES THE CITY OF ENGINEER MAY REQUIRE.
10. THE CONTRACTOR AND THE ENGINEER SHALL KEEP ACCURATE RECORDS OF ALL CONSTRUCTION THAT DEVIATES FROM THE PLANS. THE ENGINEER SHALL FURNISH THE CITY OF ELGIN ACCURATE "AS-BUILT" DRAWINGS FOLLOWING THE COMPLETION OF ALL CONSTRUCTION. THESE "AS-BUILT" DRAWINGS SHALL MEET WITH THE SATISFACTION OF THE ENGINEERING DEPARTMENT PRIOR TO FINAL ACCEPTANCE.
11. THE CITY OF ELGIN WILL NOT BE ACCEPTING THE INFRASTRUCTURE IN THE DEVELOPMENT.
12. WHEN CONSTRUCTION IS BEING CARRIED OUT WITHIN EASEMENTS, THE CONTRACTOR SHALL CONFINE HIS WORK TO WITHIN THE PERMANENT AND ANY TEMPORARY EASEMENTS, PRIOR TO FINAL ACCEPTANCE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL TRASH AND DEBRIS WITHIN THE PERMANENT AND TEMPORARY EASEMENTS.
13. PRIOR TO ANY CONSTRUCTION, THE CONTRACTOR SHALL APPLY FOR AND SECURE ALL PROPER PERMITS FROM THE APPROPRIATE AUTHORITIES.
14. AVAILABLE CONTROL POINT THAT MAY BE UTILIZED FOR THE CONSTRUCTION OF THIS PROJECT IS DESCRIBED AS FOLLOW:

ZWA CONTROL-BENCHMARKS (GRID COORDINATES)
NAD83(93) CENTRAL ZONE 4203, NAVD88, US SURVEY FEET;

PT	NORTH	EAST	ELEVATION	DESCRIPTION
1	10111142.0240	3221576.6310	546.82'	MONUMENT SET WITH ZWA CAP
2	10111914.4440	3222040.7400	543.59'	MONUMENT SET WITH ZWA CAP
3	10111377.6510	3221697.7630	542.14'	COTTON SPINDLE SET

15. 48 HOURS BEFORE DIGGING - CONTACT THE ELGIN PUBLIC WORKS DEPARTMENT: (512) 229-3260 & ONE CALL UTILITY SYSTEM: 800-344-8377
16. THE DISTRICT ENGINEER, JONES-HEROY & ASSOCIATES, INC. (KEN HEROY, PH: 512-989-2200) SHALL BE CONTACTED 48 HOURS PRIOR TO TO:
   A) PRE-CONSTRUCTION MEETINGS;
   B) BEGINNING EACH PHASE OF CONSTRUCTION;
   C) TESTING; AND
   D) FINAL WALK-THROUGH OF FACILITIES

STORM WATER POLLUTION PREVENTION PLAN (SW3P) GENERAL NOTES :

1. ALL CONSTRUCTION ACTIVITIES DISTURBING ONE ACRE AND GREATER MUST OBTAIN STORM WATER DISCHARGE AUTHORIZATION FROM THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ), THROUGH COMPLIANCE WITH TCEQ'S GENERAL PERMIT #TXR150000. THE PRIMARY CONSTRUCTION SITE OPERATOR(S) (PCSO) MUST PREPARE AND IMPLEMENT AN SW3P THROUGHOUT CONSTRUCTION WHICH INCLUDES THE EROSION AND SEDIMENT CONTROL (ESC) PLAN AND OTHER BEST MANAGEMENT PRACTICES (BMPS) SPECIFIED IN THESE PLANS APPROVED BY BASTROP COUNTY.
2. SMALL CONSTRUCTION ACTIVITIES DISTURBING BETWEEN ONE AND FIVE ACRES SHALL POST A TCEQ CONSTRUCTION SITE NOTICE (CSN) ON SITE PRIOR TO COMMENCING CONSTRUCTION.
3. BASTROP COUNTY IS OPERATOR OF THE SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) RECEIVING STORM WATER DISCHARGES FROM THIS PROJECT, UNDER TCEQ MS4 PERMIT #TXR040078. UPON REQUEST BY BASTROP COUNTY, THE PCSO SHALL PROVIDE A COPY OF THE NOI AND CSN; THE SW3P; AND REGULARLY PROVIDE COPIES OF THE SW3P'S INSPECTION REPORTS, REQUIRED WEEKLY OR BI-WEEKLY AND AFTER EVERY RAIN EVENT 0.5 INCHES OR GREATER.
4. THE PSCO MUST REVISE THE SW3P WHENEVER CHANGING SITE CONDITIONS, OR A CHANGE IN DESIGN, CONSTRUCTION, OPERATION, OR MAINTENANCE HAS A SIGNIFICANT EFFECT ON THE DISCHARGE OF POLLUTANTS NOT PREVIOUSLY ADDRESSED; OR WHEN RESULTS OF INSPECTIONS BY SITE OPERATORS, BASTROP COUNTY, TCEQ, OR OTHER LOCAL AGENCY AUTHORIZED TO APPROVE ESC PLANS INDICATE THE SW3P IS IS PROVING INEFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING POLLUTANTS IN DISCHARGES FROM THE SITE.
5. TEMPORARY OR PERMANENT EROSION CONTROL AND STABILIZATION MEASURES MUST BE INITIATED AS SOON AS PRACTABLE, AND AS SPECIFIED ON THE PLANS, IN PORTIONS OF OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED. THESE MEASURES MUST BE INITIATED NO LATER THAN 14 DAYS AFTER CESSATION, UNLESS CONSTRUCTION ACTIVITIES WILL RESUME WITHIN 21 DAYS IN THE AREA.
6. UPON FINAL STABILIZATION OF THE ENTIRE SITE, INCLUDING COMPLETION OF ALL STABILIZATION REQUIREMENTS OF THE APPROVED PLANS AND PERMIT AS VERIFIED BY BASTROP COUNTY, THE PCSO SHALL SUBMIT A NOTICE OF TERMINATION (NOT) TO TCEQ.

CONSTRUCTION SEQUENCE :

1. THE CONTRACTOR SHALL REQUEST A PRE-CONSTRUCTION CONFERENCE WITH THE CITY OF ELGIN PUBLIC WORKS DEPARTMENT, CITY ENGINEER, DESIGN ENGINEER, AND OTHER AFFECTED PARTIES.
2. THE CONTRACTOR SHALL CALL THE CITY OF ELGIN INSPECTOR 48 HOURS PRIOR TO BEGINNING INSTALLATION OF THE EROSION/SEDIMENTATION CONTROLS.
3. THE CONTRACTOR SHALL INSTALL TEMPORARY EROSION/SEDIMENTATION CONTROL MEASURE AS SHOWN WITHIN THESE PLANS.
4. THE CONTRACTOR SHALL SCHEDULE A MEETING WITH THE BASTROP COUNTY STORM WATER MANAGEMENT PROGRAM INSPECTION DEPT. AFTER SWPD AND ESC REQUIREMENTS HAVE BEEN BET.
5. DELIVER APPROVED WASTEWATER CUT SHEETS TO THE CITY OF ELGIN ENGINEERING DEPARTMENT.
6. INSTALL ALL UTILITIES AND COMPLETE THE PLANS AND SPECIFICATIONS.
7. INSURE THAT ALL UNDERGROUND UTILITY CROSSINGS ARE COMPLETED.
8. COMPLETE AND NECESSARY FINAL DRESS UP OF AREAS DISTURBED BY FINAL CONSTRUCTIONS ACTIVITIES.
9. COMPLETE PERMANENT EROSION CONTROL AND RESTORATION ON SITE VEGETATION.
10. REMOVE AND DISPOSE OF TEMPORARY EROSION CONTROL UPON DIRECTION BY THE ENGINEER AND CITY.
11. ALL AREAS DISTURBED AS A RESULT OF ITEM 10 WILL BE PROPERLY RESTORED AND STABILIZED.

STREET AND DRAINAGE NOTES :

1. ALL MATERIAL TESTING SHALL BE DONE BY AN INDEPENDENT LABORATORY FOR THE CITY OF ELGIN. ANY RETESTING SHALL BE PAID FOR BY THE CONTRACTOR. A CITY INSPECTOR SHALL BE PRESENT DURING ALL TESTS. CITY INSPECTORS SHALL BE GIVEN A MINIMUM OF 24 HOURS NOTICE PRIOR TO ANY TESTING.
2. BACKFILL BEHIND THE CURB SHALL BE COMPACTED TO OBTAIN A MINIMUM OF 95% MAXIMUM DENSITY TO WITHIN 3" OF TOP OF CURB. MATERIAL USED SHALL BE PRIMARILY GRANULAR WITH NO ROCKS LARGER THAN 6" IN THE GREATEST DIMENSION. THE REMAINING 3" SHALL BE CLEAN TOPSOIL FREE FROM ALL CLODS AND SUITABLE TO SUSTAIN PLANT LIFE.
3. DEPTH OF COVER FOR ALL CROSSINGS UNDER PAVEMENT INCLUDING GAS, ELECTRIC, TELEPHONE, CABLE TV, WATER SERVICES, ETC., SHALL BE A MINIMUM OF 30" BELOW SUBGRADE.
4. STREET RIGHT-OF-WAY SHALL BE GRADED AT A SLOPE OF 2% TOWARD THE CURB UNLESS OTHERWISE INDICATED. HOWEVER, IN NO CASE SHALL THE WIDTH OF RIGHT-OF-WAY AT 2% SLOPE BE LESS THAN 10 FEET UNLESS A SPECIFIC REQUEST FOR AN ALTERNATE GRADING SCHEME IS MADE TO AND ACCEPTED BY THE CITY OF ELGIN PUBLIC WORKS DEPARTMENT.
5. BARRICADES BUILT TO CITY OF ELGIN STANDARDS SHALL BE CONSTRUCTED ON ALL DEAD-END STREETS AND AS NECESSARY DURING CONSTRUCTION TO MAINTAIN JOB AND PUBLIC SAFETY.
6. THE SUBGRADE MATERIAL FOR THE STREETS SHOWN HEREIN WAS TESTED AND THE PAVING SECTIONS DESIGNATED BY MLA GEOTECHNICAL REPORT DATED JULY 16, 2025, IN ACCORDANCE WITH THE CURRENT CITY OF ELGIN DESIGN CRITERIA. REFER TO GEOTECHNICAL REPORT FOR DESIGN AND CONSTRUCTION INFORMATION. THE PAVING SECTIONS AT A MINIMUM ARE TO BE CONSTRUCTED AS FOLLOWS WITH BASE AND SUBGRADE TO BE EXTENDED 3' BEGIN BACK OF CURB.

RECOMMENDATIONS - PAVEMENT THICKNESS SECTIONS

		Flexible Pavement			Rigid Pavement		
Street Classification	**Subgrade Material**	**Hot Mix Asphalt Concrete, in**	**Crushed Limestone Base, in**	**Geogrid**	**Concrete Pavement (JRCP), in**	**Crushed Limestone Base, in**	**Geogrid**
Alleys*	Prepared in accordance with Item 1 on page 7	2.0	12	X***	6**	12	X***
Local Streets	Prepared in accordance with Item 1 on page 7	2.0	12	X***	-	-	-
Collectors	Prepared in accordance with Item 1 on page 7	3.5	20	X***	-	-	-

*- DUE TO THE DRAINAGE CHALLENGES ASSOCIATED WITH THE PROPOSED ALLEYS AND THE PROXIMITY OF THE ADJACENT LOTS, A VERTICAL MOISTURE BARRIER (10 MIL. POLY) SHOULD BE USED AT THE EDGE OF THE PAVEMENT. THE POLY SHOULD BE AFFIXED TO THE BACK OF THE CURB OR EDGE OF THE PAVEMENT, COVER THE BASE OVERBUILD, AND EXTEND A MINIMUM OF 24 INCHES BELOW THE BOTTOM OF THE CURB. PLEASE REFERENCE THE DETAIL SHOWN ON PAGE 6. THE MOISTURE BARRIER MAY BE ELIMINATED IF A TRADITIONAL CROWN WITH CURB AND GUTTER IS USED.
** - WHERE STANDARD CURBS ARE NOT INSTALLED, TURN DOWN THE OUTSIDE EDGE AND AT PANEL JOINTS, 12 INCHES WITH A #3 BAR AND DOWEL JOINTS WITH #4 BARS SPACED AT 12 INCHES ON CENTER.
*** - A SINGLE LAYER OF TENSAR HX5.5 GEOGRID SHOULD BE PLACED BELOW THE CRUSHED LIMESTONE BASE LAYER. THIS IS A REQUIREMENT OF THE CITY OF ELGIN. A REDUCED THICKNESS IN THE CRUSHED LIMESTONE BASE HAS BEEN RECOMMENDED FOR COLLECTORS DUE TO THE PRESENCE OF HIGH-STRENGTH GEOGRID.

7. AT INTERSECTIONS WHICH HAVE VALLEY DRAINAGE, THE CROWN OF THE INTERSECTION STREET WILL BE CULMINATED IN A DISTANCE OF 40' FROM THE INTERSECTING CURB LINE UNLESS OTHERWISE NOTED. INLETS ON THE INTERSECTING STREET SHALL NOT BE CONSTRUCTED WITHIN 50' OF THE VALLEY GUTTERS. AT THE INTERSECTION OF TWO 44' STREETS, THE CROWNS OF THE INTERSECTING STREETS WILL CULMINATE AT A DISTANCE OF 40' FROM THE INTERSECTION CURB LINE UNLESS OTHERWISE NOTED.
8. THE GEOTECHNICAL ENGINEER SHALL INSPECT THE SUBGRADE FOR COMPLIANCE WITH THE DESIGN ASSUMPTIONS MADE DURING PREPARATION OF THE SOILS REPORT. ANY ADJUSTMENTS THAT ARE REQUIRED SHALL BE MADE THROUGH REVISIONS OF THE CONSTRUCTION PLANS DUE TO UNACCEPTABLE SULFATE LEVELS.
9. ALL STORM SEVER LINE CONSTRUCTION SHALL BE IN COMPLIANCE WITH THE CITY OF ELGIN SUBDIVISION ORDINANCE 2019-12-03-20 AND SECTIONS OF THE CITY OF ELGIN CONSTRUCTIONS STANDARDS.
10. STORM SEWER PLAN AND PROFILES SHALL TAKE PRECEDENCE WHERE A DIFFERENCE IS SHOWN.
11. MANHOLES SHALL BE 4-FOOT DIAMETER REINFORCED SEWER PIPE AND ECCENTRIC CONE SECTION CONFORMING TO ASTM C-478 UNLESS SHOWN OTHERWISE. MANHOLE COVERS SHALL BE EAST JORDAN IRON WORKS V1432-2 OR EQUAL WITH 32-INCH OPENING WEIGHING ABOUT 220 POUNDS. THE COVER SHALL BE MARKED "STORM".
12. INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARD DETAILS.
13. INLET LOCATIONS ARE BY STATION, GIVEN AT CENTER OF INLET.
14. ALL CURB RETURNS AT INTERSECTIONS SHALL BE A 15' RADIUS (FACE OF CURB) ON LOCAL STREETS AND 20' RADIUS (FACE OF CURB) AT INTERSECTIONS TO MINOR COLLECTOR OR LARGER.
15. ALL CONCRETE STRUCTURES SHALL BE TESTED AS DIRECTED BY THE CITY ENGINEER.
16. EMBANKMENT SHALL CONFORM TO TXDOT STANDARD SPECIFICATIONS, 1993 EDITION OR CURRENT EDITION, ITEM 132. MATERIAL SHALL BE OBTAINED FROM REQUIRED EXCAVATION AREAS AS SHOWN ON THE PLANS. COMPACTION SHALL BE BY "DENSITY CONTROL" MEASUREMENT AND PAYMENT SHALL BE AS INCLUDED IN THE UNIT PRICE BID FOR STREET CONSTRUCTION AND FOR LOT FILLS OUTSIDE OF THE R.O.W.
17. PROJECTS USING LIME STABILIZATION SHALL BE REQUIRED TO PLACE LIME IN SLURRY FORM.
18. THE SIDEWALK ADJACENT TO PUBLIC SPACES AND HIKE & BIKE TRAILS ARE TO BE CONSTRUCTED WITH THESE SUBDIVISIONS AS NOTED BY SHADING.
19. FILL SECTIONS MAY BE COMPOSED OF ON-SITE MATERIAL EXCLUDING TOPSOIL, VEGETATION, AND ORGANICS. FILLS SHOULD BE COMPACTED IN LIFTS NOT EXCEEDING 8-INCHES AFTER COMPACTION AND MEET THE CITY OF AUSTIN'S CURRENT "STANDARD SPECIFICATIONS" ITEM NO. 132 AND 201 AS APPLICABLE.

TRAFFIC MARKING NOTES :

1. ANY METHODS, STREET MARKINGS AND SIGNAGE NECESSARY FOR WARNING MOTORISTS WARNING PEDESTRIANS OR DIVERTING TRAFFIC DURING CONSTRUCTION SHALL CONFORM TO THE TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, LATEST EDITION.
2. ALL PAVEMENT MARKINGS, MARKERS, PAINT, TRAFFIC BUTTONS, TRAFFIC CONTROLS AND SIGNAGE SHALL BE INSTALLED IN ACCORDANCE WITH THE TEXAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND BRIDGES AND THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, LATEST EDITION.

CITY OF ELGIN EROSION AND SEDIMENTATION CONTROL NOTES :

1. EROSION CONTROL MEASURES, SITE WORK, AND RESTORATION WORK SHALL BE IN ACCORDANCE WITH THE CITY OF ELGIN'S SUBDIVISION CODE AND CONSTRUCTION STANDARDS MANUAL, EXCEPT AS NOTED BELOW AND APPROVED BY CITY COUNCIL.
2. ALL SLOPES SHALL BE SODDED OR SEEDED WITH APPROPRIATE GRASS, GRASS MIXTURES, OR GROUND COVER SUITABLE TO THE AREA AND SEASON TO WHICH THEY ARE APPLIED.
3. SILT FENCES, ROCK BERMS AND SIMILARLY RECOGNIZED TECHNIQUES AND MATERIALS SHALL BE EMPLOYED DURING CONSTRUCTION TO PREVENT POINT SOURCE SEDIMENTATION LOADING OF DOWNSTREAM FACILITIES. SUCH INSTALLATION SHALL BE REGULARLY INSPECTED BY THE CITY OF ELGIN FOR EFFECTIVENESS. ADDITIONAL MEASURES MAY BE REQUIRED IF, IN THE OPINION OF THE CITY ENGINEER, THEY ARE WARRANTED.
4. ALL TEMPORARY EROSION CONTROL MEASURES SHALL NOT BE REMOVED UNTIL FINAL INSPECTION AND APPROVAL OF THE PROJECT BY THE ENGINEER.
5. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN ALL TEMPORARY EROSION CONTROL STRUCTURES AND TO REMOVE EACH STRUCTURE AS APPROVED BY THE ENGINEER.

CITY OF ELGIN WATER AND WASTEWATER NOTES :
(MODIFIED PER DEVELOPMENT AGREEMENT)

1. ALL WATER LINE AND WASTEWATER CONSTRUCTION, TESTING, AND MATERIALS SHALL BE IN COMPLIANCE WITH THE CITY OF ELGIN'S SUBDIVISION CODE AND CONSTRUCTION STANDARDS MANUAL, EXCEPT AS NOTED BELOW AND APPROVED BY THE CITY COUNCIL.
2. PIPE MATERIAL FOR WATER MAINS SHALL BE PVC (AWWA C-900, MIN. CLASS 200), OR DUCTILE IRON (AWWA C-100, MIN. CLASS 50).
3. ALL VALVES SHALL BE LOCATED OPPOSITE THE TANGENT POINT ON CURB RETURNS OF THE STREET CURB RADIUS, PER CITY OF ELGIN STANDARDS, UNLESS OTHERWISE NOTED.
4. PIPE MATERIAL FOR PRESSURE WASTEWATER MAINS SHALL BE PVC (ASTM D2241 CLASS 200 SDR 26), OR DUCTILE IRON (AWWA C-1OO MIN. CLASS 50). PIPE MATERIAL FOR GRAVITY WASTEWATER MAINS SHALL BE PVC (ASTM D2241 OR D3034, SDR 26 OR SDR 35), DUCTILE IRON (AWWA C-100, MIN. CLASS 50), OR CONCRETE (ASTM C-76) WITH O-RING JOINT DESIGN.
5. DEPTH OF COVER FOR ALL LINES SHALL BE A MINIMUM OF 36".
6. ALL FIRE HYDRANT LEADS SHALL BE DUCTILE IRON (AWWA C-100, MIN CLASS 50) AND LOCATED AS SHOWN ON THE PLANS.
7. ALL CAST IRON PIPE AND FITTINGS SHALL BE WRAPPED WITH MINIMUM 8-MIL POLYETHYLENE.
8. MINIMUM CLEARANCE BETWEEN WATERLINES AND SEWER LINES IS 9 FEET MEASURED BETWEEN OUTSIDE OF PIPE DIAMETERS, OR APPROPRIATE MEASURES ARE TAKEN TO MEET REQUIREMENTS OF TCEQ REGULATIONS.
9. THE CONTRACTOR SHALL CONTACT AQUA WATER SUPPLY CORPORATION AT LEAST 48 HOURS PRIOR TO CONNECTING TO EXISTING TO EXISTING WATER LINES.
10. ALL SEWER LINE MANHOLE SHALL BE 4-FOOT DIAMETER, NON-CONCENTRIC REINFORCED CONCRETE SEWER PIPE, CLASS IV WITH MINIMUM 5" THICK WALLS, CAST IRON FRAMES, AND COVERS SHALL CONFORM TO APPROXIMATELY 300 POUNDS. MANHOLE COVERS TO BE VULCAN FOUNDRY NUMBER 38 OR 42 OR EQUAL. MANHOLE COVERS PER CITY OF ELGIN DETAIL SS-1.
11. LINE FLUSHING OR ANY ACTIVITY USING LARGE QUANTITIES OF WATER MUST BE SCHEDULED WITH THE WATER AND WASTEWATER SUPERINTENDENT OF THE CITY OF ELGIN.
12. THE CONTRACTOR, AT HIS EXPENSE SHALL PERFORM STERILIZATION OF ALL POTABLE WATERLINES CONSTRUCTED AND SHALL PROVIDE ALL EQUIPMENT (INCLUDING TEST GAUGES), SUPPLIES (INCLUDING CONCENTRATED CHLORINE DISINFECTANT MATERIAL), AND NECESSARY LABOR REQUIRED FOR THE STERILIZATION PROCEDURE. THE STERILIZATION PROCEDURE SHALL BE MONITORED BY THE ENGINEER AND BE SUBMITTED TO A CERTIFIED LABORATORY FOR TESTING WITH THE RESULTS BEING SENT TO THE CITY OF ELGIN TO VERIFY EACH TREATED LINE HAS ATTAINED AN INITIAL CHLORINE CONCENTRATION OF 50 PPM.
13. SAMPLING TAPS SHALL BE BROUGHT UP TO 3 FEET ABOVE GRADE AND SHALL BE EASILY ACCESSIBLE. AT THE CONTRACTORS REQUEST, AND IN HIS PRESENCE, SAMPLES FOR BACTERIOLOGICAL TESTING WILL BE COLLECTED BY THE ENGINEER NOT LESS THAN 24 HOURS AFTER THE TREATED LINE HAS BEEN FLUSHED OF THE CONCENTRATED CHLORINE SOLUTION AND CHARGED WITH WATER APPROVED BY THE CITY. THE CONTRACTOR SHALL SUPPLY A CHECK OR MONEY ORDER, PAYABLE TO THE TEXAS DEPARTMENT OF HEALTH, TO COVER THE FEE CHARGED FOR TESTING EACH WATER SAMPLE.
14. THE CONTRACTOR AT HIS EXPENSE, SHALL PERFORM QUALITY TESTING FOR ALL WASTEWATER PIPE INSTALLED AND PRESSURE PIPE HYDROSTATIC DESIGN OF ALL WATER LINES CONSTRUCTED AND SHALL PROVIDE ALL EQUIPMENT (INCLUDING PUMPS AND GAUGES), SUPPLIES AND LABOR NECESSARY TO PERFORM THE TESTS. QUALITY AND PRESSURE TESTING SHALL BE MONITORED BY THE ENGINEER OR HIS REPRESENTATIVE.
15. THE CONTRACTOR SHALL PROVIDE THE ENGINEER OR HIS REPRESENTATIVE NO LESS THAN 24 NOTICE PRIOR TO PERFORMING STERILIZATION, QUALITY TESTING OR PRESSURE TESTING.
16. THE CONTRACTOR SHALL NOT OPEN OR CLOSE ANY VALVES UNLESS AUTHORIZED BY THE CITY OF ELGIN.
17. ALL VALVE BOXES AND COVERS SHALL BE CAST IRON.
18. ALL WATER SERVICE, WASTEWATER SERVICE AND VALCE LOCATIONS SHALL BE APPROXIMATELY MARKED AS FOLLOWS: WATER SERVICE "W" ON TOP OF CURB, VALVE "V" ON TOP OF CURB, WASTEWATER SERVICE "S" ON TOP OF CURB.
19. THE CONTRACTOR SHALL CONTACT THE AUSTIN AREA "ONE CALL" SYSTEMS AT 1-800-344-8377 FOR EXISTING UTILITY LOCATIONS PRIOR TO ANY EXCAVATION IN ADVANCE OF CONSTRUCTION. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITIES TO BE EXTENDED, TIED TO, ALTERED, OR SUBJECT TO CHANGE/INCONVENIENCE TO CONSTRUCTION OPERATIONS. THE CITY OF ELGIN WATER AND WASTEWATER MAINTENANCE RESPONSIBILITY ENDS AT R.O.W./EASEMENT LINE.
20. ALL MATERIAL TESTS, INCLUDING SOIL DENSITY TESTS AND RELATED SOIL ANALYSIS, SHALL BE ACCOMPLISHED BY AN INDEPENDENT LABORATORY FUNDED BY THE DEVELOPER IN ACCORDANCE WITH THE SPECIFICATIONS.
21. DEFLECTION TEST: DEFLECTION TEST SHALL BE PERFORMED ON ALL FLEXIBLE AND SEMI-RIGID PIPE. THE TEST SHALL BE CONDUCTED AFTER FINAL BACKFILL HAS BEEN IN PLACE FOR AT LEAST THIRTY (30) DAYS. NO PIPE SHALL EXCEED A DEFLECTION OF 5%. THE DEFLECTION TEST IS TO BE RUN USING A BALL OR MANDREL. IT SHALL HAVE A DIAMETER EQUAL TO 95% OF THE INSIDE DIAMETER OF THE PIPE. THE TEST SHALL BE PERFORMED WITHOUT MECHANICAL PULLING DEVICES.
22. WASTEWATER MANHOLES SHALL BE COATED WITH 80 MILS OF RAVEN COATING SYSTEM, SEWPERCOAT, OR CITY APPROVED EQUAL.

TRENCH SAFETY NOTES :

1. IN ACCORDANCE WITH THE LAWS OF THE STATE OF TEXAS AND THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULATIONS, ALL TRENCHES OVER 5 FEET IN DEPTH IN EITHER HARD AND COMPACT OR SOFT AND UNSTABLE SOIL SHALL BE SLOPED, SHORED, SHEETED, BRACED OR OTHERWISE SUPPORTED. FURTHERMORE, ALL TRENCHES LESS THAN 5 FEET IN DEPTH SHALL ALSO BE EFFECTIVELY PROTECTED WHEN HAZARDOUS GROUND MOVEMENT MAY BE EXPECTED. TRENCH SAFETY SYSTEMS TO BE UTILIZED FOR THIS PROJECT (WILL BE PROVIDED BY THE CONTRACTOR; ARE ON SHEET ______, ETC.)
2. IN ACCORDANCE WITH THE U.S. OCCUPATION SAFETY AND HEALTH ADMINISTRATION REGULATIONS, WHEN PERSONS ARE IN TRENCHES 4-FEET DEEP OR MORE, ADEQUATE MEANS OF EXIST, SUCH AS A LADDER OR STEPS, MUST BE PROVIDED AND LOCATED SO AS TO REQUIRE NO MORE THAN 25 FEET OF LATERAL TRAVEL.
3. IF TRENCH SAFETY SYSTEM DETAILS WERE NOT PROVIDED IN THE PLANS BECAUSE TRENCHES WERE ANTICIPATED TO BE LESS THAN 5 FEED IN DEPTH AND DURING CONSTRUCTION IT IS FOUND THAT TRENCHES ARE IN FACT 5 FEET OR MORE IN DEPTH OR TRENCHES LESS THAN 5 FEET IN DEPTH ARE IN AN AREA WHERE HAZARDOUS GROUND MOVEMENT IS EXPECTED, ALL CONSTRUCTION SHALL CEASE, THE TRENCHED AREA SHALL BE BARRICADED AND THE ENGINEER NOTIFIED IMMEDIATELY. CONSTRUCTION SHALL NOT RESUME UNTIL APPROPRIATE TRENCH SYSTEM DETAILS, AS DESIGNED BY A PROFESSIONAL ENGINEER, ARE RETAINED.

BASTROP COUNTY FLOODPLAIN NOTES :

1. FLOOD WARNING: THE DEGREE OF FLOOD PROTECTION REQUIRED BY THE BASTROP COUNTY FLOOD DAMAGE PREVENTION ORDER IS CONSIDERED REASONABLE FOR REGULATORY PURPOSES AND IS BASED ON SCIENTIFIC AND ENGINEERING CONSIDERATIONS. ON RARE OCCASIONS, GREATER FLOODS CAN AND WILL OCCUR AND FLOOD HEIGHTS MAY BE INCREASED BY MAN-MADE OR NATURAL CAUSES. ACCEPTANCE OF THIS PLAT BY THE COMMISSIONERS COURT DOES NOT IMPLY THAT LAND OUTSIDE THE AREAS OF SPECIAL FLOOD HAZARDS OR USES PERMITTED WITHIN SUCH AREAS WILL BE FREE FROM FLOODING OR FLOOD DAMAGES. NOR SHALL ACCEPTANCE OF THIS PLAT CREATE LIABILITY ON THE PART OF BASTROP COUNTY OR ANY OFFICIAL OR EMPLOYEE THEREOF FOR ANY FLOOD DAMAGES THAT RESULT FROM RELIANCE ON THE INFORMATION CONTAINED WITHIN THIS PLAT OR ANY ADMINISTRATION DECISION LAWFULLY MADE THEREUNDER.
2. EROSION AND SEDIMENTATION CONTROLS ARE REQUIRED FOR CONSTRUCTION ON EACH LOT, INCLUDING SINGLE-FAMILY, DUPLEX, AND MULTI-FAMILY CONSTRUCTION.

TCEQ WATER DISTRIBUTION SYSTEM AND GENERAL CONSTRUCTION NOTES :

1. THIS WATER DISTRIBUTION SYSTEM MUST BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) RULES AND REGULATIONS FOR PUBLIC WATER SYSTEMS 30 TEXAS ADMINISTRATIVE CODE (TAC) CHAPTER 290 SUBCHAPTER D. WHEN CONFLICTS ARE NOTED WITH LOCAL STANDARDS, THE MORE STRINGENT REQUIREMENT SHALL BE APPLIED. AT A MINIMUM, CONSTRUCTION FOR PUBLIC WATER SYSTEMS MUST ALWAYS MEET TCEQ'S "RULES AND REGULATIONS FOR PUBLIC WATER SYSTEMS."
2. ALL NEWLY INSTALLED PIPES AND RELATED PRODUCTS MUST CONFORM TO AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)/NSF INTERNATIONAL STANDARD 61 AND MUST BE CERTIFIED BY AND ORGANIZATION ACCREDITED BY ANSI [290.11(A)(2)].
3. PLASTIC PIPE FOR USE IN PUBLIC WATER SYSTEMS MUST BEAR THE NSF INTERNATIONAL SEAL OF APPROVAL (NSF-PW) AND HAVE AN ASTM DESIGN PRESSURE RATING OF AT LEAST 150 PSI OR A STANDARD DIMENSION RATION OF 26 OR LESS [290.44(A)(2)].
4. NO PIPE WHICH HAS BEEN USED FOR ANY PURPOSE OTHER THAN THE CONVEYANCE OF DRINKING WATER SHALL BE ACCEPTED OR RELOCATED FOR USE IN ANY PUBLIC DRINKING WATER SUPPLY [290.44(A)(3)].
5. ALL WATER LINE CROSSINGS OF WASTEWATER MAINS SHALL BE PERPENDICULAR [290.44(E)(4)(B).
6. WATER TRANSMISSION AND DISTRIBUTION LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURE'S INSTRUCTIONS. HOWEVER, THE TOP OF THE WATER LINE MUST BE LOCATED BELOW THE FROST LINE AND IN NO CASE SHALL THE TOP OF THE WATER LINE BE LESS THAN 24 INCHES BELOW GROUND SURFACE [290.44(A)(4)].
7. THE MAXIMUM ALLOWABLE LEAD CONTENT OF PIPES, PIPE FITTINGS, PLUMBING FITTINGS, AND FIXTURES IS 0.25% PERCENT [290.44(B)].
8. THE CONTRACTOR SHALL INSTALL APPROPRIATE AIR RELEASE DEVICES WITH VENT OPENINGS TO THE ATMOSPHERE COVERED WITH 16-MESH OF FINER, CORROSION RESISTANT SCREENING MATERIAL OR AN ACCEPTABLE EQUIVALENT [290.44(D)(1)].
9. THE CONTRACTOR SHALL NOT PLACE THE PIPE IN WATER OR WHERE IT CAN BE FLOODED WITH WATER OR SEWAGE DURING ITS STORAGE OR INSTALLATION [290.44(F)(1)].
10. WHEN WATERLINES ARE LAID UNDER ANY FLOWING OR INTERMITTENT STREAM OR SEMI-PERMANENT BODY OF WATER THE WATERLINE SHALL BE INSTALLED IN A SEPARATE WATERTIGHT PIPE ENCASEMENT. VALVES MUST BE PROVIDED ON EACH SIDE OF THE CROSSING WITH FACILITIES TO ALLOW THE UNDERWATER PORTION OF THE SYSTEM TO BE ISOLATED AND TESTED [290.44(F)(2)].
11. PURSUANT TO 30 TCA 290.44(A)(5), THE HYDROSTATIC LEAKAGE RATE SHALL NOT EXCEED THE AMOUNT ALLOWED OR RECOMMENDED BY THE MOST CURRENT AWWA FORMULAS FOR PVC PIPE, CAST IRON AND DUCTILE IRON PIPE. INCLUDE THE FORMULAS IN THE NOTES ON THE PLANS.

   THE HYDROSTATIC LEAKAGE RATE FOR POLYVINL CHLORIDE (PVC) AND APPURTENANCES SHALL NOT EXCEED THE AMOUNT ALLOWED OR RECOMMENDED BY FORMULAS IN AMERICA WATER WORKS ASSOCIATION (AWWA) C-605 AS REQUIRED IN 30 TAC 290.44(A)(5). PLEASE ENSURE THAT THE FORMULA FOR THIS CALCULATION IS CORRECT AND MOST CURRENT FORMULA IS IN USE;

   Q=LD*SQR(P)/148,000

   WHERE:
   Q=THE QUANTITY OF MAKEUP WATER IN GALLONS PER HOUR,
   L=THE LENGTH OF THE PIPE SECTION BEING TESTED, IN FEET,
   D=THE NOMINAL DIAMETER OF THE PIPE IN INCHES, AND
   P=THE AVERAGE TEST PRESSURE DURING THE HYDROSTATIC TEST IN POUNDS PER SQUARE INCH (PSI).

   THE HYDROSTATIC LEAKAGE RATE FOR DUCTILE IRON (DI) PIPE AND APPURTENANCES SHALL NOT EXCEED THE AMOUNT ALLOWED OR RECOMMENDED BY FORMULAS IN AMERICA WATER WORKS ASSOCIATION (AWWA) C-600 AS REQUIRED IN 30 TAC 290.44(A)(5). PLEASE ENSURE THAT THE FORMULA FOR THIS CALCULATION IS CORRECT AND MOST CURRENT FORMULA IS IN USE;

   L=SD*SQR(P)/148,000

   WHERE:
   L=THE QUANTITY OF MAKEUP WATER IN GALLONS PER HOUR,
   S=THE LENGTH OF THE PIPE SECTION BEING TESTED, IN FEET,
   D=THE NOMINAL DIAMETER OF THE PIPE IN INCHES, AND
   P=THE AVERAGE TEST PRESSURE DURING THE HYDROSTATIC TEST IN POUNDS PER SQUARE INCH (PSI).
12. THE CONTRACTOR SHALL MAINTAIN A MINIMUM SEPARATION DISTANCE IN ALL DIRECTIONS OF NINE FEET BETWEEN THE PROPOSED WATERLINE AND WASTEWATER COLLECTION FACILITIES INCLUDING MANHOLES. IF THIS DISTANCE CANNOT BE MAINTAINED, THE CONTRACTOR MUST IMMEDIATELY NOTIFY THE PROJECT ENGINEER FOR FURTHER DIRECTION. SEPARATION DISTANCES, INSTALLATION METHODS, AND MATERIALS UTILIZED MUST MEET 290.44(E)(1)-(4).
13. THE SEPARATION DISTANCE FROM A POTABLE WATERLINE TO A WASTEWATER MAIN OR LATERAL MANHOLE OR CLEANOUT SHALL BE A MINIMUM OF NINE FEET. WHERE THE NINE-FOOT SEPARATION DISTANCE CANNOT BE ACHIEVED, THE POTABLE WATERLINE SHALL BE ENCASED IN A JOINT OF AT LEASE 150 PSI PRESSURE CLASS PIPE AT LEAST 18 FEET LONG AND TOW NOMINAL SIZES LARGER THAN THE NEW CONVEYANCE. THE SPACE AROUND THE CARRIER PIPE SHALL BE SUPPORTED AT FIVE-FOOT INTERVALS WITH SPACERS OR BE FILLED TO THE SPRINGLINE WITH WASHED SAND. THE ENCASEMENT PIPE SHALL BE CENTERED ON THE CROSSING AND BOTH ENDS SEALED WITH CEMENT GROUT OR MANUFACTURED SEALANT [290.44(E)(5)].
14. FIRE HYDRANTS SHALL NOT BE INSTALLED WITHIN NINE FEET VERTICALLY OR HORIZONTALLY OF ANY WASTEWATER LINE, WASTEWATER LATERAL, OR WASTEWATER SERVICE LINE REGARDLESS OF CONSTRUCTION [290.44(E)(6)].
15. SUCTION MAINS TO PUMPING EQUIPMENT SHALL NOT CROSS WASTEWATER MINS, WASTEWATER LATERALS, OR WASTEWATER SERVICE LINES. RAW WATER SUPPLY LINES SHALL NOT BE INSTALLED WITHIN FIVE FEET OF ANY TILE OR CONCRETE WASTEWATER MAIN, WASTEWATER LATERAL, OR WASTEWATER SERVICE LINE [290.44(E)(7)].
16. WATERLINES SHALL NOT BE INSTALLED CLOSER THAN TEN FEET TO SEPTIC TANK DRAIN FIELDS [290.44(E)(8)].
17. THE CONTRACTOR SHALL DISINFECT THE NEW WATERLINES IN ACCORDANCE WITH AWWA STANDARD C-651-14 OR MOST RECENT, THEN FLUSH AND SAMPLE THE LINES BEFORE BEING PLACED INTO SERVICE. SAMPLES SHALL BE COLLECTED FOR MICROBIOLOGICAL ANALYSIS TO CHECK THE EFFECTIVENESS OF THE DISINFECTION PROCEDURE WHICH SHALL BE REPEATED IF CONTAMINATION PERSISTS. A MINIMUM OF ONE SAMPLE FOR EACH 1,000 FEET OF COMPLETED WATERLINE WILL BE REQUIRED OR AT THE NEXT AVAILABLE SAMPLING POINT BEYOND THE 1,000 FEET AS DESIGNATED BY THE DESIGN ENGINEER [290.44(F)(3)].
18. DECHLORINATION OF DISINFECTING WATER SHALL BE IN STRICT ACCORDANCE WITH CURRENT AWWA STANDARD C-655-09 OR MOST RECENT.

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NO.	BY	DATE	REVISION DESCRIPTION

HARVEST RIDGE
SECTION 5

GENERAL NOTES

PROJECT NO: 1636-11996
DESIGNED BY: MRC
DRAWN BY: DPG/BE
CHECKED BY: JAB

NOTICE:
ALTERATION OF A SEALED DRAWING WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS A VIOLATION OF THE TEXAS ENGINEERING PRACTICE ACT.

THESE PLANS ARE RELEASED UNDER THE AUTHORITY OF J. ADAM BERRY, PE, ON 01/13/2026, FOR THE PURPOSES OF REVIEW AND ARE NOT TO BE USED FOR BIDDING OR CONSTRUCTION

H:\PROJECTS\1636 - BROHN HOMES\11996 - HARVEST RIDGE - SEC 5\CAD\SHEETS\11996-C-NOTE.DWG DATE: 1/7/2026 11:14:56 AM BY: DPEREZ-GUERRA

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CHECKED BY: JAB

DRAWN BY: DPC/BE

DESIGNED BY: MRC

PROJECT NO: 1636-11996

FINAL PLAT (SHEET 1 OF 2)

HARVEST RIDGE
SECTION 5

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CHECKED BY: JAB

DRAWN BY: DPC/BE

DESIGNED BY: MRC

PROJECT NO: 1636-11996

FINAL PLAT (SHEET 2 OF 2)

HARVEST RIDGE
SECTION 5

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HARVEST RIDGE BOULEVARD

ALLEY A

ALLEY B

ALLEY C

BERRY BEND

BUMBLEBEE DRIVE

POND VIEW DRIVE

CONCRETE WASHOUT

STABILIZED CONSTRUCTION ENTRANCE

STAGING / SPOILS AREA

27.2 SY ROCK RIP-RAP

33.3 SY ROCK RIP-RAP

21 LF OF TEMPORARY ROCK-BERM

68
DRAINAGE LOT
2.72 AC.

35.5 SY ROCK RIP-RAP

TEMPORARY PERIMETER DIVERSION DIKE (266 LF)

TEMPORARY PERIMETER DIVERSION DIKE (261 LF)

TEMPORARY PERIMETER DIVERSION DIKE (443 LF)

NORMA JEANNE LARSON, ET AL
(103 ACRES)
VOLUME 296, PAGE 347 O.P.R.B.C.T.

CLAYTON PROPERTIES GROUP, INC.
DOC. NO. 201807699
O.P.R.B.C.T.

SCALE: 1" = 60'
GRAPHIC SCALE IN FEET
0 30' 60' 120'

LEGEND

- PROPERTY BOUNDARY
- EXISTING MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- LOC — LOC — LIMITS OF CONSTRUCTION
- LOC–SF — LIMITS OF CONSTRUCTION/ SILT FENCE
- SF — SF — SILT FENCE
- SF — SF — SILT FENCE W/ J HOOKS
- DIVERSION DIKE
- INLET PROTECTION
- TEMPORARY ROCK BERM
- DIRECTION OF FLOW
- CONSTRUCTION ENTRANCE
- CONCRETE WASHOUT
- STAGING / SPOILS AREA
- TURF REINFORCEMENT MATTING

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HARVEST RIDGE SECTION 5

EROSION AND SEDIMENTATION CONTROL PLAN

PROJECT NO: 1636-11996

DESIGNED BY: MRC

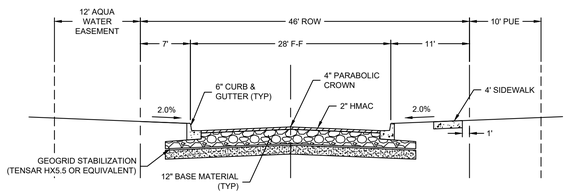
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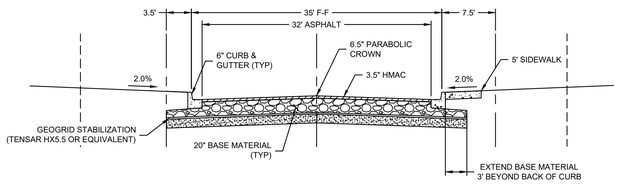
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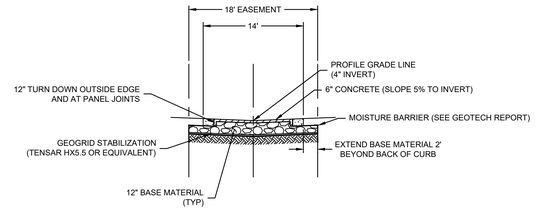
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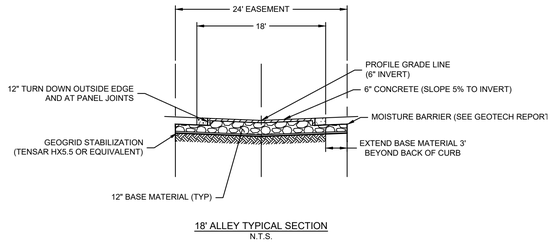
LOCAL STREET TYPICAL SECTION
N.T.S.



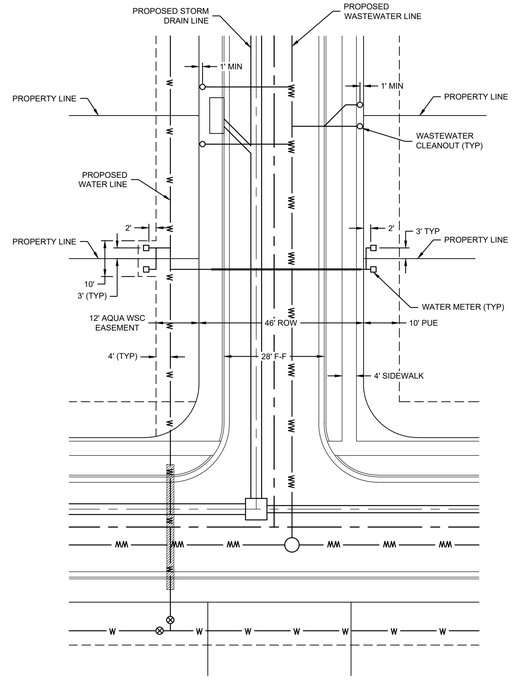
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N.T.S.



14' ALLEY TYPICAL SECTION
N.T.S.



18' ALLEY TYPICAL SECTION
N.T.S.



TYPICAL UTILITY ASSIGNMENT
SCALE: 1" = 20'

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HARVEST RIDGE
SECTION 5

TYPICAL STREET SECTIONS

PROJECT NO: 1636-11996

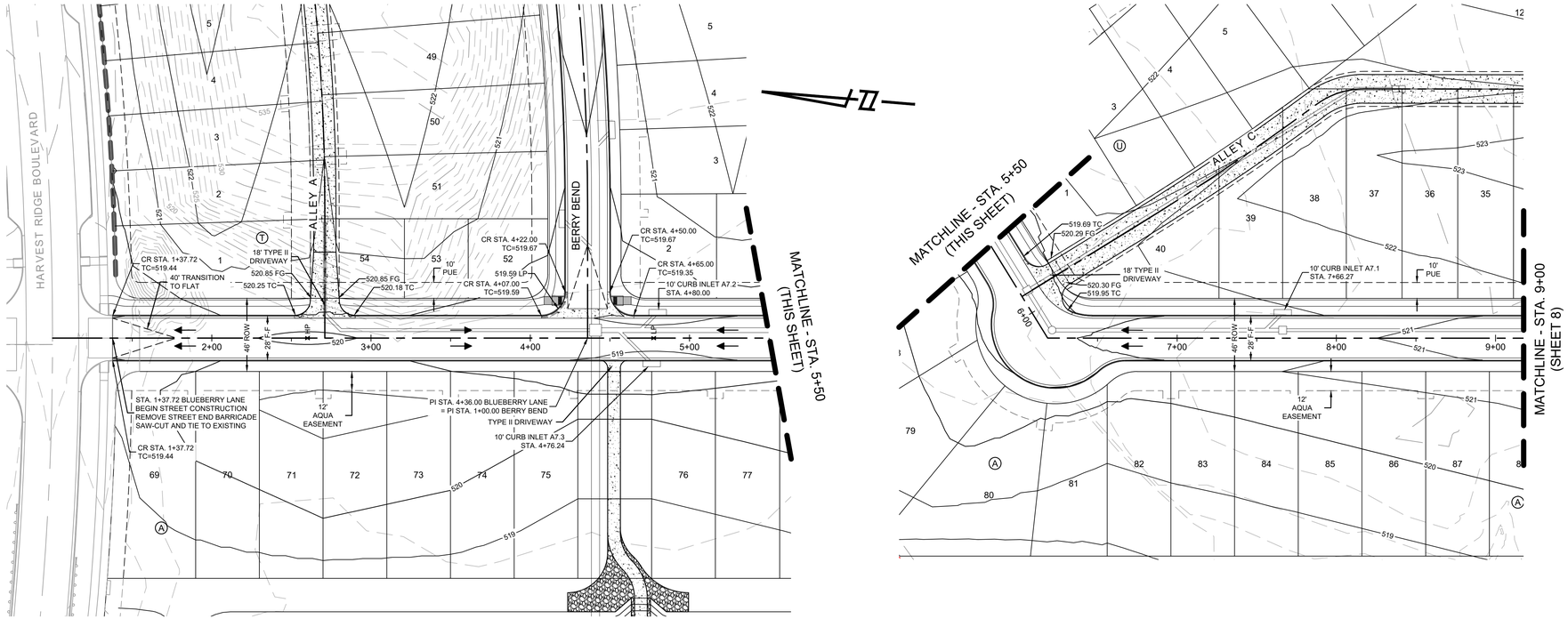
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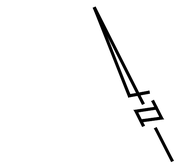
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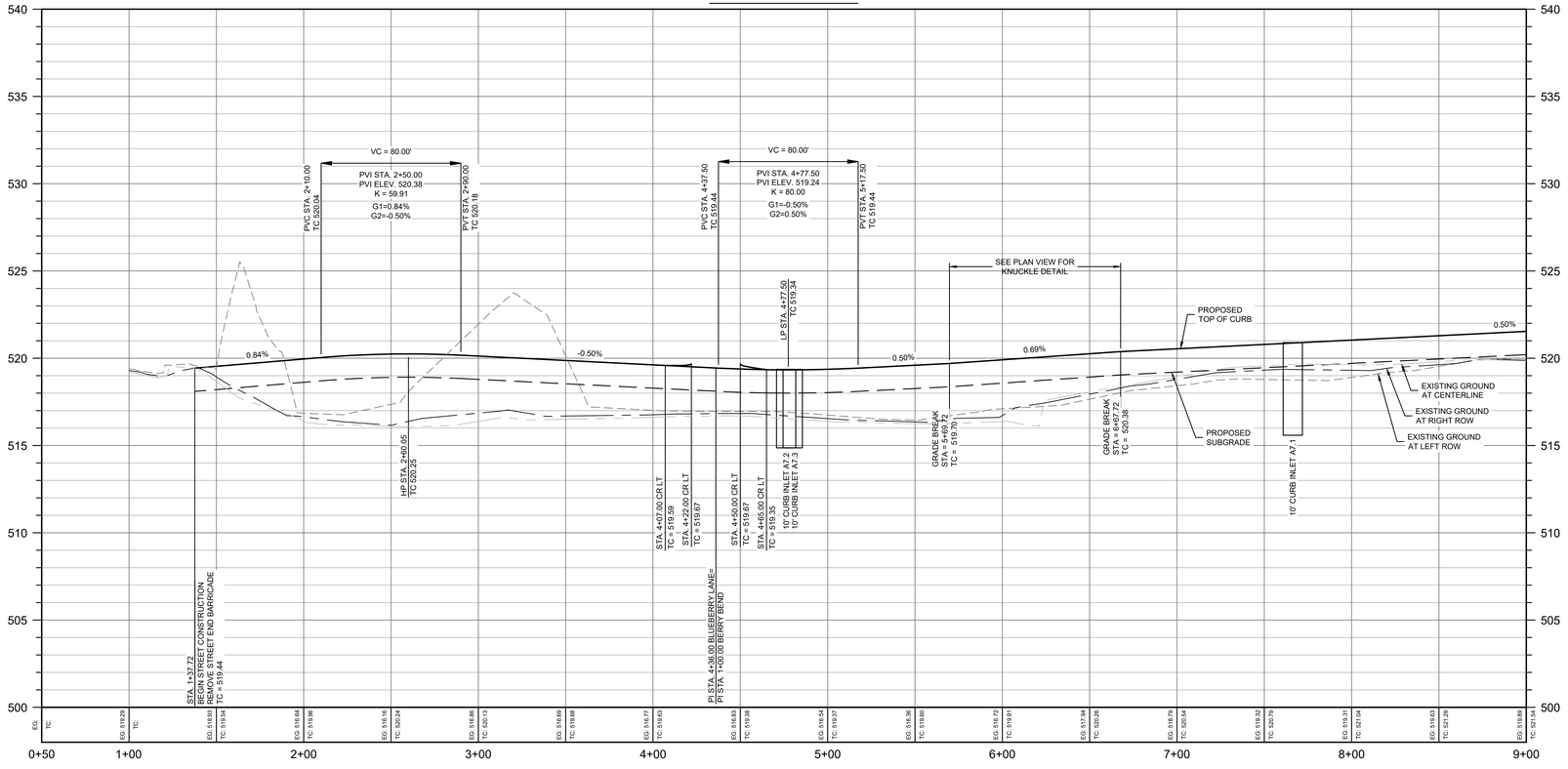


LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- EASEMENTS
- 28 LOT NUMBER
- ROAD CENTERLINE
- CURB & GUTTER (CATCH CURB)
- CURB & GUTTER (SPILL CURB)
- DIRECTION OF FLOW
- CURB INLET
- SIDEWALK TO BE CONSTRUCTED WITH SUBDIVISION IMPROVEMENTS
- SIDEWALK TO BE CONSTRUCTED BY HOMEBUILDER
- STREET END BARRICADE (S-11)
- SIDEWALK SET BACK FROM CURB DIRECTIONAL RAMPS (M-2)
- CONCRETE VALLEY GUTTER

NOTES:
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4. ALL CURB ON THE UPSTREAM SIDE OF A VALLEY GUTTER SHALL BE SPILL CURB.

BLUEBERRY LANE



PROFILE LEGEND

- PROPOSED GRADE LINE
- PROPOSED SUBGRADE
- EXISTING GROUND @ CENTERLINE
- EXISTING GROUND @ LEFT ROW
- EXISTING GRADE @ RIGHT ROW

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NO.	BY	DATE	REVISION DESCRIPTION

HARVEST RIDGE
SECTION 5

BLUEBERRY LANE
(STA. 1+00 TO 9+00)

PROJECT NO: 1636-11996

DESIGNED BY: MRC

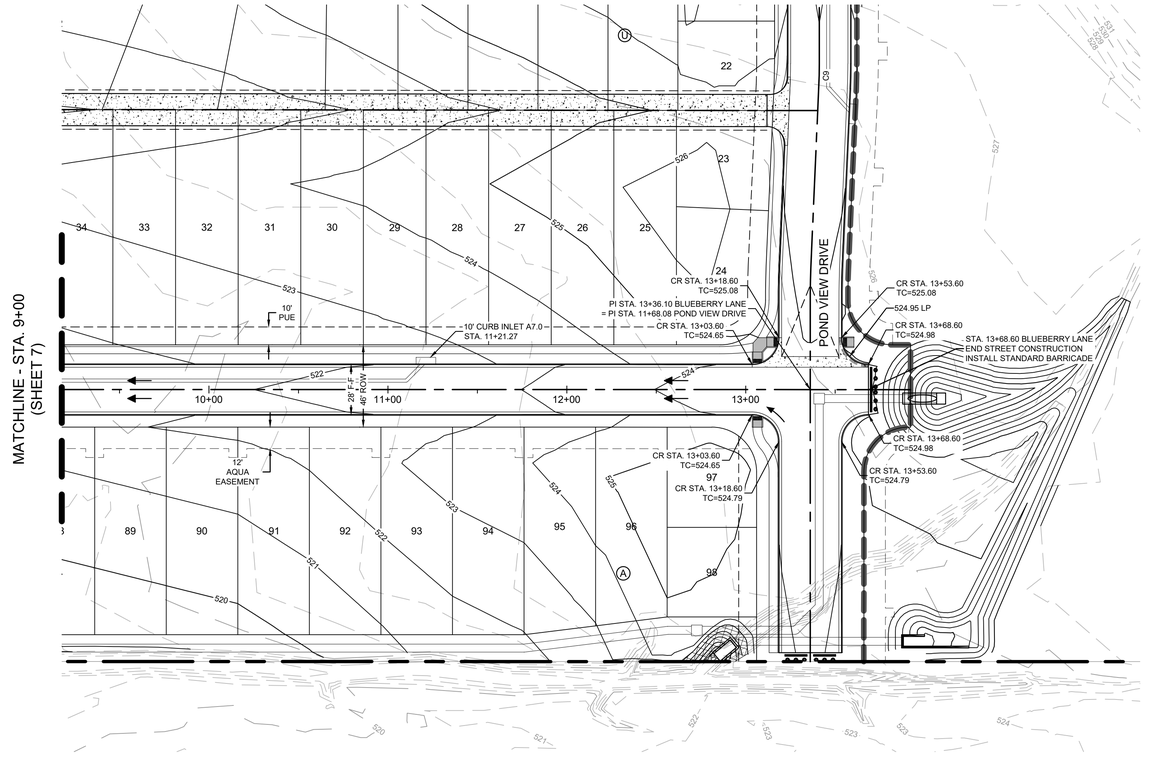
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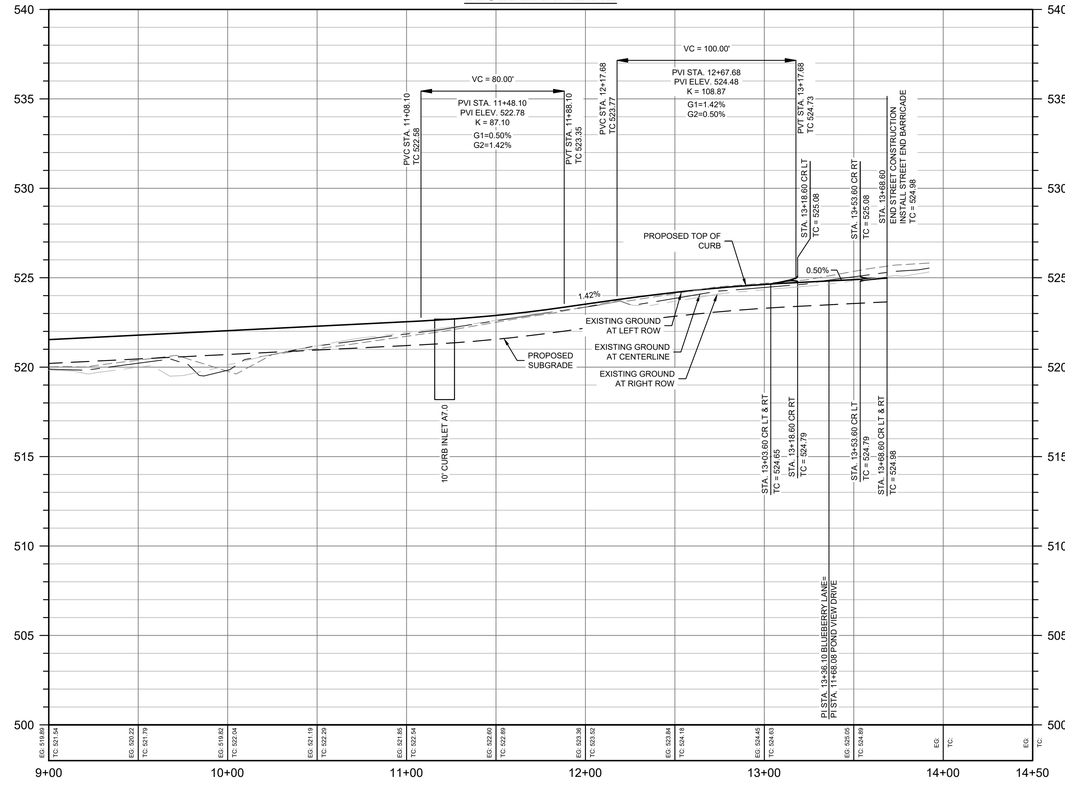
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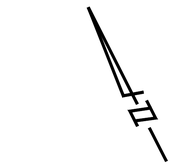
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SCALE: 1" = 40'
GRAPHIC SCALE IN FEET
0 20' 40' 80'

LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- EASEMENTS
- 28 LOT NUMBER
- ROAD CENTERLINE
- CURB & GUTTER (CATCH CURB)
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- DIRECTION OF FLOW
- CURB INLET
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- STREET END BARRICADE (S-11)
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PROFILE LEGEND

- PROPOSED GRADE LINE
- PROPOSED SUBGRADE
- EXISTING GROUND @ CENTERLINE
- EXISTING GROUND @ LEFT ROW
- EXISTING GRADE @ RIGHT ROW

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NO.	BY	DATE	REVISION DESCRIPTION

HARVEST RIDGE
SECTION 5

BLUEBERRY LANE
(STA. 9+00 TO END)

PROJECT NO: 1636-11996

DESIGNED BY: MRC

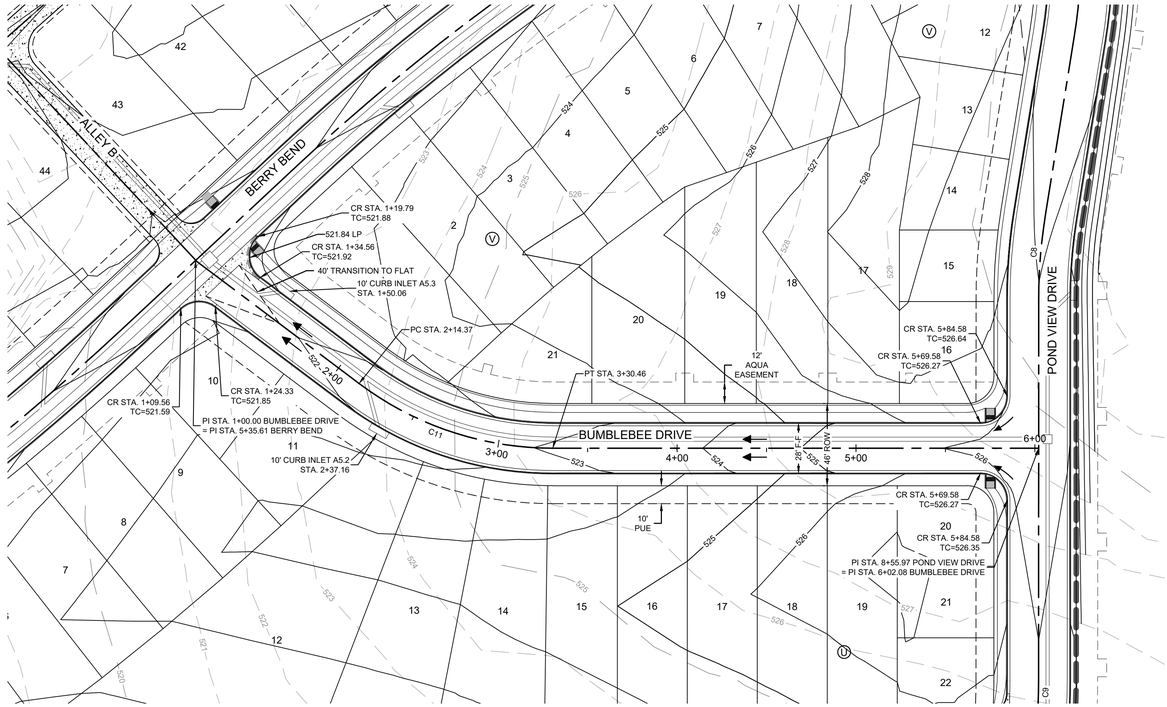
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SCALE: 1" = 40'

GRAPHIC SCALE IN FEET

0 20' 40' 80'

LEGEND

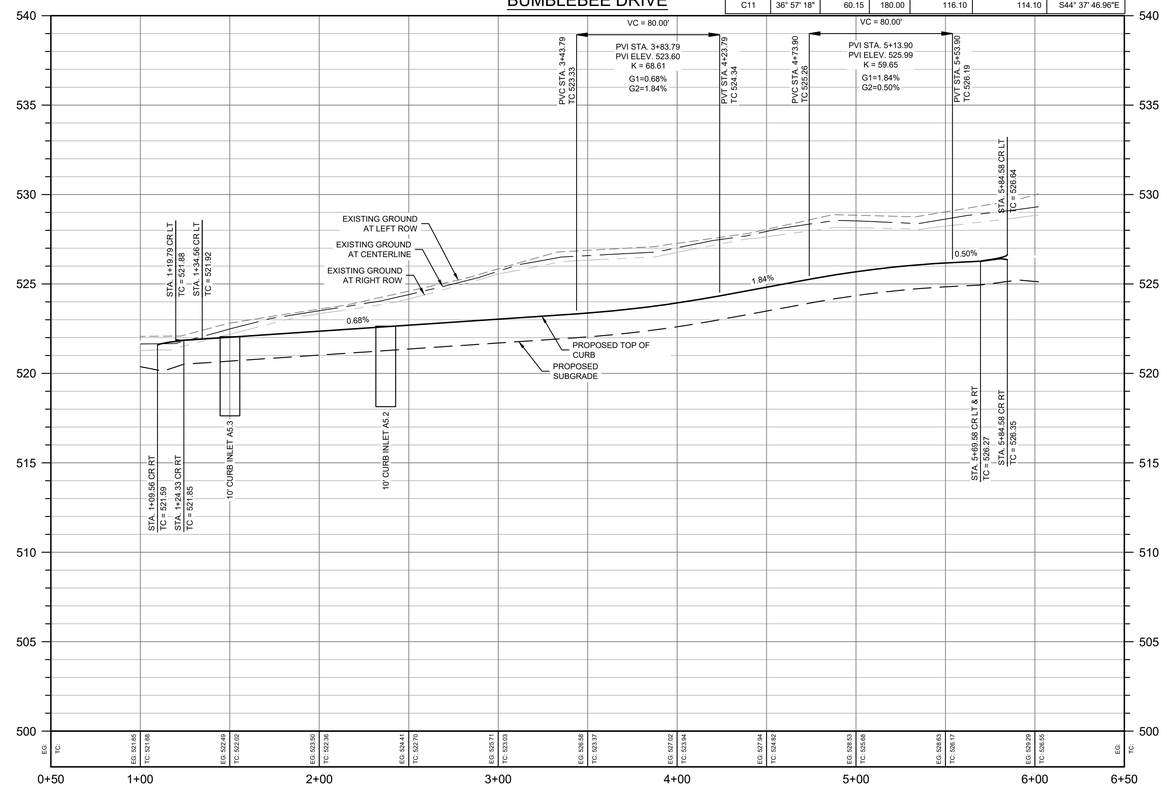
- PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
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CURVE DATA

NUMBER	DELTA	TANGENT	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING
C11	36° 57' 18"	60.15	180.00	116.10	114.10	S44° 37' 46.96"E

BUMBLEBEE DRIVE



PROFILE LEGEND

- PROPOSED GRADE LINE
- PROPOSED SUBGRADE
- EXISTING GROUND @ CENTERLINE
- EXISTING GROUND @ LEFT ROW
- EXISTING GRADE @ RIGHT ROW

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HARVEST RIDGE
SECTION 5

BUMBLEBEE DRIVE
(STA. 1+00 TO END)

PROJECT NO: 1636-11996

DESIGNED BY: MRC

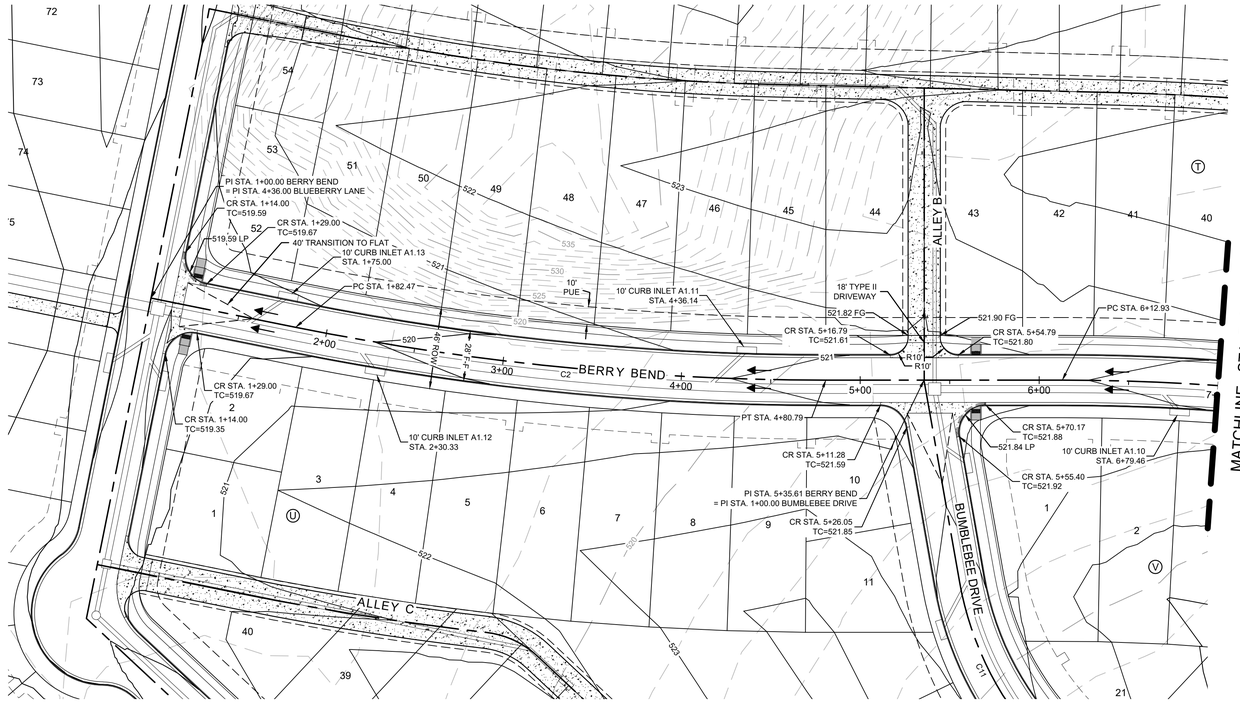
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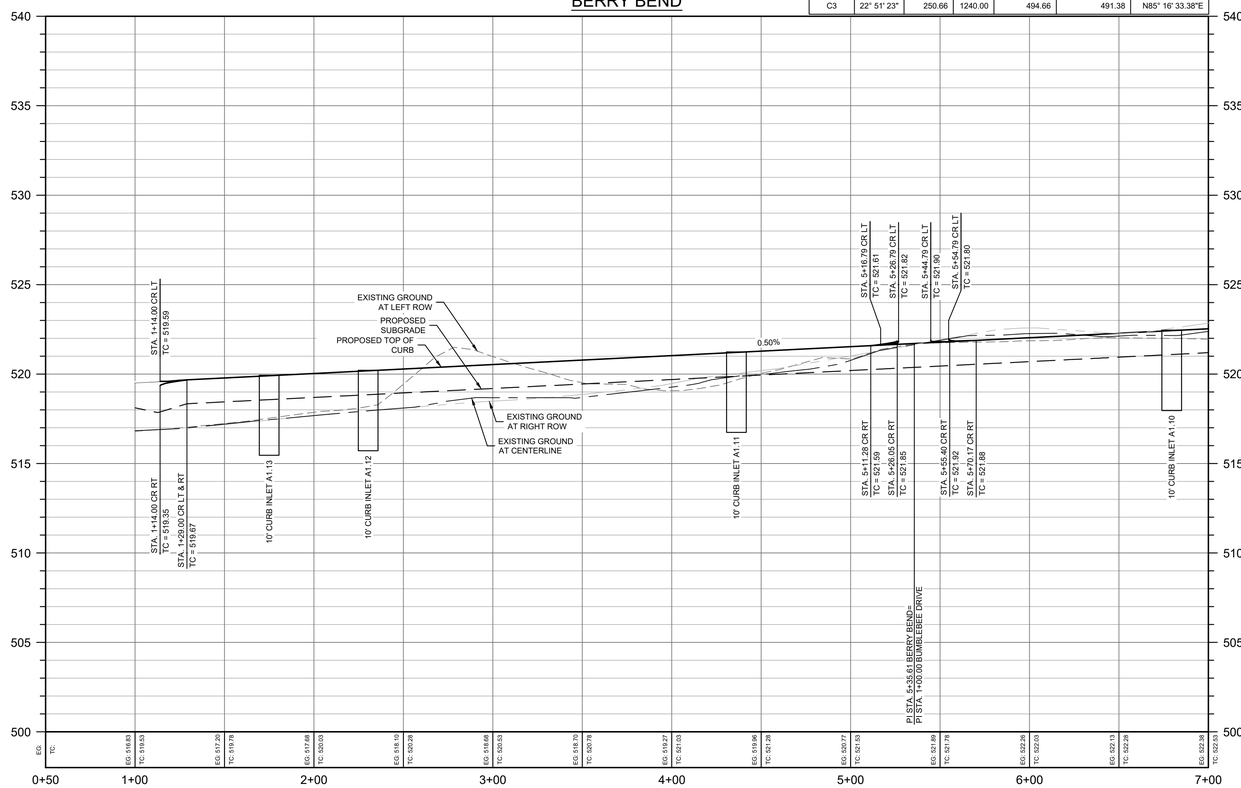
SCALE: 1" = 40'
GRAPHIC SCALE IN FEET
0 20' 40' 80'

LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
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CURVE DATA						
NUMBER	DELTA	TANGENT	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING
C2	11° 23' 43"	149.66	1500.00	298.33	297.84	N79° 32' 43.54"E
C3	22° 51' 23"	250.66	1240.00	494.66	491.38	N85° 16' 33.38"E



PROFILE LEGEND

- PROPOSED GRADE LINE
- PROPOSED SUBGRADE
- EXISTING GROUND @ CENTERLINE
- EXISTING GROUND @ LEFT ROW
- EXISTING GRADE @ RIGHT ROW

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NO.	BY	DATE	REVISION DESCRIPTION

HARVEST RIDGE
SECTION 5

BERRY BEND (STA. 1+00 TO 7+00)

PROJECT NO: 1636-11996

DESIGNED BY: MRC

DRAWN BY: DPG/BE

CHECKED BY: JAB

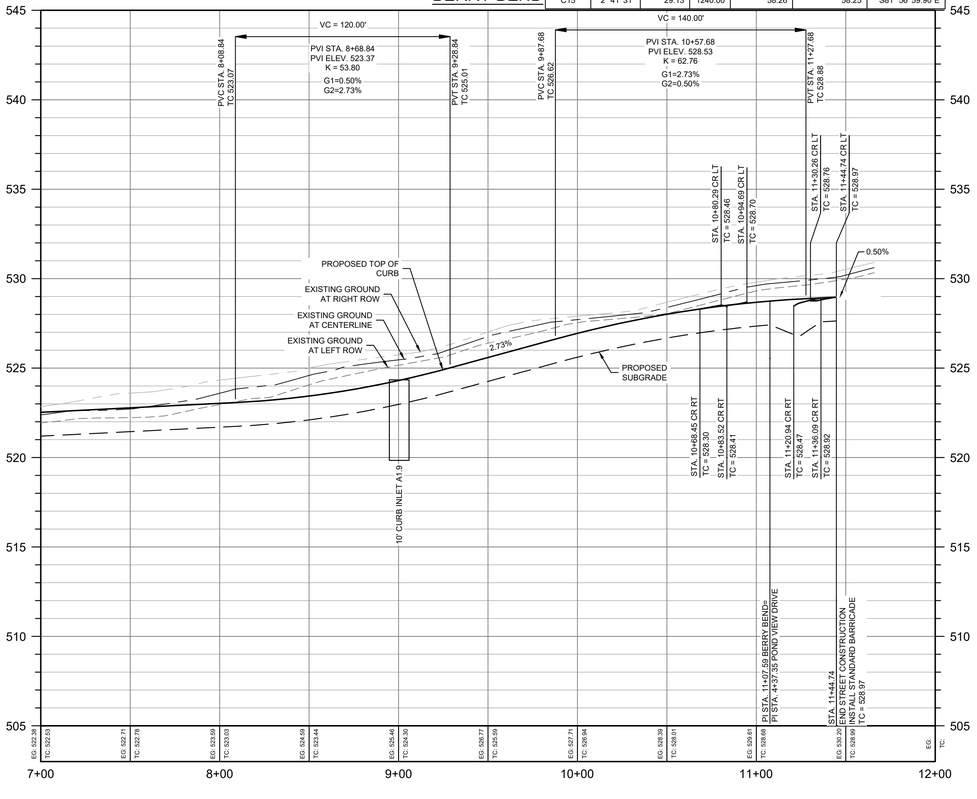
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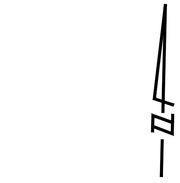
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CURVE DATA						
NUMBER	DELTA	TANGENT	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING
C3	22° 51' 23"	250.66	1240.00	494.66	491.38	N85° 16' 33.38"E
C15	2° 41' 31"	29.13	1240.00	58.26	58.25	S81° 56' 59.90"E





LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- EASEMENTS
- 28 LOT NUMBER
- ROAD CENTERLINE
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- CURB & GUTTER (SPILL CURB)
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- CURB INLET
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PROFILE LEGEND

- PROPOSED GRADE LINE
- PROPOSED SUBGRADE
- EXISTING GROUND @ CENTERLINE
- EXISTING GROUND @ LEFT ROW
- EXISTING GRADE @ RIGHT ROW

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NO.	BY	DATE	REVISION DESCRIPTION

HARVEST RIDGE
SECTION 5

BERRY BEND (STA. 7+00 TO END)

PROJECT NO: 1636-11996

DESIGNED BY: MRC

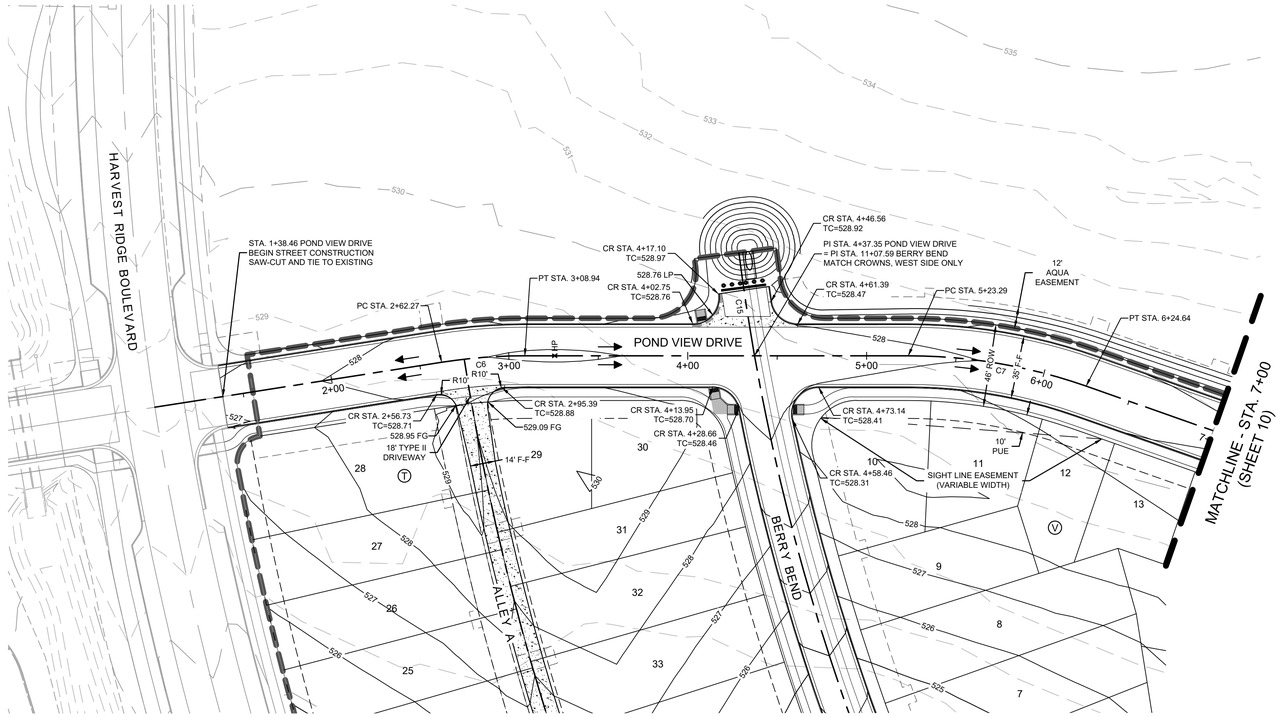
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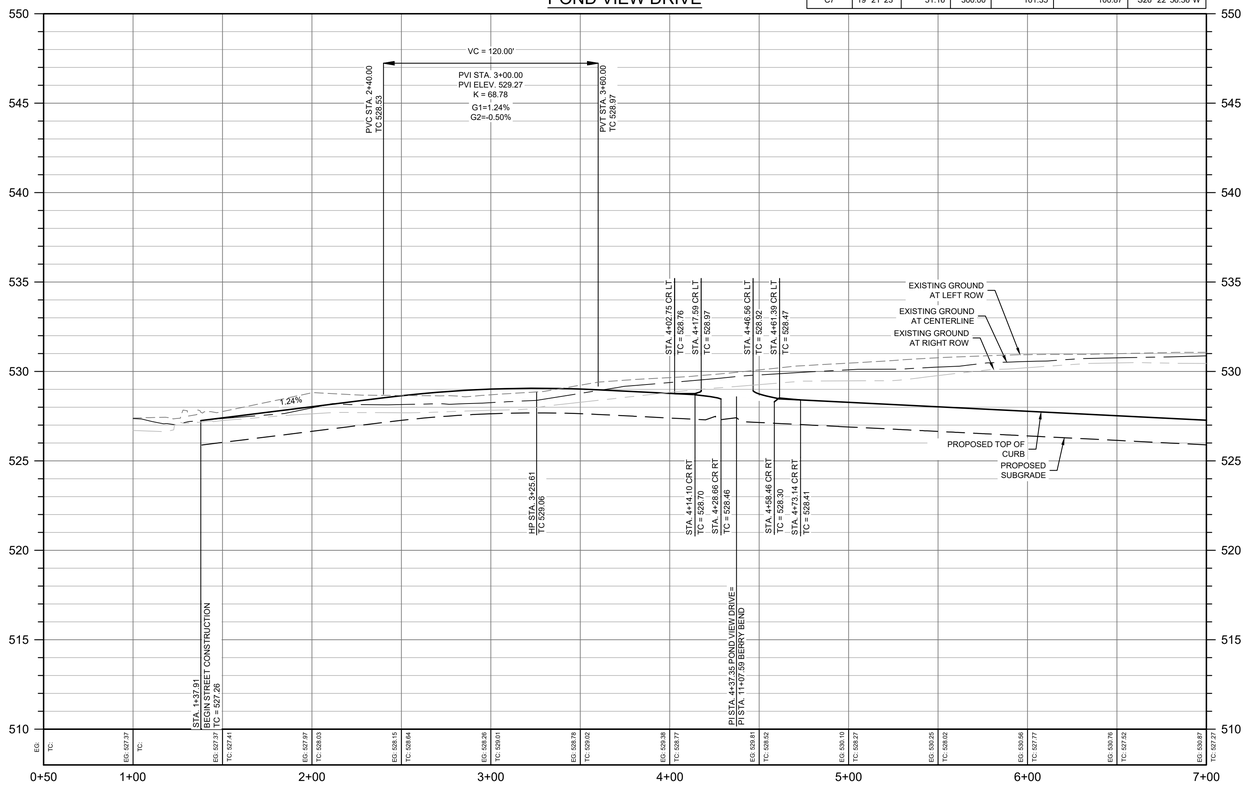
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CURVE DATA

NUMBER	DELTA	TANGENT	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING
C6	8° 54' 48"	23.38	300.00	46.67	46.62	S12° 14' 50.88"W
C7	19° 21' 23"	51.16	300.00	101.35	100.87	S26° 22' 56.36"W

POND VIEW DRIVE



SCALE: 1" = 40'
GRAPHIC SCALE IN FEET
0 20' 40' 80'

LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- EASEMENTS
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PROFILE LEGEND

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NO.	BY	DATE	REVISION DESCRIPTION

HARVEST RIDGE
SECTION 5

POND VIEW DRIVE
(STA. 1+00 TO 7+00)

PROJECT NO: 1636-11996

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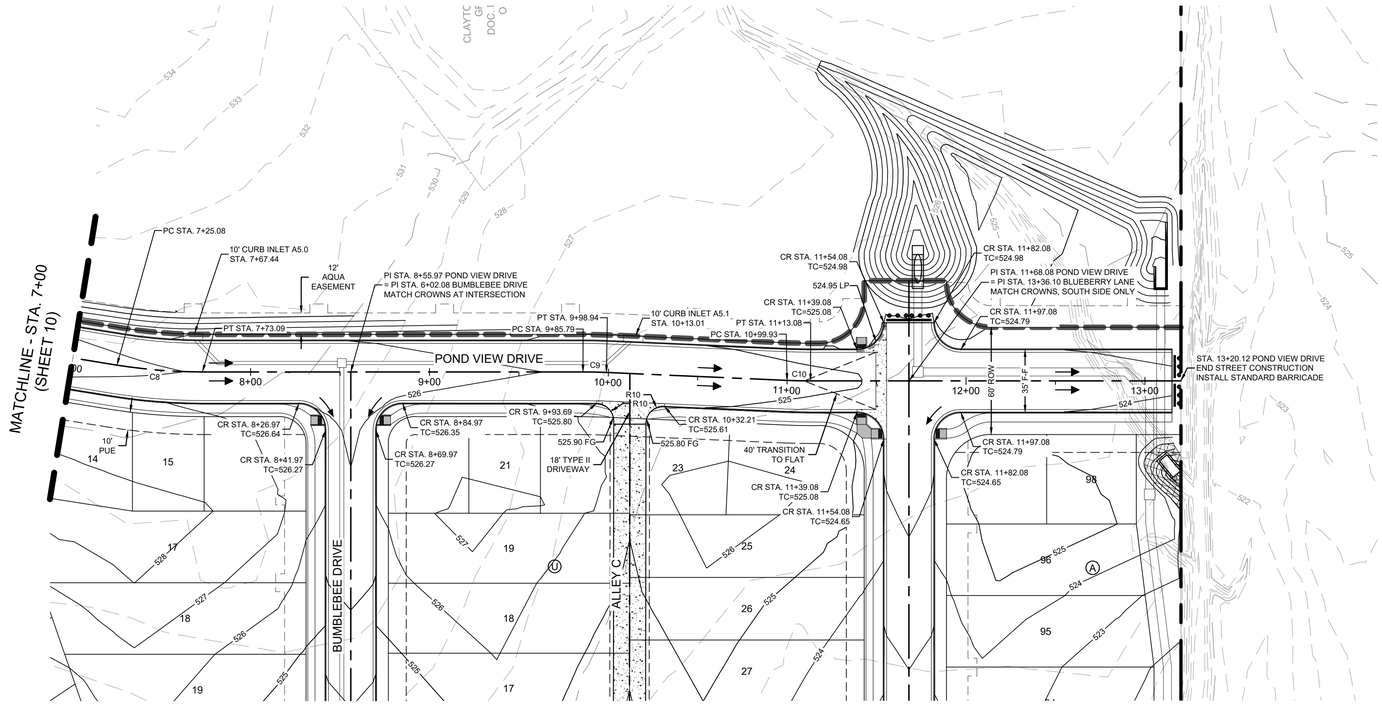
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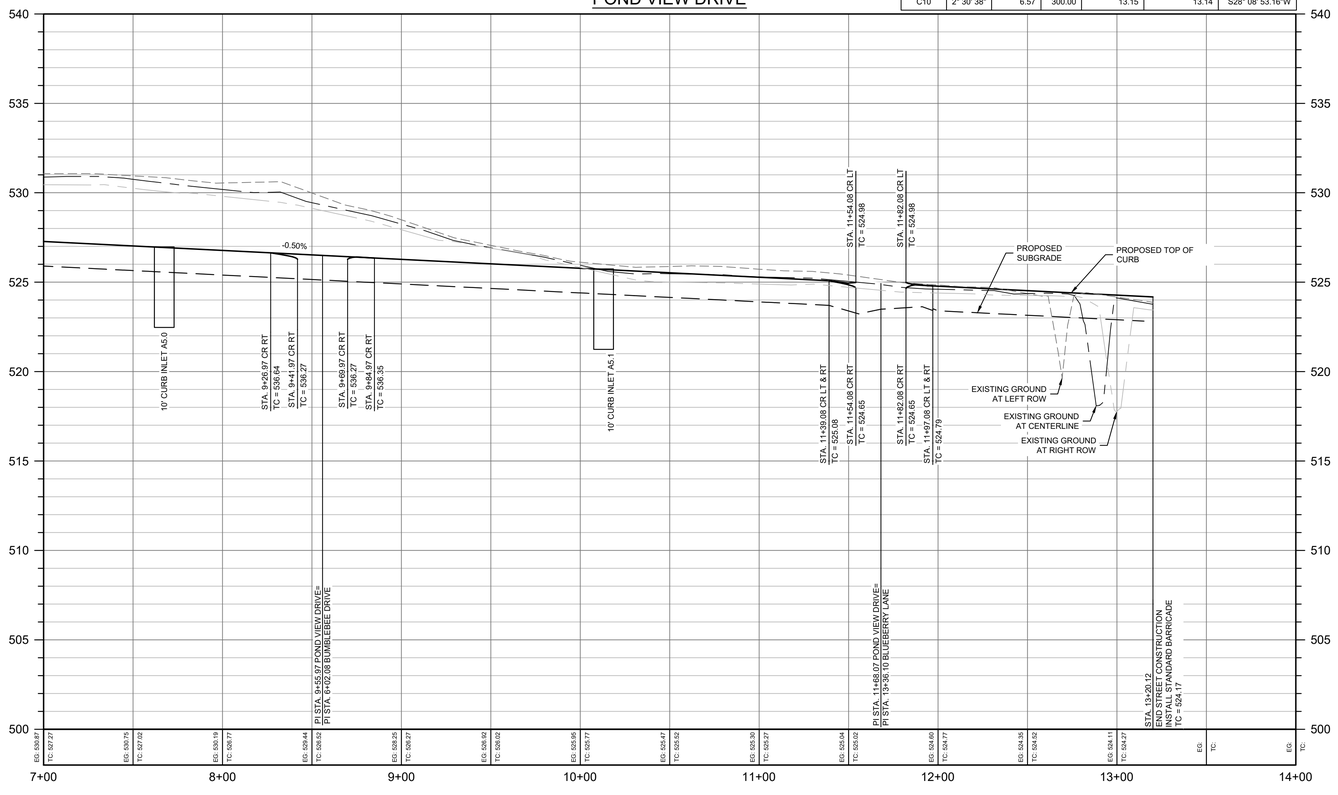
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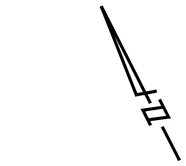
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CURVE DATA						
NUMBER	DELTA	TANGENT	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING
C8	9° 10' 04"	24.05	300.00	48.00	47.95	S31° 28' 36.02"W
C9	2° 30' 38"	6.57	300.00	13.15	13.14	S28° 08' 53.16"W
C10	2° 30' 38"	6.57	300.00	13.15	13.14	S28° 08' 53.16"W





SCALE: 1" = 40'
GRAPHIC SCALE IN FEET
0 20' 40' 80'

LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- EASEMENTS
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- PROPOSED GRADE LINE
- PROPOSED SUBGRADE
- EXISTING GROUND @ CENTERLINE
- EXISTING GROUND @ LEFT ROW
- EXISTING GRADE @ RIGHT ROW

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HARVEST RIDGE
SECTION 5

POND VIEW DRIVE
(STA. 7+00 TO END)

PROJECT NO: 1636-11996

DESIGNED BY: MRC

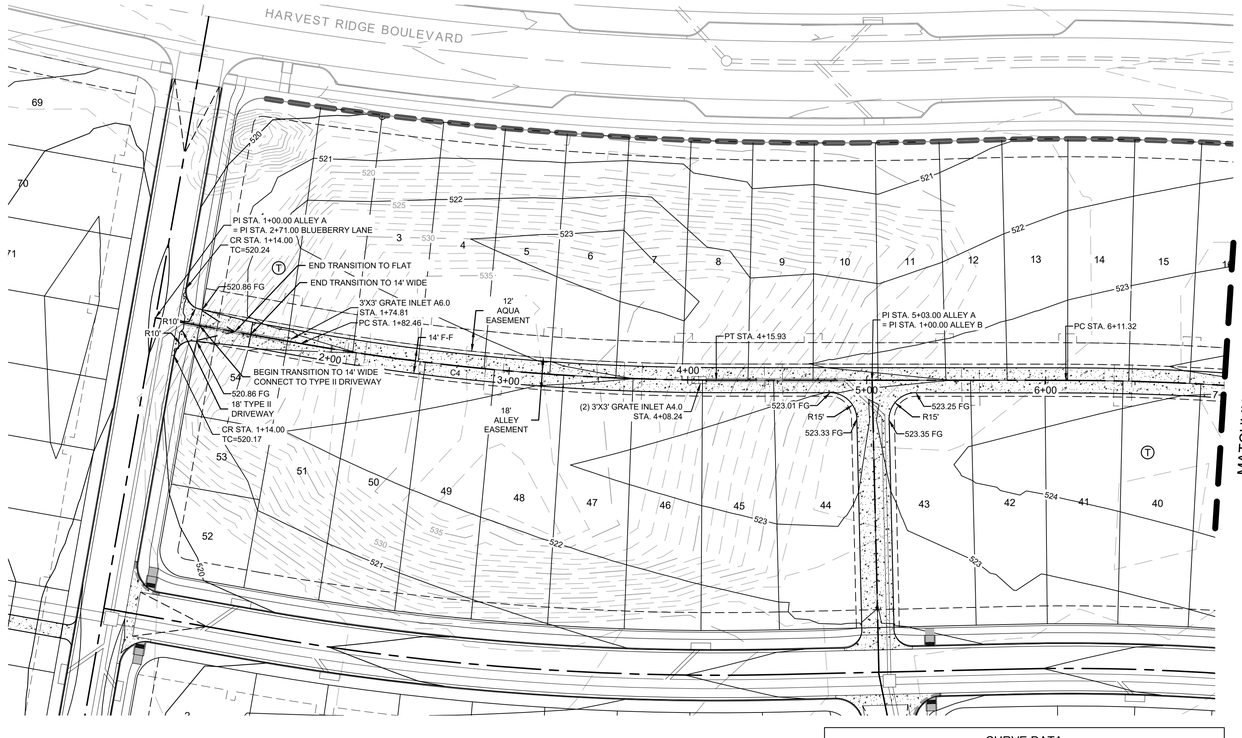
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CHECKED BY: JAB

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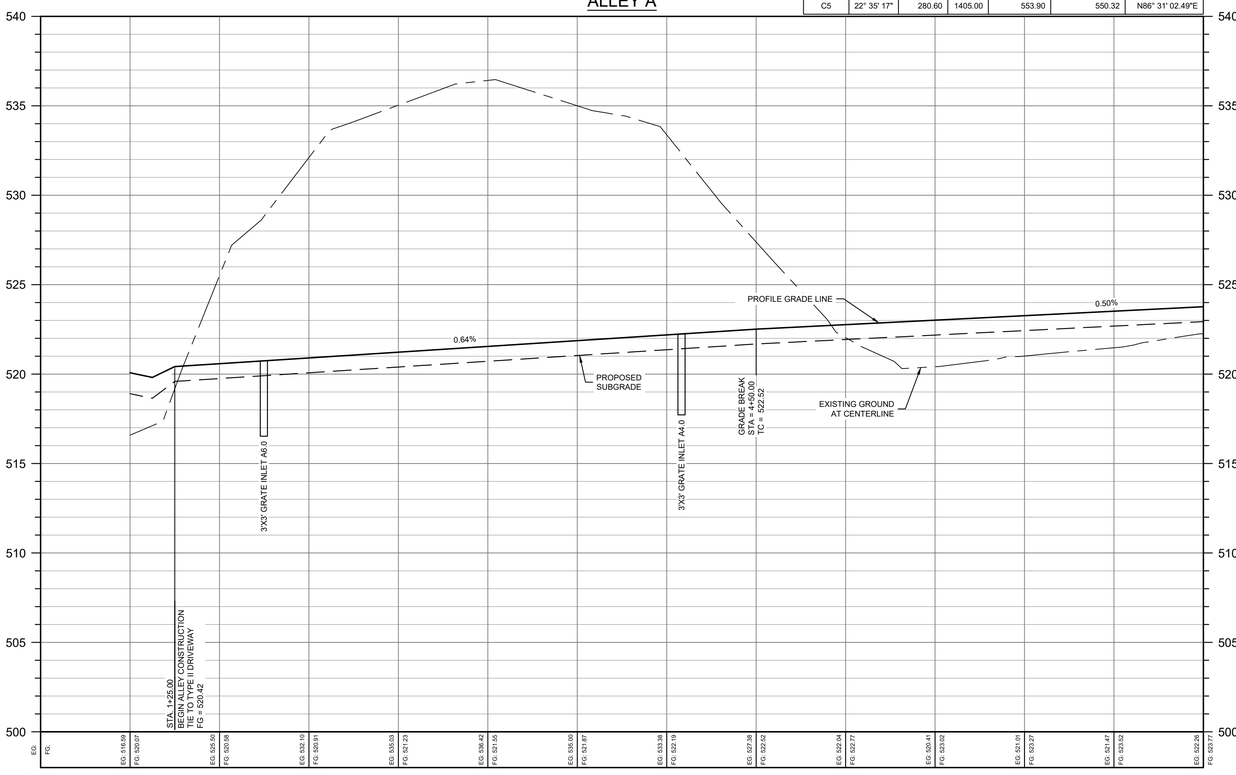
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CURVE DATA

NUMBER	DELTA	TANGENT	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING
C4	10° 01' 11"	117.03	1335.00	233.46	233.17	N80° 13' 59.55"E
C5	22° 35' 17"	280.60	1405.00	553.90	550.32	N86° 31' 02.49"E

ALLEY A





SCALE: 1" = 40'
GRAPHIC SCALE IN FEET
0 20' 40' 80'

LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- EASEMENTS
- 28 LOT NUMBER
- ROAD CENTERLINE
- CURB & GUTTER (CATCH CURB)
- CURB & GUTTER (SPILL CURB)
- DIRECTION OF FLOW
- CURB INLET
- SIDEWALK TO BE CONSTRUCTED WITH SUBDIVISION IMPROVEMENTS
- SIDEWALK TO BE CONSTRUCTED BY HOMEBUILDER
- STREET END BARRICADE (S-11)
- SIDEWALK SET BACK FROM CURB DIRECTIONAL RAMPS (M-2)
- CONCRETE VALLEY GUTTER

NOTES:
1. ALL CURB RETURN RADII TO BE 15' UNLESS OTHERWISE NOTED.
2. THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE ASSOCIATED WITH THE CONTRACTORS FAILURE TO LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
3. ALL PAVEMENT MARKINGS SHALL BE PER THE CURRENT "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.): PART III MARKINGS", ALL STRIPING TO BE THERMOPLASTIC.
4. ALL CURB ON THE UPSTREAM SIDE OF A VALLEY GUTTER SHALL BE SPILL CURB.

PROFILE LEGEND

- PROPOSED GRADE LINE
- PROPOSED SUBGRADE
- EXISTING GROUND @ CENTERLINE
- EXISTING GROUND @ LEFT ROW
- EXISTING GRADE @ RIGHT ROW

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HARVEST RIDGE
SECTION 5

ALLEY A (STA. 1+00 TO 7+00)

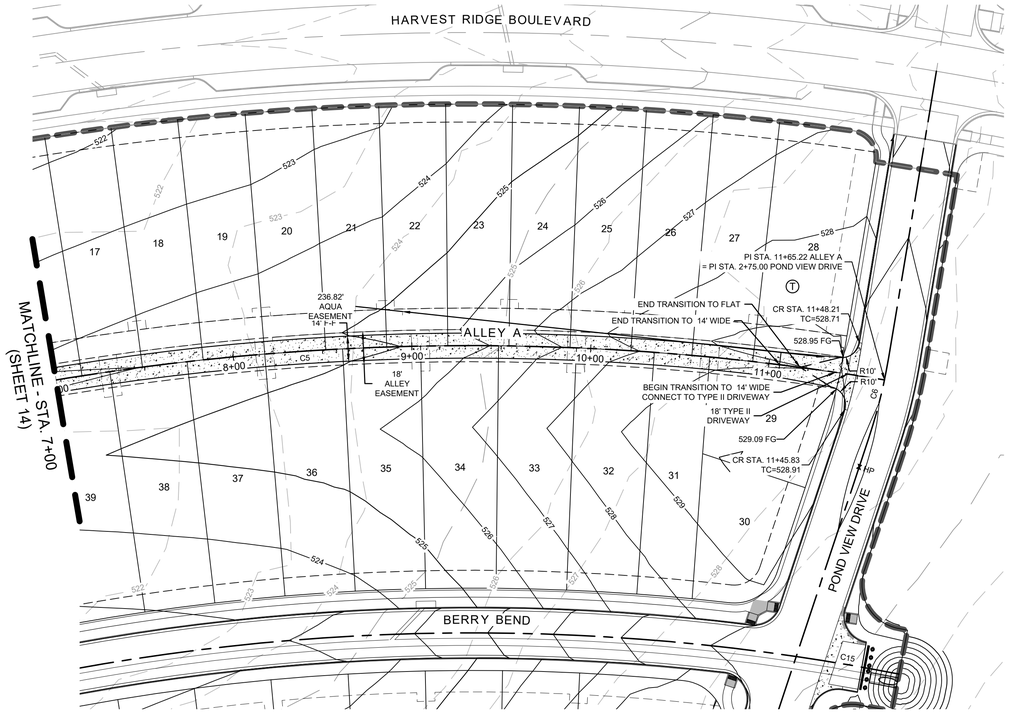
PROJECT NO: 1636-11996
DESIGNED BY: MRC
DRAWN BY: DPG/BE
CHECKED BY: JAB

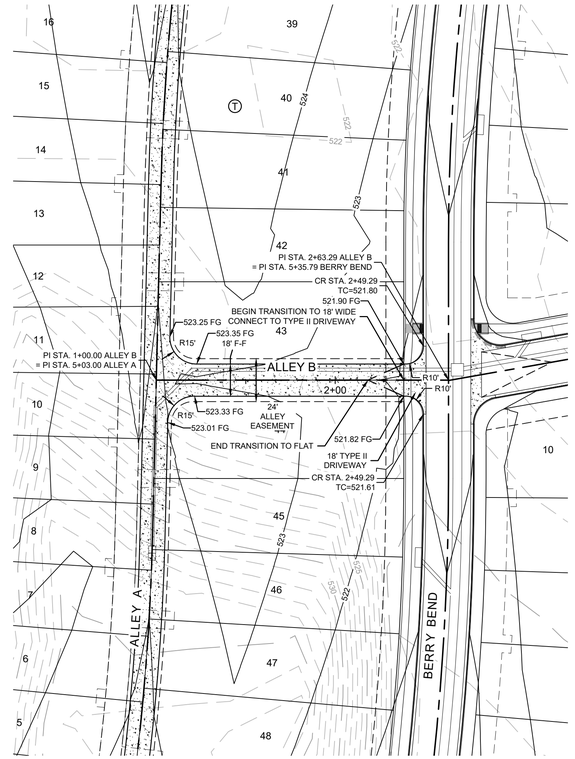
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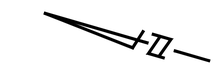
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SHEET 14 OF 61

H:\PROJECTS\1636 - BROHN HOMES\11996 - HARVEST RIDGE - SEC 5\CAD\SHEET S\11996-C-ROAD.DWG DATE: 1/7/2026 11:16:15 AM BY: DPEREZ-GUERRA







LEGEND

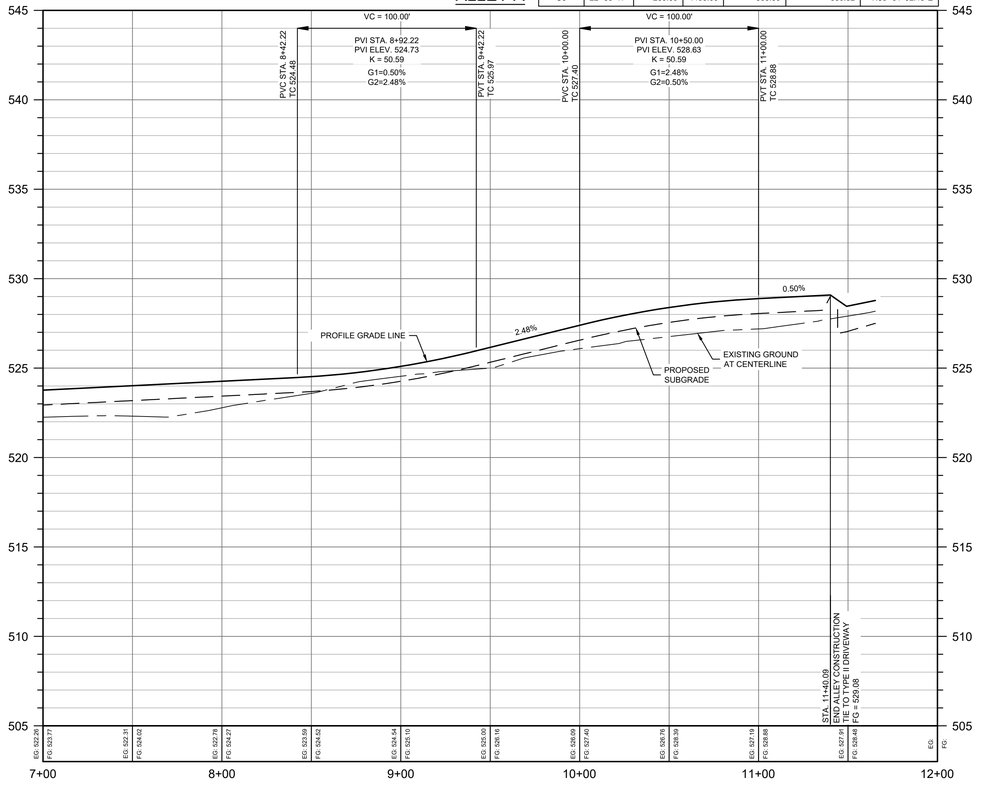
- PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- EASEMENTS
- 28 LOT NUMBER
- ROAD CENTERLINE
- CURB & GUTTER (CATCH CURB)
- CURB & GUTTER (SPILL CURB)
- DIRECTION OF FLOW
- CURB INLET
- SIDEWALK TO BE CONSTRUCTED WITH SUBDIVISION IMPROVEMENTS
- SIDEWALK TO BE CONSTRUCTED BY HOMEBUILDER
- STREET END BARRICADE (S-11)
- SIDEWALK SET BACK FROM CURB DIRECTIONAL RAMPS (M-2)
- CONCRETE VALLEY GUTTER

NOTES:
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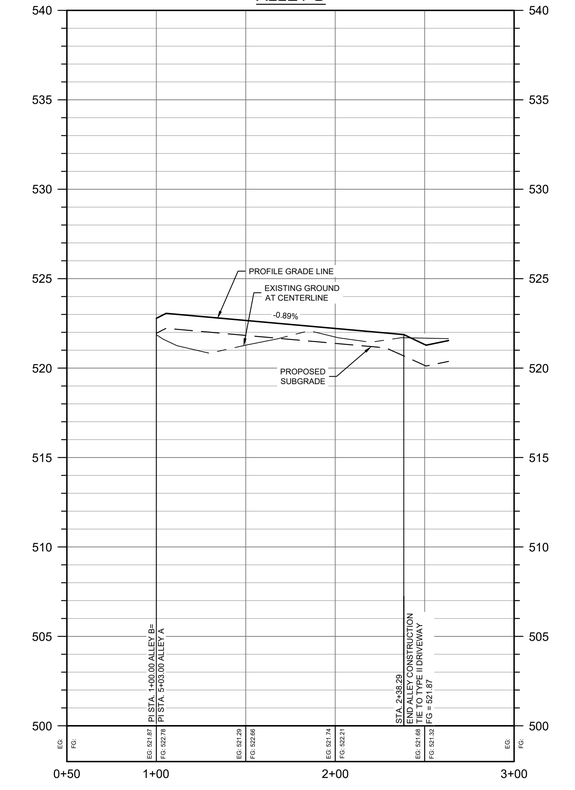
CURVE DATA

NUMBER	DELTA	TANGENT	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING
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C5	22° 35' 17"	280.60	1405.00	553.90	550.32	N86° 31' 02.49"E

ALLEY A



ALLEY B



PROFILE LEGEND

- PROPOSED GRADE LINE
- PROPOSED SUBGRADE
- EXISTING GROUND @ CENTERLINE
- EXISTING GROUND @ LEFT ROW
- EXISTING GRADE @ RIGHT ROW

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NO.	BY	DATE	REVISION DESCRIPTION

HARVEST RIDGE
SECTION 5

ALLEY A (STA. 7+00 TO END)
AND ALLEY B (1+00 TO END)

PROJECT NO: 1636-11996

DESIGNED BY: MRC

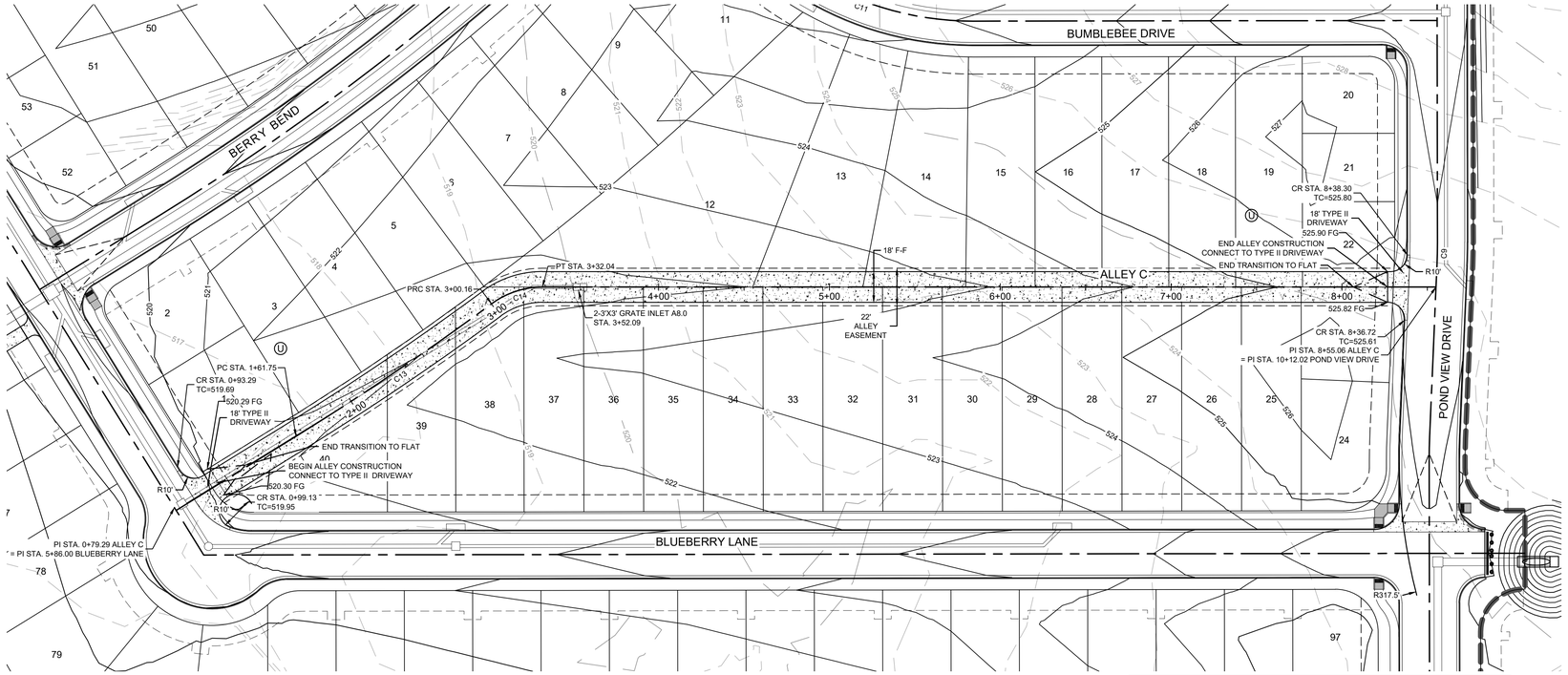
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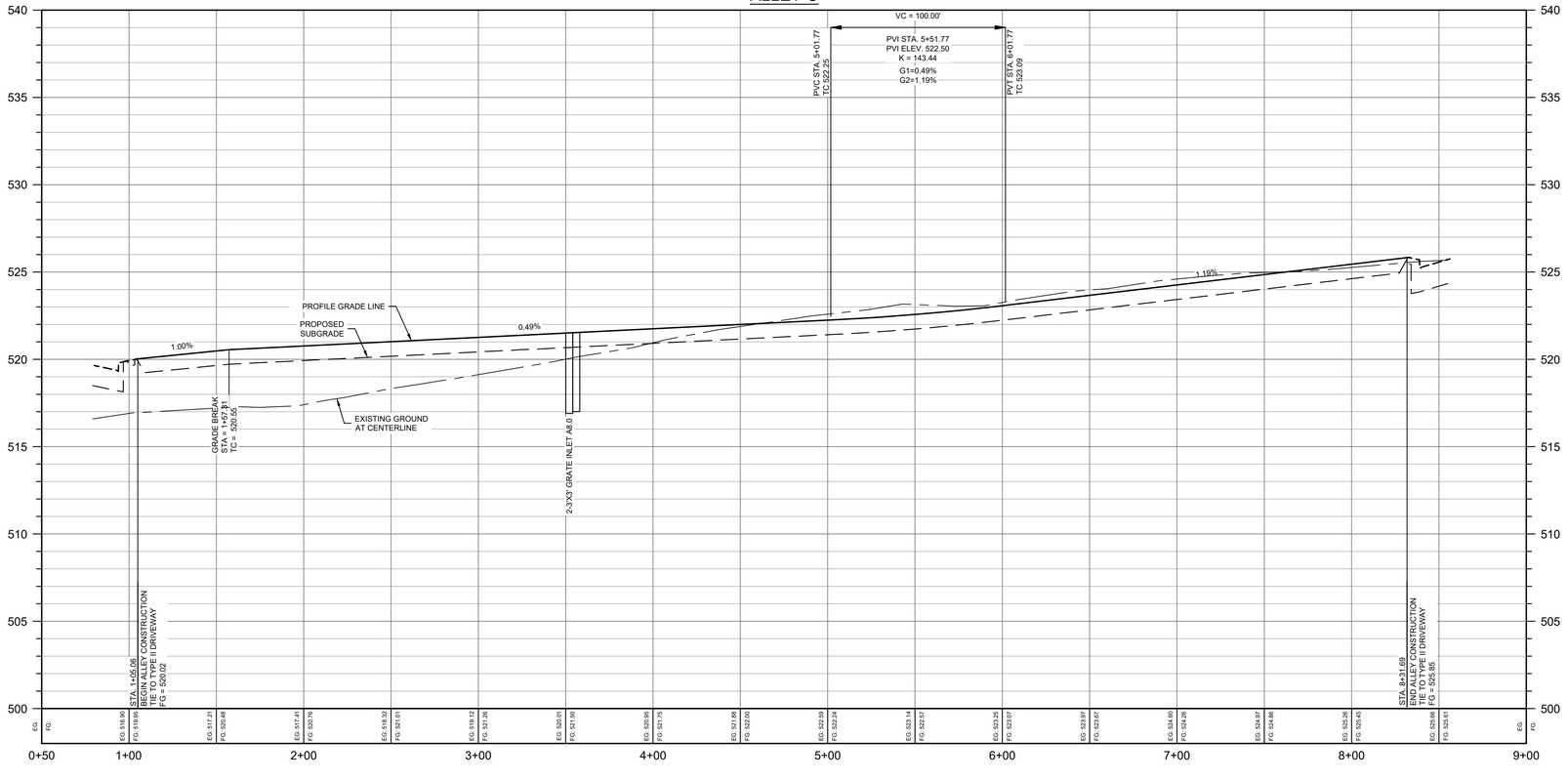
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CURVE DATA						
NUMBER	DELTA	TANGENT	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING
C13	4° 48' 01"	69.24	1652.00	138.41	138.37	N82° 50' 34.39"E
C14	36° 31' 40"	16.50	50.00	31.84	31.34	S81° 17' 36.21"E



NOTES:
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4. ALL CURB ON THE UPSTREAM SIDE OF A VALLEY GUTTER SHALL BE SPILL CURB.

SCALE: 1" = 40'
GRAPHIC SCALE IN FEET
0 20' 40' 80'

LEGEND
- PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- EASEMENTS
- 28 LOT NUMBER
- ROAD CENTERLINE
- CURB & GUTTER (CATCH CURB)
- CURB & GUTTER (SPILL CURB)
- DIRECTION OF FLOW
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- SIDEWALK TO BE CONSTRUCTED WITH SUBDIVISION IMPROVEMENTS
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- STREET END BARRICADE (S-11)
- SIDEWALK SET BACK FROM CURB DIRECTIONAL RAMPS (M-2)
- CONCRETE VALLEY GUTTER

PROFILE LEGEND
- PROPOSED GRADE LINE
- PROPOSED SUBGRADE
- EXISTING GROUND @ CENTERLINE
- EXISTING GROUND @ LEFT ROW
- EXISTING GRADE @ RIGHT ROW

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HARVEST RIDGE
SECTION 5

ALLEY C (STA. 1+00 TO END)

PROJECT NO: 1636-11996

DESIGNED BY: MRC

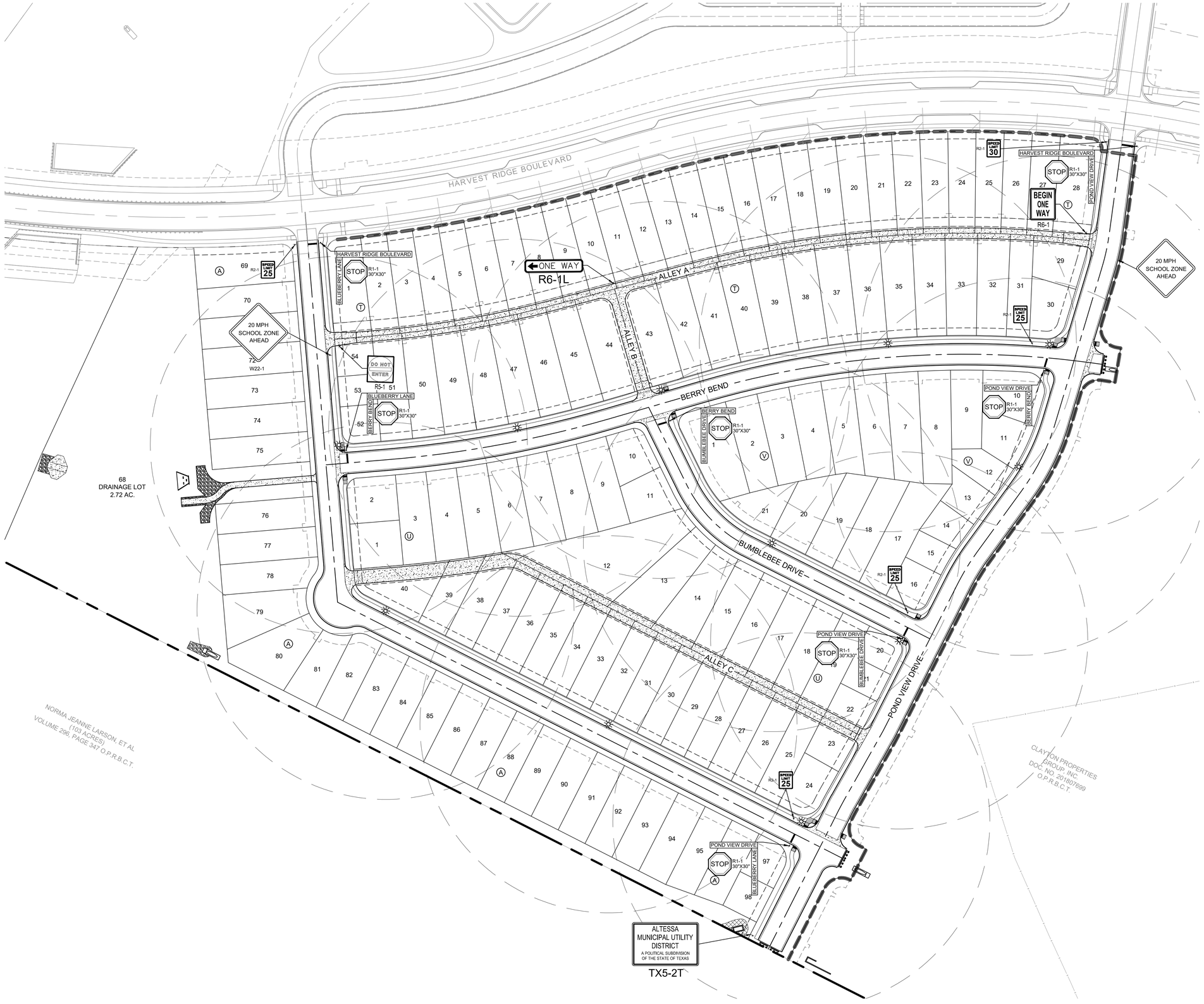
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SCALE: 1" = 60'

GRAPHIC SCALE IN FEET

0 30' 60' 120'

LEGEND

STREET NAME D3-1

STREET NAME STOP — PROPOSED STOP SIGN W/ STREET NAME SIGNS

STREET END BARRICADE

PROPOSED SIGN

12" STOP BAR

PROPOSED BLUE FIRE HYDRANT DELINEATOR

STREET LIGHT

NOTES:

1. THE STREET NAMES SHALL BE DISPLAYED ON STANDARD INTERSECTION STREET MARKERS ERECTED AT EACH STREET INTERSECTION (SEE DETAIL SHEETS FOR MORE INFORMATION).
2. ALL PAVEMENT MARKINGS, PAINT, TRAFFIC BUTTONS, AND TRAFFIC CONTROL SHALL CONFORM TO CURRENT TEXAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS AND THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD).
3. LANE CLOSURES ARE ONLY ALLOWED FROM 9AM TO 4PM MONDAY THROUGH FRIDAY. LANE CLOSURES ARE NOT ALLOWED IF PAVEMENT IS WET OR ICY.
4. CONSTRUCTION WORK WITHIN THE CITY OF ELGIN R.O.W. MUST BE SCHEDULED MONDAY THROUGH FRIDAY DURING DAYLIGHT HOURS.
5. CONTRACTOR TO CONTACT THE CITY OF ELGIN AT LEAST 48 HOURS PRIOR TO WORKING IN THE R.O.W.
6. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR KEEPING THE ROADWAY FREE OF MUD, ROCKS, AND OTHER FOREIGN DEBRIS. IF THE ROADWAY BECOMES UNSAFE FOR TRAFFIC THE CONTRACTOR MUST CLEAN THE ROADWAY IMMEDIATELY AND SUSPEND WORK IF NECESSARY.
7. THE GENERAL CONTRACTOR MUST PROVIDE ONSITE PARKING DURING ALL PHASES OF CONSTRUCTION. PARKING WILL NOT BE ALLOWED WITHIN THE CITY R.O.W.
8. THE CONTRACTOR SHALL PROVIDE 4:1 SAFETY WEDGE AT EDGE OF PAVEMENT DROP-OFFS 2 INCHED OR MORE LEFT OPEN OVERNIGHT.
9. REFERENCES TO FIRE LANE PAINTING, SIGNAGE, AND MARKERS PER 2021 IFC, AND AMENDMENTS.
10. NEWLY MANDATED STREET SIGN NAMES MUST HAVE AN UPPER CASE FIRST LETTER AND THE REMAINING LETTERS LOWER CASE THE PLATE FOR THE NAME SHOULD BE 9" TALL AND THE LETTERS THEMSELVES SHOULD BE 6" TALL.
11. STREET NAME SIGNS SHALL BE GREEN VINYL LETTER ON A WHITE REFLECTIVE BLANK PER BASTROP COUNTY REQUIREMENTS.

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HARVEST RIDGE SECTION 5

SIGNAGE AND STRIPING PLAN

PROJECT NO: 1636-11996

DESIGNED BY: MRC

DRAWN BY: DPG/BE

CHECKED BY: JAB

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HARVEST RIDGE BOULEVARD

BERRY BEND

BUMBLEBEE DRIVE

POND VIEW DRIVE

ALLEY A

ALLEY B

ALLEY C

PROPOSED 1% ANNUAL CHANCE FEMA FLOODPLAIN PER CLOMR NO. 21-06-2267R

68
DRAINAGE LOT
2.72 AC.

NORMA JEANNE LARSON, ET AL
(103 ACRES)
VOLUME 286, PAGE 347 O.P.R.B.C.T.

CLAYTON PROPERTIES GROUP, INC.
DOC. NO. 20190769
O.P.R.B.C.T.

SCALE: 1" = 60'
GRAPHIC SCALE IN FEET
0 30' 60' 120'

LEGEND

- PROPERTY BOUNDARY
- EXISTING MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- REMOVED TREES
- PROTECTED TREES

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HARVEST RIDGE SECTION 5

GRADING PLAN

PROJECT NO: 1636-11996

DESIGNED BY: MRC

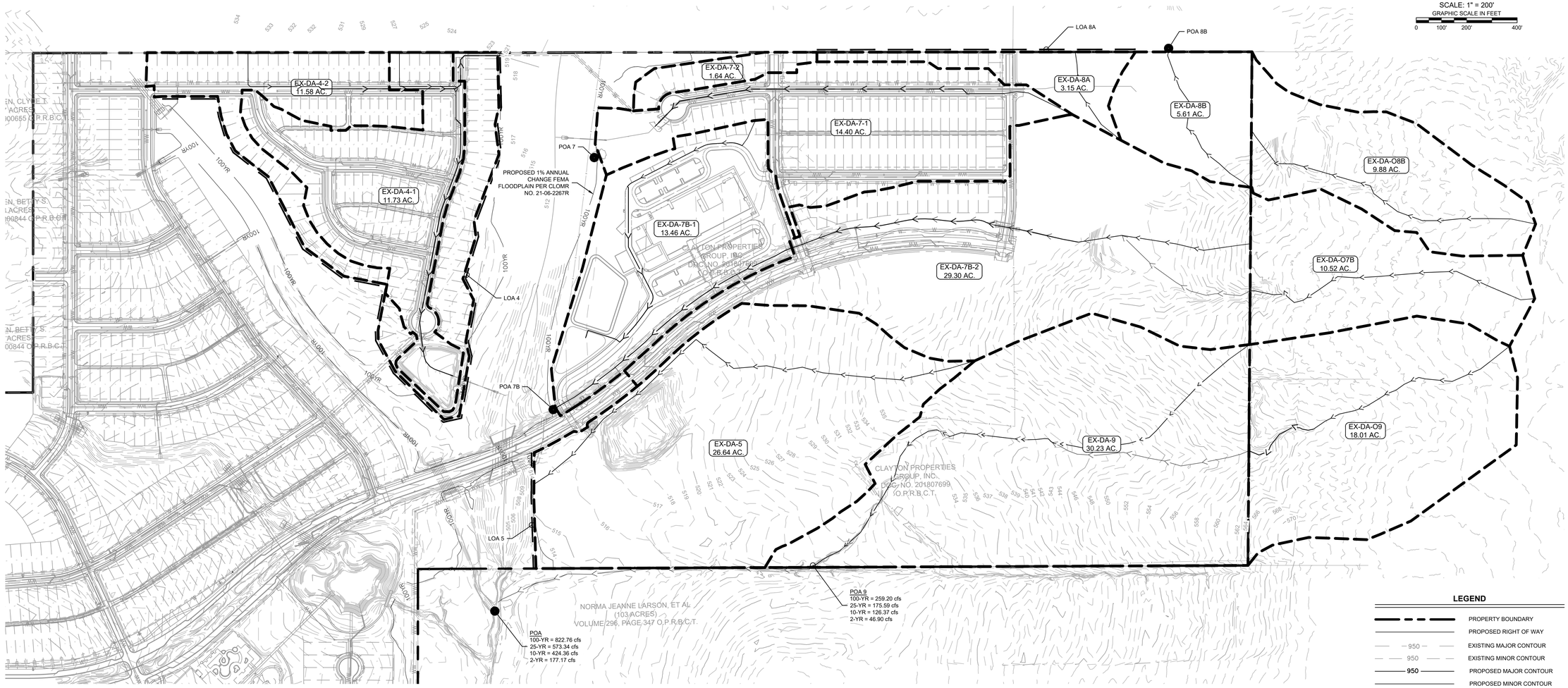
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LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- 950 EXISTING MAJOR CONTOUR
- 950 EXISTING MINOR CONTOUR
- 950 PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- STORM SEWER FLOW DIRECTION
- PROPOSED MANHOLE
- PROPOSED BOX MANHOLE
- 10' CURB INLET
- 15' CURB INLET
- TIME OF CONCENTRATION - SHEET FLOW
- TIME OF CONCENTRATION - SHALLOW CONCRETRATED FLOW
- TIME OF CONCENTRATION - CHANNEL OR PIPE FLOW

NOTES:
1, ALL DRAINAGE BASIN DELINEATION IS ASSUMING FINAL BUILD OUT OF SUBDIVISION.

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HARVEST RIDGE
SECTION 5

PRE-DEVELOPED
HYDROLOGY MAP

PROJECT NO: 1636-11996

DESIGNED BY: MRC

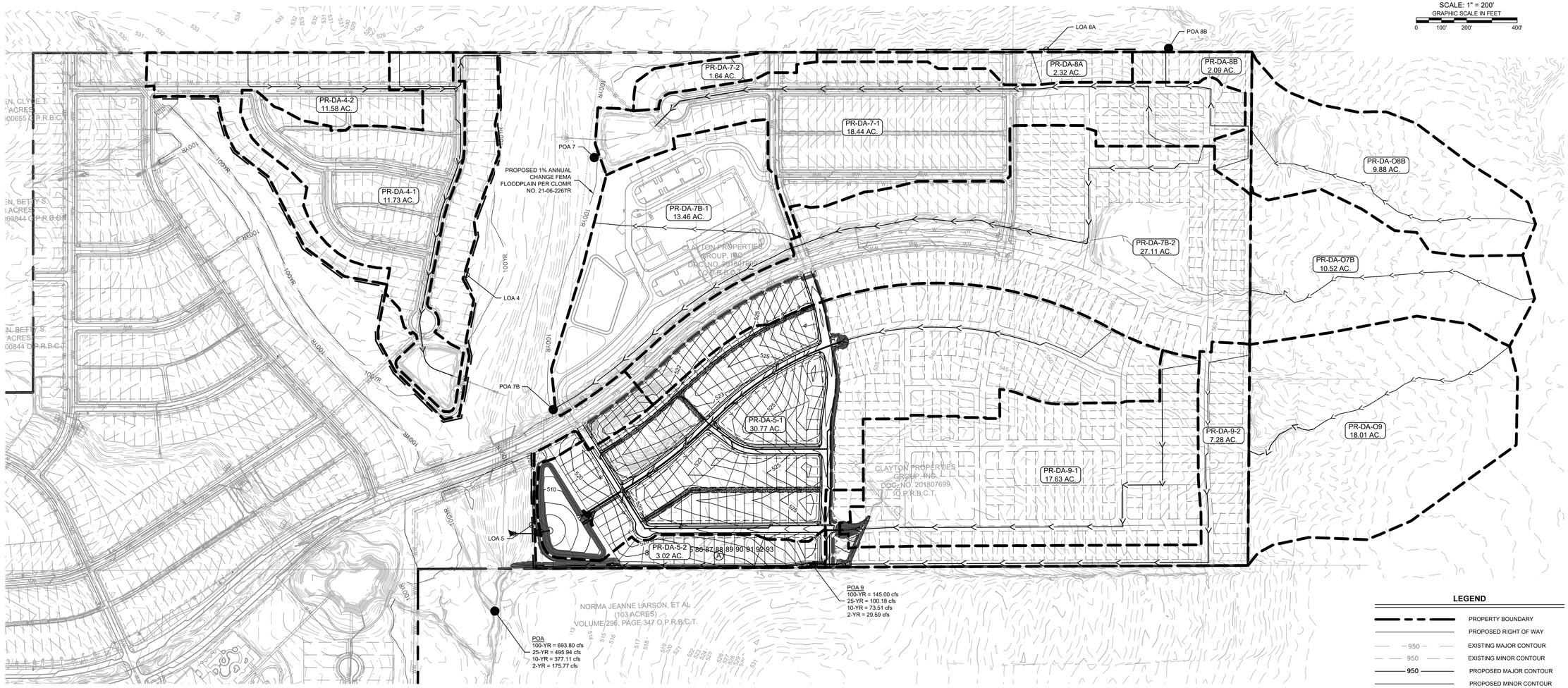
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LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- STORM SEWER FLOW DIRECTION
- PROPOSED MANHOLE
- PROPOSED BOX MANHOLE
- 10' CURB INLET
- 15' CURB INLET
- TIME OF CONCENTRATION - SHEET FLOW
- TIME OF CONCENTRATION - SHALLOW CONCRETRATED FLOW
- TIME OF CONCENTRATION - CHANNEL OR PIPE FLOW

NOTES:
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HARVEST RIDGE
SECTION 5

POST-DEVELOPED
HYDROLOGY MAP

PROJECT NO: 1636-11996

DESIGNED BY: MRC

DRAWN BY: DPG/BE

CHECKED BY: JAB

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SCALE: 1" = 80'
GRAPHIC SCALE IN FEET
0 40' 80' 160'

LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- STORM SEWER FLOW DIRECTION
- PROPOSED MANHOLE
- PROPOSED BOX MANHOLE
- 10' CURB INLET
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HARVEST RIDGE
SECTION 5

INLET BASIN DRAINAGE AREA MAP
(SHEET 1 OF 2)

PROJECT NO: 1636-11996

DESIGNED BY: MRC

DRAWN BY: DPG/BE

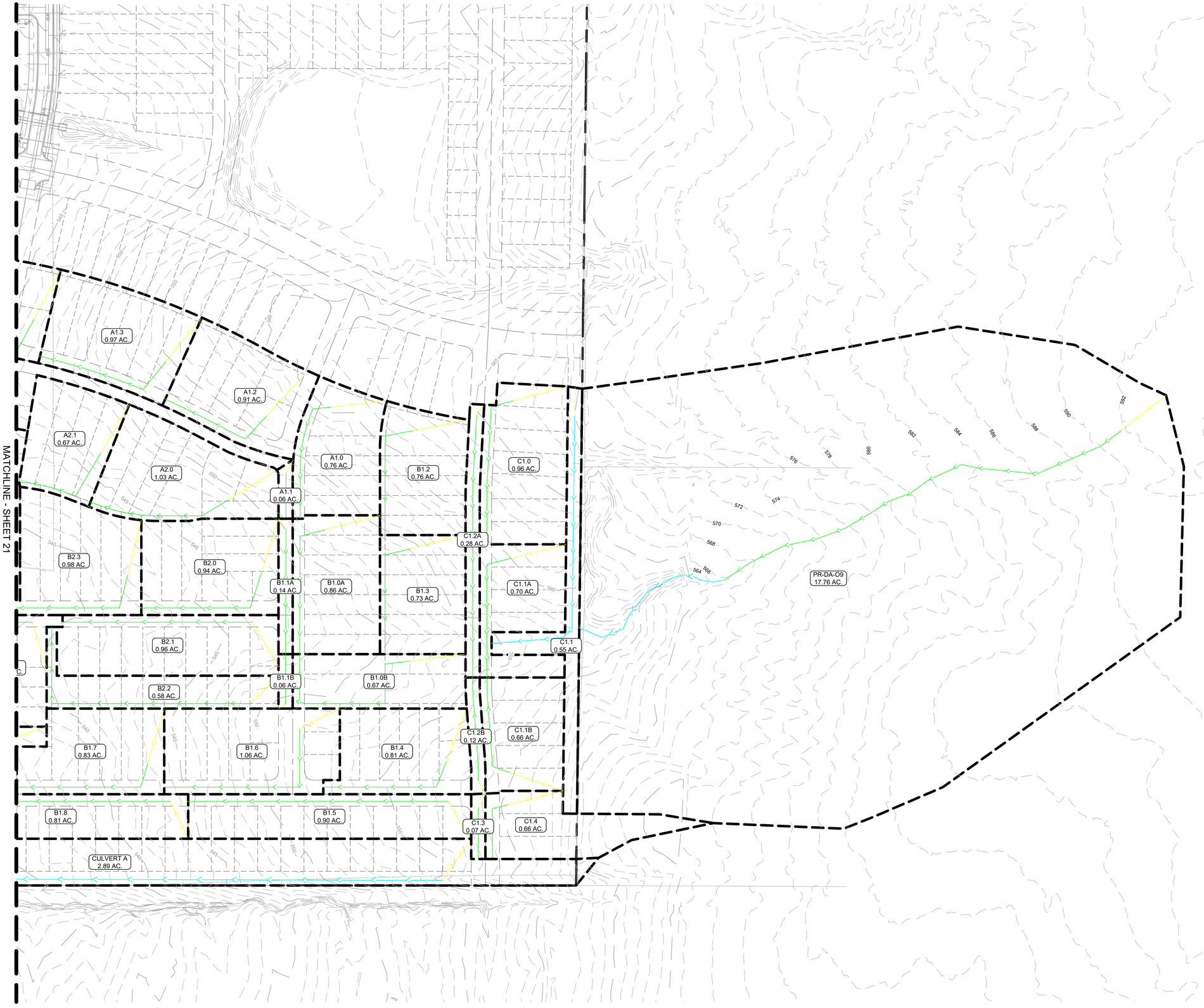
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THESE PLANS ARE RELEASED UNDER THE AUTHORITY OF J. ADAM BERRY, PE, ON 01/13/2026, FOR THE PURPOSES OF REVIEW AND ARE NOT TO BE USED FOR BIDDING OR CONSTRUCTION

SHEET 21 OF 61

H:\PROJECTS\1636 - BROHN HOMES\11996 - HARVEST RIDGE - SEC 5\CAD\SHEETS\11996-C-DAM.DWG DATE: 1/7/2026 11:17:43 AM BY: DPEREZ-GUERRA



SCALE: 1" = 80'

GRAPHIC SCALE IN FEET

0 40' 80' 160'

LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- STORM SEWER FLOW DIRECTION
- PROPOSED MANHOLE
- PROPOSED BOX MANHOLE
- 10' CURB INLET
- 15' CURB INLET
- TIME OF CONCENTRATION - SHEET FLOW
- TIME OF CONCENTRATION - SHALLOW CONCRETRATED FLOW
- TIME OF CONCENTRATION - CHANNEL OR PIPE FLOW

NOTES:
1. ALL DRAINAGE BASIN DELINEATION IS ASSUMING FINAL BUILD OUT OF SUBDIVISION.

PROFILE LEGEND

- FINISHED GRADE
- PROPOSED SUBGRADE
- EXISTING GROUND
- 25YR HGL
- 100 YR HGL
- PROPOSED FILL

GRAY CIVIL, INC.
512-452-0371
gray-civil.com
8834 N. Capital of Texas Highway, Suite 140
5316 W. US Highway 290 Service Road, Suite 220
TBPELS FIRM # 2946

GRAY

NO.	BY	DATE	REVISION DESCRIPTION

HARVEST RIDGE
SECTION 5

INLET BASIN DRAINAGE AREA MAP
(SHEET 2 OF 2)

PROJECT NO: 1636-11996

DESIGNED BY: MRC

DRAWN BY: DPG/BE

CHECKED BY: JAB

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H:\PROJECTS\1636 - BROHN HOMES\11996 - HARVEST RIDGE - SEC 5\CAD\SHEETS\11996-C-DAM.DWG DATE: 1/7/2026 11:17:47 AM BY: DPEREZ-GUERRA

LAND USE TABLE

Condition	Drainage Area	Area (ft²)	Area (Acre)	Length of 29' Street (ft)	Length of 36' Street (ft)	Length of 37' Street (ft)	Length of 14' Alley (ft)	Length of 18' Alley (ft)	Length of 4' Sidewalk (ft)	Length of 5' Sidewalk (ft)	Impervious Area, Street	Additional Impervious Cover	Number of 31' Cottage Lots	Number of 35' Lots	Number of 40' Cottage Lots	Number of 40' Lots	Impervious Area, Lots (ft²)	Impervious Area (ft²)	Pervious Area (ft²)	Pervious Type	Impervious (%)	Pervious (%)	Runoff Coefficent			
																							2 Year	10 Year	25 Year	100 Year
EXISTING	X1.0	36,312	**0.83**	0	0	231	0	0	0	0	4,267	2,157	0.0	6.0	0.0	0.0	**11040**	**17464**	**18,848**	Grass (0-2%)	**48.09%**	**51.91%**	**0.47**	**0.53**	**0.57**	**0.65**
EXISTING	X1.1L	3,974	**0.09**	0	0	100	0	0	0	0	1,856	1,589	0.0	0.0	0.0	0.0	**0**	**3445**	**529**	Grass (0-2%)	**86.70%**	**13.30%**	**0.68**	**0.75**	**0.80**	**0.89**
EXISTING	X1.1R	20,219	**0.46**	0	0	500	0	0	0	0	9,255	6,438	0.0	0.0	0.0	0.0	**0**	**15693**	**4,526**	Grass (0-2%)	**77.61%**	**22.39%**	**0.63**	**0.70**	**0.75**	**0.83**
EXISTING	X1.2L	17,021	**0.39**	0	0	100	0	0	0	0	1,856	1,296	0.0	3.0	0.0	0.0	**5520**	**8672**	**8,349**	Grass (0-2%)	**50.95%**	**49.05%**	**0.49**	**0.55**	**0.59**	**0.67**
EXISTING	X1.2R	41,736	**0.96**	0	0	263	0	0	0	0	4,859	2,570	0.0	7.0	0.0	0.0	**12880**	**20309**	**21,427**	Grass (0-2%)	**48.66%**	**51.34%**	**0.47**	**0.53**	**0.58**	**0.66**
EXISTING	X2.0	79,041	**1.81**	0	166	504	0	0	0	131	12,968	4,655	0.0	11.0	0.0	0.0	**20240**	**37863**	**41,178**	Grass (0-2%)	**47.90%**	**52.10%**	**0.47**	**0.53**	**0.57**	**0.65**
EXISTING	X2.1	23,372	**0.54**	0	108	497	0	0	0	0	11,149	5,584	0.0	0.0	0.0	0.0	**0**	**16733**	**6,639**	Grass (0-2%)	**71.59%**	**28.41%**	**0.60**	**0.67**	**0.71**	**0.80**
EXISTING	K1.2	42,371	**0.97**	0	0	269	0	0	0	0	4,983	2,638	0.0	7.0	0.0	0.0	**12880**	**20501**	**21,870**	Grass (0-2%)	**48.38%**	**51.62%**	**0.47**	**0.53**	**0.58**	**0.66**
FUTURE	A1.0	33,185	**0.76**	259	0	0	128	0	0	0	5,549	0	0.0	4.0	0.0	1.0	**9830**	**15379**	**17,806**	Grass (0-2%)	**46.34%**	**53.66%**	**0.46**	**0.52**	**0.56**	**0.64**
FUTURE	A1.1	2,408	**0.06**	104	0	0	0	0	90	0	1,868	0	0.0	0.0	0.0	0.0	**0**	**1868**	**540**	Grass (0-2%)	**77.56%**	**22.44%**	**0.63**	**0.70**	**0.75**	**0.83**
FUTURE	A1.2	39,624	**0.91**	406	0	0	231	0	359	0	10,566	0	0.0	0.0	2.0	3.0	**9510**	**20076**	**19,548**	Grass (0-2%)	**50.67%**	**49.33%**	**0.48**	**0.54**	**0.59**	**0.67**
FUTURE	A1.3	42,039	**0.97**	232	0	0	0	0	236	0	4,301	0	0.0	0.0	0.0	6.0	**14820**	**19121**	**22,919**	Grass (0-2%)	**45.48%**	**54.52%**	**0.46**	**0.51**	**0.56**	**0.64**
FUTURE	A1.4	42,651	**0.98**	574	0	0	0	0	387	0	9,876	0	0.0	0.0	4.0	2.0	**9140**	**19016**	**23,635**	Grass (0-2%)	**44.59%**	**55.41%**	**0.45**	**0.51**	**0.55**	**0.63**
FUTURE	A1.5	48,059	**1.10**	1,042	0	0	0	0	109	0	15,540	0	5.0	0.0	4.0	0.0	**11200**	**26740**	**21,319**	Grass (0-2%)	**55.64%**	**44.36%**	**0.51**	**0.57**	**0.62**	**0.70**
FUTURE	A1.6	40,397	**0.93**	223	0	0	254	0	227	0	7,699	0	0.0	0.0	0.0	5.0	**12350**	**20049**	**20,348**	Grass (0-2%)	**49.63%**	**50.37%**	**0.48**	**0.54**	**0.58**	**0.66**
FUTURE	A1.7	39,670	**0.91**	537	0	0	0	0	103	0	8,200	0	4.0	0.0	3.5	0.0	**9275**	**17475**	**22,195**	Grass (0-2%)	**44.05%**	**55.95%**	**0.45**	**0.51**	**0.55**	**0.63**
FUTURE	A1.8	33,635	**0.77**	188	0	0	209	0	191	0	6,420	0	1.0	0.0	0.0	4.0	**11280**	**17700**	**15,935**	Grass (0-2%)	**52.62%**	**47.38%**	**0.49**	**0.56**	**0.60**	**0.68**
DEVELOPED	A1.9	25,075	**0.58**	207	112	0	0	0	207	112	6,406	0	1.0	0.0	1.0	3.0	**9860**	**16266**	**8,809**	Grass (0-2%)	**64.87%**	**35.13%**	**0.56**	**0.63**	**0.67**	**0.76**
DEVELOPED	A1.10	55,929	**1.28**	428	0	0	0	0	0	0	6,208	0	0.0	0.0	0.5	7.0	**17815**	**24023**	**31,906**	Grass (0-2%)	**42.95%**	**57.05%**	**0.44**	**0.50**	**0.54**	**0.62**
DEVELOPED	A1.11	55,358	**1.27**	464	0	0	0	141	469	0	11,150	0	0.0	0.0	0.0	11.0	**27170**	**38320**	**17,038**	Grass (0-2%)	**69.22%**	**30.78%**	**0.58**	**0.65**	**0.70**	**0.78**
DEVELOPED	A1.12	49,523	**1.14**	549	0	0	0	0	6	17	8,073	0	0.0	0.0	2.0	5.5	**15685**	**23758**	**25,765**	Grass (0-2%)	**47.97%**	**52.03%**	**0.47**	**0.53**	**0.57**	**0.65**
DEVELOPED	A1.13	29,638	**0.68**	261	0	0	0	0	257	0	4,815	0	0.0	0.0	0.0	6.0	**14820**	**19635**	**10,003**	Grass (0-2%)	**66.25%**	**33.75%**	**0.57**	**0.63**	**0.68**	**0.76**
FUTURE	A2.0	44,874	**1.03**	0	0	0	330	0	0	0	4,616	0	1.0	4.0	2.0	0.0	**10860**	**15476**	**29,398**	Grass (0-2%)	**34.49%**	**65.51%**	**0.40**	**0.45**	**0.49**	**0.57**
FUTURE	A2.1	29,244	**0.67**	0	0	0	131	0	0	0	1,840	0	0.0	4.0	0.0	0.0	**7360**	**9200**	**20,044**	Grass (0-2%)	**31.46%**	**68.54%**	**0.38**	**0.43**	**0.48**	**0.55**
FUTURE	A2.2	17,517	**0.40**	226	0	0	52	0	222	0	4,888	0	0.0	0.0	5.0	0.0	**5250**	**10138**	**7,378**	Grass (0-2%)	**57.88%**	**42.12%**	**0.52**	**0.59**	**0.63**	**0.71**
FUTURE	A2.3	20,388	**0.47**	416	0	0	0	0	66	0	6,302	0	0.0	0.0	4.0	0.0	**4200**	**10502**	**9,885**	Grass (0-2%)	**51.51%**	**48.49%**	**0.49**	**0.55**	**0.59**	**0.67**
FUTURE	A3.0	35,506	**0.82**	253	0	0	313	0	0	0	8,047	0	1.0	4.0	1.5	0.0	**10335**	**18382**	**17,124**	Grass (0-2%)	**51.77%**	**48.23%**	**0.49**	**0.55**	**0.60**	**0.68**
FUTURE	A3.1	51,881	**1.19**	674	0	0	0	0	439	0	11,526	0	8.0	0.0	4.0	0.0	**15400**	**26926**	**24,955**	Grass (0-2%)	**51.90%**	**48.10%**	**0.49**	**0.55**	**0.60**	**0.68**
DEVELOPED	A4.0	40,727	**0.93**	0	0	0	741	44	0	19	11,262	0	0.0	0.0	0.0	0.0	**0**	**11262**	**29,465**	Grass (0-2%)	**27.65%**	**72.35%**	**0.36**	**0.41**	**0.45**	**0.53**
DEVELOPED	A5.0	47,186	**1.08**	76	442	0	128	0	76	0	11,153	0	0.0	5.0	3.0	0.0	**12350**	**23503**	**23,683**	Grass (0-2%)	**49.81%**	**50.19%**	**0.48**	**0.54**	**0.58**	**0.66**
DEVELOPED	A5.1	36,176	**0.83**	0	245	0	0	0	0	0	4,410	0	0.0	7.0	0.0	0.0	**12880**	**17290**	**18,886**	Grass (0-2%)	**47.79%**	**52.21%**	**0.47**	**0.53**	**0.57**	**0.65**
DEVELOPED	A5.2	27,610	**0.63**	365	0	0	0	0	0	0	5,291	0	0.0	4.0	0.5	0.0	**7885**	**13176**	**14,434**	Grass (0-2%)	**47.72%**	**52.28%**	**0.47**	**0.53**	**0.57**	**0.65**
DEVELOPED	A5.3	62,717	**1.44**	452	418	0	0	0	408	357	17,494	0	0.0	0.0	7.5	4.5	**18990**	**36484**	**26,234**	Grass (0-2%)	**58.17%**	**41.83%**	**0.52**	**0.59**	**0.63**	**0.71**
DEVELOPED	A6.0	26,007	**0.60**	0	0	0	233	0	0	0	3,265	0	0.0	3.0	0.0	0.0	**5520**	**8785**	**17,221**	Grass (0-2%)	**33.78%**	**66.22%**	**0.39**	**0.45**	**0.49**	**0.57**
DEVELOPED	A7.0	34,158	**0.78**	215	312	0	0	0	215	312	11,152	0	0.0	4.0	3.5	0.0	**11035**	**22187**	**11,970**	Grass (0-2%)	**64.96%**	**35.04%**	**0.56**	**0.63**	**0.67**	**0.76**
DEVELOPED	A7.1	40,610	**0.93**	355	0	0	0	0	355	0	6,568	0	0.0	9.0	1.0	0.0	**17610**	**24178**	**16,432**	Grass (0-2%)	**59.54%**	**40.46%**	**0.53**	**0.60**	**0.64**	**0.72**
DEVELOPED	A7.2A	36,743	**0.84**	269	0	0	0	258	246	0	9,518	0	0.0	0.0	3.5	0.0	**3675**	**13193**	**23,550**	Grass (0-2%)	**35.91%**	**64.09%**	**0.40**	**0.46**	**0.50**	**0.58**
DEVELOPED	A7.2B	21,351	**0.49**	415	0	0	75	0	263	0	8,126	0	0.0	0.0	3.5	0.5	**4910**	**13036**	**8,315**	Grass (0-2%)	**61.06%**	**38.94%**	**0.54**	**0.60**	**0.65**	**0.73**
DEVELOPED	A7.3A	27,975	**0.64**	842	0	0	0	0	0	3	12,225	0	0.0	0.0	0.0	0.0	**0**	**12225**	**15,749**	Grass (0-2%)	**43.70%**	**56.30%**	**0.45**	**0.50**	**0.55**	**0.63**
DEVELOPED	A7.3B	8,460	**0.19**	206	0	0	0	0	0	0	2,992	0	0.0	0.0	0.0	0.0	**0**	**2992**	**5,468**	Grass (0-2%)	**35.37%**	**64.63%**	**0.40**	**0.46**	**0.50**	**0.58**
DEVELOPED	A8.0	56,360	**1.29**	0	0	0	0	469	0	0	8,438	0	0.0	4.0	1.0	2.5	**14585**	**23023**	**33,337**	Grass (0-2%)	**40.85%**	**59.15%**	**0.43**	**0.49**	**0.53**	**0.61**
FUTURE	B1.0A	37,604	**0.86**	239	0	0	0	0	0	0	3,466	0	0.0	7.0	0.0	0.0	**12880**	**16346**	**21,259**	Grass (0-2%)	**43.47%**	**56.53%**	**0.44**	**0.50**	**0.55**	**0.63**
FUTURE	B1.0B	29,314	**0.67**	96	0	0	389	0	0	0	6,831	0	0.0	2.0	0.0	2.0	**8620**	**15451**	**13,862**	Grass (0-2%)	**52.71%**	**47.29%**	**0.49**	**0.56**	**0.60**	**0.68**
FUTURE	B1.1A	5,975	**0.14**	239	0	0	0	0	239	0	4,422	0	0.0	0.0	0.0	0.0	**0**	**4422**	**1,554**	Grass (0-2%)	**74.00%**	**26.00%**	**0.61**	**0.68**	**0.73**	**0.81**
FUTURE	B1.1B	2,400	**0.06**	96	0	0	0	0	96	0	1,776	0	0.0	0.0	0.0	0.0	**0**	**1776**	**624**	Grass (0-2%)	**74.00%**	**26.00%**	**0.61**	**0.68**	**0.73**	**0.81**
FUTURE	B1.2	33,316	**0.76**	0	0	0	369	0	0	0	5,168	0	0.0	4.0	0.0	1.0	**9830**	**14998**	**18,318**	Grass (0-2%)	**45.02%**	**54.98%**	**0.45**	**0.51**	**0.56**	**0.63**
FUTURE	B1.3	31,710	**0.73**	0	0	0	210	0	0	0	2,940	0	0.0	6.0	0.0	0.0	**11040**	**13980**	**17,730**	Grass (0-2%)	**44.09%**	**55.91%**	**0.45**	**0.51**	**0.55**	**0.63**
FUTURE	B1.4	35,313	**0.81**	261	0	0	0	0	261	0	4,829	0	0.0	5.0	2.0	0.0	**11300**	**16129**	**19,184**	Grass (0-2%)	**45.67%**	**54.33%**	**0.46**	**0.51**	**0.56**	**0.64**
FUTURE	B1.5	39,198	**0.90**	499	0	0	0	0	0	0	7,240	0	0.0	0.0	1.0	5.5	**14635**	**21875**	**17,322**	Grass (0-2%)	**55.81%**	**44.19%**	**0.51**	**0.57**	**0.62**	**0.70**
FUTURE	B1.6	46,058	**1.06**	583	0	0	0	0	410	0	10,086	0	0.0	4.0	5.0	0.0	**12610**	**22696**	**23,362**	Grass (0-2%)	**49.28%**	**50.72%**	**0.48**	**0.54**	**0.58**	**0.66**
FUTURE	B1.7	36,295	**0.83**	281	0	0	126	0	281	0	6,970	0	0.0	5.0	1.0	0.0	**10250**	**17220**	**19,075**	Grass (0-2%)	**47.44%**	**52.56%**	**0.47**	**0.53**	**0.57**	**0.65**
FUTURE	B1.8	35,273	**0.81**	449	0	0	0	0	0	0	6,515	0	0.0	0.0	0.0	5.5	**13585**	**20100**	**15,172**	Grass (0-2%)	**56.99%**	**43.01%**	**0.52**	**0.58**	**0.63**	**0.71**
FUTURE	B1.9	43,154	**0.99**	0	0	0	0	0	0	0	0	4,315	0.0	0.0	0.0	0.0	**0**	**4315**	**38,839**	Grass (0-2%)	**10.00%**	**90.00%**	**0.26**	**0.31**	**0.35**	**0.42**
FUTURE	B1.10	51,839	**1.19**	1,071	0	0	406	0	927	0	24,914	0	0.0	1.0	4.0	0.0	**6040**	**30954**	**20,885**	Grass (0-2%)	**59.71%**	**40.29%**	**0.53**	**0.60**	**0.64**	**0.72**
FUTURE	B1.11	32,094	**0.74**	402	0	0	0	0	0	0	5,835	0	0.0	0.0	0.0	5.0	**12350**	**18185**	**13,909**	Grass (0-2%)	**56.66%**	**43.34%**	**0.52**	**0.58**	**0.62**	**0.71**
FUTURE	B2.0	40,770	**0.94**	242	0	0	0	0	242	0	4,477	0	3.0	3.0	3.0	0.0	**12870**	**17347**	**23,423**	Grass (0-2%)	**42.55%**	**57.45%**	**0.44**	**0.50**	**0.54**	**0.62**
FUTURE	B2.1	41,627	**0.96**	381	0	0	0	0	0	0	5,525	0	0.0	9.0	1.5	0.0	**18135**	**23660**	**17,968**	Grass (0-2%)	**56.84%**	**43.16%**	**0.52**	**0.58**	**0.63**	**0.71**
FUTURE	B2.2	25,271	**0.58**	0	0	0	535	0	0	0	7,490	0	0.0	0.0	0.0	0.0	**0**	**7490**	**17,781**	Grass (0-2%)	**29.64%**	**70.36%**	**0.37**	**0.42**	**0.46**	**0.54**
FUTURE	B2.3	42,751	**0.98**	241	0	0	0	0	241	0	4,459	0	0.0	6.0	0.0	0.0	**11040**	**15499**	**27,252**	Grass (0-2%)	**36.25%**	**63.75%**	**0.41**	**0.46**	**0.50**	**0.58**
FUTURE	B2.4	34,143	**0.78**	517	0	0	0	0	343	0	8,869	0	0.0	3.0	4.0	0.0	**9720**	**18589**	**15,554**	Grass (0-2%)	**54.44%**	**45.56%**	**0.50**	**0.57**	**0.61**	**0.69**
FUTURE	B2.5	22,098	**0.51**	361	0	0	0	0	62	0	5,482	0	0.0	0.0	4.0	0.0	**4200**	**9682**	**12,416**	Grass (0-2%)	**43.82%**	**56.18%**	**0.45**	**0.50**	**0.55**	**0.63**
FUTURE	B3.0	50,648	**1.16**	654	0	0	0	0	419	0	11,166	0	0.0	8.0	4.0	0.0	**15400**	**26566**	**24,082**	Grass (0-2%)	**52.45%**	**47.55%**	**0.49**	**0.55**	**0.60**	**0.68**
FUTURE	B3.1	47,244	**1.08**	347	0	0	0	0	0	0	5,037	0	1.0	9.0	0.0	0.0	**17960**	**22997**	**24,247**	Grass (0-2%)	**48.68%**	**51.32%**	**0.47**	**0.53**	**0.58**	**0.66**
FUTURE	C1.0	41,762	**0.96**	247	0	0	0	0	0	0	3,575	0	0.0	0.0	0.0	7.0	**17290**	**20865**	**20,898**	Grass (0-2%)	**49.96%**	**50.04%**	**0.48**	**0.54**	**0.58**	**0.66**
FUTURE	C1.1A	30,312	**0.70**	235	0	0	0	0	0	0	3,408	0	0.0	0.0	0.0	5.0	**12350**	**15758**	**14,555**	Grass (0-2%)	**51.98%**	**48.02%**	**0.49**	**0.55**	**0.60**	**0.68**
FUTURE	C1.1B	28,663	**0.66**	205	0	0	0	0	0	0	2,974	0	0.0	0.0	0.0	5.0	**12350**	**15324**	**13,339**	Grass (0-2%)	**53.46%**	**46.54%**	**0.50**	**0.56**	**0.61**	**0.69**
FUTURE	C1.1	23,990	**0.55**	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	1.0	**2470**	**2470**	**21,520**	Grass (0-2%)	**10.30%**	**89.70%**	**0.27**	**0.31**	**0.35**	**0.42**
FUTURE	C1.2A	12,055	**0.28**	482	0	0	0	0	483	0	8,913	0	0.0	0.0	0.0	0.0	**0**	**8913**	**3,142**	Grass (0-2%)	**73.94%**	**26.06%**	**0.61**	**0.68**	**0.73**	**0.81**
FUTURE	C1.2B	5,160	**0.12**	205	0	0	0	0	206	0	3,798	0	0.0	0.0	0.0	0.0	**0**	**3798**	**1,362**	Grass (0-2%)	**73.61%**	**26.39%**	**0.61**	**0.68**	**0.72**	**0.81**
FUTURE	C1.3	2,868	**0.07**	115	0	0	0	0	114	0	2,129	0	0.0	0.0	0.0	0.0	**0**	**2129**	**740**	Grass (0-2%)	**74.22%**	**25.78%**	**0.61**	**0.68**	**0.73**	**0.81**
FUTURE	C1.4	28,540	**0.66**	114	0	0	0	0	0	0	1,656	0	0.0	0.0	0.0	3.0	**7410**	**9066**	**19,474**	Grass (0-2%)	**31.77%**	**68.23%**	**0.38**	**0.43**	**0.48**	**0.55**
FUTURE	CULVERT A	125,777	**2.89**	93	0	0	0	0	47	0	1,530	0	0.0	0.0	1.0	17.0	**43040**	**44570**	**81,208**	Grass (0-2%)	**35.44%**	**64.56%**	**0.40**	**0.46**	**0.50**	**0.58**
EXISTING	OFFISTE 9	773,423	**17.76**	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	**0**	**0**	**773,423**	Grass (0-2%)	**0.00%**	**100.00%**	**0.21**	**0.25**	**0.29**	**0.36**
EXISTING	HARVEST A	49,078	**1.13**	340	0	529	0	0	127	507	17,760	1,028	0.0	4.0	0.0	0.0	**7360**	**26148**	**22,930**	Grass (0-2%)	**53.28%**	**46.72%**	**0.50**	**0.56**	**0.60**	**0.68**
EXISTING	HARVEST B	18,680	**0.43**	0	0	572	0	0	0	574	13,456	0	0.0	0.0	0.0	0.0	**0**	**13456**	**5,224**	Grass (0-2%)	**72.03%**	**27.97%**	**0.60**	**0.67**	**0.72**	**0.80**
DEVELOPED	OS-1	29,234	**0.67**	115	307	0	0	0	58	0	7,425	0	1.0	1.0	3.0	0.0	**6390**	**13815**	**15,419**	Grass (0-2%)	**47.26%**	**52.74%**	**0.47**	**0.52**	**0.57**	**0.65**
	Total	**3400364**	**78.06**								**509671.67**	**32269.61**	**34.00**	**155.00**	**90.50**	**118.00**	**719285.00**	**1268651.75**	**2131711.84**		**37.31%**	**62.69%**				

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NO.	BY	DATE	REVISION DESCRIPTION

HARVEST RIDGE
SECTION 5

INLET BASIN DRAINAGE CALCULATIONS
(SHEET 1 OF 4)

PROJECT NO: 1636-11996

DESIGNED BY: MRC

DRAWN BY: DPG/BE

CHECKED BY: JAB

NOTICE:
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H:\PROJECTS\1636 - BROHN HOMES\11996 - HARVEST RIDGE - SEC 5\CAD\SHEETS\11996-C-DAM.DWG DATE: 1/7/2026 11:17:48 AM BY: DPEREZ-GUERRA

Drainage Area	Sheet Flow					Shallow Concentrated Flow							Channel or Storm Drain Flow					Time of Concentration (min.)
						Unpaved			Paved			Total						
	Surface Type	n	Length (ft)	Slope (%)	Tt (min.)	Length (ft)	Slope (%)	Tt (min.)	Length (ft)	Slope (%)	Tt (min.)	Tt (min.)	Q,peak(ft³/s)	Area (ft²)	Velocity (ft/s)	Length (ft)	Tt (min.)	Tc (min.)
X1.0	Grass (Dense grasses2)	0.24	100	2.0%	13.76	49.2	2.0%	0.36	188	0.66%	1.90	2.26						16.02
X1.1L	Grass (Dense grasses2)	0.24	15.8	2.0%	3.15	0	2.0%	0.00	91.6	0.50%	1.06	1.06						5.00
X1.1R	Grass (Dense grasses2)	0.24	24.7	2.0%	4.50	0	2.0%	0.00	494.6	0.50%	5.73	5.73						10.23
X1.2L	Grass (Dense grasses2)	0.24	100	2.0%	13.76	34.9	2.0%	0.25	63	0.50%	0.73	0.99						14.75
X1.2R	Grass (Dense grasses2)	0.24	100	2.0%	13.76	45	2.0%	0.33	229.2	0.50%	2.66	2.99						16.75
X2.0	Grass (Dense grasses2)	0.24	100	2.0%	13.76	45	2.0%	0.33	460	1.75%	2.85	3.18						16.94
X2.1	Grass (Dense grasses2)	0.24	30.9	2.0%	5.38	0	2.0%	0.00	481.1	1.70%	3.03	3.03						8.40
K1.2	Grass (Dense grasses2)	0.24	100	2.0%	13.76	53.2	2.0%	0.39	221.8	1.72%	1.39	1.78						15.54
A1.0	Grass (Dense grasses2)	0.24	100	2.0%	13.76	31.9	2.0%	0.23	196.5	1.00%	1.61	1.84						15.61
A1.1	Asphalt	0.016	26.8	1.0%	0.73	0	2.0%	0.00	80.4	1.00%	0.66	0.66						5.00
A1.2	Grass (Dense grasses2)	0.24	100	2.0%	13.76	51.3	2.0%	0.37	160.3	1.00%	1.31	1.69						17.34
A1.3	Grass (Dense grasses2)	0.24	100	2.0%	13.76	64	2.0%	0.47	191.1	1.00%	1.57	2.03						17.20
A1.4	Grass (Dense grasses2)	0.24	100	2.0%	13.76	63.3	2.0%	0.46	196	1.00%	1.61	2.07						16.75
A1.5	Grass (Dense grasses2)	0.24	100	2.0%	13.76	10.6	2.0%	0.08	130.8	1.00%	1.07	1.15						15.62
A1.6	Grass (Dense grasses2)	0.24	100	2.0%	13.76	64	2.0%	0.47	180.7	1.00%	1.48	1.95						16.17
A1.7	Grass (Dense grasses2)	0.24	72.4	2.0%	10.63	0	2.0%	0.00	327.5	1.00%	2.69	2.69						13.36
A1.8	Grass (Dense grasses2)	0.24	100	2.0%	13.76	63.5	2.0%	0.46	146	1.00%	1.20	1.66						15.49
A1.9	Grass (Dense grasses2)	0.24	97.6	2.0%	13.50	0	2.0%	0.00	147.7	2.00%	0.86	0.86						14.35
A1.10	Grass (Dense grasses2)	0.24	100	2.0%	13.76	11.3	2.0%	0.08	290.5	1.00%	2.38	2.46						16.23
A1.11	Grass (Dense grasses2)	0.24	99.8	2.0%	13.74	0	2.0%	0.00	432	0.50%	5.01	5.01						18.75
A1.12	Grass (Dense grasses2)	0.24	100	2.0%	13.76	15.5	2.0%	0.11	409	0.50%	4.74	4.86						18.62
A1.13	Grass (Dense grasses2)	0.24	100	2.0%	13.76	0	2.0%	0.00	235.7	0.50%	2.73	2.73						16.50
A2.0	Grass (Dense grasses2)	0.24	100	2.0%	13.76	54.5	2.0%	0.40	199.9	1.00%	1.64	2.04						17.92
A2.1	Grass (Dense grasses2)	0.24	100	2.0%	13.76	87.5	2.0%	0.64	100.3	1.00%	0.82	1.46						17.07
A2.2	Grass (Dense grasses2)	0.24	73.7	2.0%	10.78	0	2.0%	0.00	200.7	0.50%	2.33	2.33						14.60
A2.3	Grass (Dense grasses2)	0.24	76.1	2.0%	11.06	0	2.0%	0.00	219.1	0.50%	2.54	2.54						15.04
A3.0	Grass (Dense grasses2)	0.24	100	2.0%	13.76	48.3	2.0%	0.35	215.5	0.50%	2.50	2.85						17.36
A3.1	Grass (Dense grasses2)	0.24	100	2.0%	13.76	14.6	2.0%	0.11	290.7	0.50%	3.37	3.48						18.01
A4.0	Grass (Dense grasses2)	0.24	69.9	2.0%	10.33	0	2.0%	0.00	688.4	0.64%	7.06	7.06						17.39
A5.0	Grass (Dense grasses2)	0.24	73.6	2.0%	10.77	0	2.0%	0.00	397.5	0.50%	4.61	4.61						15.38
A5.1	Grass (Dense grasses2)	0.24	100	2.0%	13.76	34.2	2.0%	0.25	211.9	0.50%	2.46	2.71						16.47
A5.2	Grass (Dense grasses2)	0.24	61.5	2.0%	9.33	0	2.0%	0.00	260.2	0.50%	3.02	3.02						12.35
A5.3	Grass (Dense grasses2)	0.24	53.3	2.0%	8.32	0	2.0%	0.00	753.3	1.30%	5.42	5.42						13.74
A6.0	Grass (Dense grasses2)	0.24	67.4	2.0%	10.04	0	2.0%	0.00	196.6	0.64%	2.01	2.01						12.05
A7.0	Grass (Dense grasses2)	0.24	66.45	2.0%	9.92	0	2.0%	0.00	402.5	1.00%	3.30	3.30						13.22
A7.1	Grass (Dense grasses2)	0.24	100	2.0%	13.76	2.3	2.0%	0.02	336.8	0.50%	3.91	3.92						17.69
A7.2A	Grass (Dense grasses2)	0.24	91.3	2.0%	12.80	0	2.0%	0.00	253	0.50%	2.93	2.93						15.73
A7.2B	Grass (Dense grasses2)	0.24	66.4	2.0%	9.92	0	2.0%	0.00	175.1	0.50%	2.03	2.03						11.95
A7.3A	Grass (Dense grasses2)	0.24	39	2.0%	6.48	0	2.0%	0.00	816.4	0.62%	8.50	8.50						14.98
A7.3B	Grass (Dense grasses2)	0.24	27.2	2.0%	4.86	0	2.0%	0.00	203.8	0.50%	2.36	2.36						7.22
A8.0	Grass (Dense grasses2)	0.24	89.3	2.0%	12.57	0	2.0%	0.00	392.5	0.55%	4.34	4.34						16.91
B1.0A	Grass (Dense grasses2)	0.24	100	2.0%	13.76	37.5	2.0%	0.27	216.1	0.50%	2.51	2.78						16.54
B1.0B	Grass (Dense grasses2)	0.24	100	2.0%	13.76	43.1	2.0%	0.31	305.1	0.50%	3.54	3.85						17.62
B1.1A	Grass (Dense grasses2)	0.24	22.9	2.0%	4.23	0	2.0%	0.00	220.3	0.50%	2.55	2.55						6.79
B1.1B	Grass (Dense grasses2)	0.24	13.1	2.0%	2.71	0	2.0%	0.00	89.3	0.50%	1.04	1.04						5.00
B1.2	Grass (Dense grasses2)	0.24	100	2.0%	13.76	50.2	2.0%	0.37	175	1.00%	1.43	1.80						15.56
B1.3	Grass (Dense grasses2)	0.24	100	2.0%	13.76	46.2	2.0%	0.34	175	1.00%	1.43	1.77						15.54
B1.4	Grass (Dense grasses2)	0.24	100	2.0%	13.76	48.2	2.0%	0.35	199.4	1.00%	1.63	1.99						15.75
B1.5	Grass (Dense grasses2)	0.24	75.6	2.0%	11.00	0	2.0%	0.00	459.8	1.00%	3.77	3.77						14.77
B1.6	Grass (Dense grasses2)	0.24	79.3	2.0%	11.43	0	2.0%	0.00	341.8	1.00%	2.80	2.80						14.23
B1.7	Grass (Dense grasses2)	0.24	100	2.0%	13.76	44.6	2.0%	0.33	239.8	1.00%	1.97	2.29						16.06
B1.8	Grass (Dense grasses2)	0.24	73.2	2.0%	10.72	0	2.0%	0.00	417.7	1.00%	3.42	3.42						14.15
B1.9	Grass (Dense grasses2)	0.24	100	3.0%	11.70	193.6	1.5%	1.63	0	0.50%	0.00	1.63						13.34
B1.10	Grass (Dense grasses2)	0.24	100	2.0%	13.76	22	2.0%	0.16	635.5	1.00%	5.21	5.37						19.13
B1.11	Grass (Dense grasses2)	0.24	79.1	2.0%	11.41	0	2.0%	0.00	440.5	1.00%	3.61	3.61						15.02
B2.0	Grass (Dense grasses2)	0.24	100	2.0%	13.76	65.2	2.0%	0.48	192	1.00%	1.57	2.05						15.81
B2.1	Grass (Dense grasses2)	0.24	90	2.0%	12.65	0	2.0%	0.00	335.2	1.00%	2.75	2.75						15.40
B2.2	Grass (Dense grasses2)	0.24	70	2.0%	10.35	0	2.0%	0.00	485	1.00%	3.98	3.98						14.32
B2.3	Grass (Dense grasses2)	0.24	100	2.0%	13.76	59.7	2.0%	0.44	202.2	1.00%	1.66	2.09						15.86
B2.4	Grass (Dense grasses2)	0.24	81.5	2.0%	11.69	0	2.0%	0.00	269.3	1.00%	2.21	2.21						13.89
B2.5	Grass (Dense grasses2)	0.24	74.5	2.0%	10.88	0	2.0%	0.00	342.1	1.00%	2.80	2.80						13.68
B3.0	Grass (Dense grasses2)	0.24	100	2.0%	13.76	14.1	2.0%	0.10	292.1	1.00%	2.39	2.50						16.26
B3.1	Grass (Dense grasses2)	0.24	100	2.0%	13.76	27.6	2.0%	0.20	315.2	1.00%	2.58	2.79						16.55
C1.0	Grass (Dense grasses2)	0.24	100	2.0%	13.76	31.1	2.0%	0.23	252.1	1.00%	2.07	2.29						16.06
C1.1A	Grass (Dense grasses2)	0.24	100	2.0%	13.76	35.6	2.0%	0.26	208.2	0.50%	2.41	2.67						16.44
C1.1B	Grass (Dense grasses2)	0.24	100	2.0%	13.76	29.3	2.0%	0.21	158.6	0.50%	1.84	2.05						15.82
C1.1	Grass (Dense grasses2)	0.24	50	2.0%	7.91	0	2.0%	0.00	0	1.00%	0.00	0.00						7.91
C1.2A	Asphalt	0.016	22.7	2.0%	0.48	0	2.0%	0.00	463.2	0.50%	5.37	5.37						5.85
C1.2B	Asphalt	0.016	25.2	2.0%	0.52	0	2.0%	0.00	183.2	0.50%	2.12	2.12						5.00
C1.3	Asphalt	0.016	27.1	2.0%	0.55	0	2.0%	0.00	90.2	1.00%	0.74	0.74						5.00
C1.4	Grass (Dense grasses2)	0.24	100	2.0%	13.76	28.4	2.0%	0.21	88.9	1.00%	0.73	0.94						14.70
CULVERT A	Grass (Dense grasses2)	0.24	89.2	2.0%	12.56	0	2.0%	0.00	0	0.50%	0.00	0.00	6.00	1409.2	3.91			16.48
OFFISTE 9	Grass (Short-grass prairie)	0.15	100	1.0%	12.47	772	5.0%	3.57	0	0.50%	0.00	3.57	2.00	308	2.57			18.60
HARVEST A	Grass (Dense grasses2)	0.24	100	2.0%	13.76	43.4	2.0%	0.32	493.8	0.50%	5.73	6.04						19.81
HARVEST B	Grass (Dense grasses2)	0.24	32.9	2.0%	5.66	0	5.0%	0.00	559.3	0.50%	6.48	6.48						12.14
OS-1	Grass (Dense grasses2)	0.24	100	2.0%	13.76	32.8	2.0%	0.24	280.1	0.50%	3.25	3.49						17.25

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NO.	BY	DATE	REVISION DESCRIPTION

HARVEST RIDGE
SECTION 5

INLET BASIN DRAINAGE CALCULATIONS
(SHEET 2 OF 4)

PROJECT NO: 1636-11996

DESIGNED BY: MRC

DRAWN BY: DPG/BE

CHECKED BY: JAB

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H:\PROJECTS\1636 - BROHN HOMES\11996 - HARVEST RIDGE - SEC 5\CAD\SHEETS\11996-C-DAM.DWG DATE: 1/7/2026 11:17:49 AM BY: DPEREZ-GUERRA

PEAK FLOW TABLE (DEVELOPED CONDITIONS) - INTERSECTION FLOW

Drainage Area	Inlet	Area (Acre)	Impervious (%)	Pervious(%)	Time of Concentration (min.)	2 Year			10 Year			25 Year			100 Year		
						C	I (in/hr)	Q (ft³/s)	C	I (in/hr)	Q (ft³/s)	C	I (in/hr)	Q (ft³/s)	C	I (in/hr)	Q (ft³/s)
X1.0	X1.0	0.83	48.09%	51.91%	16.02	0.47	3.77	1.47	0.53	5.65	2.49	0.57	6.74	3.23	0.65	8.70	4.74
X1.1L	X1.1L	0.09	86.70%	13.30%	5.00	0.68	5.76	0.36	0.75	8.57	0.59	0.80	10.11	0.74	0.89	12.54	1.02
X1.1R	X1.1R	0.46	77.61%	22.39%	10.23	0.63	4.58	1.34	0.70	6.84	2.22	0.75	8.12	2.82	0.83	10.32	3.99
X1.2L	X1.2L	0.39	50.95%	49.05%	14.75	0.49	3.92	0.74	0.55	5.87	1.25	0.59	7.00	1.62	0.67	9.00	2.36
X1.2R	X1.2R	0.96	48.66%	51.34%	16.75	0.47	3.69	1.67	0.53	5.53	2.82	0.58	6.61	3.65	0.66	8.53	5.37
X2.0	X2.0	1.81	47.90%	52.10%	16.94	0.47	3.67	3.12	0.53	5.50	5.27	0.57	6.57	6.83	0.65	8.49	10.05
X2.1	X2.1	0.54	71.59%	28.41%	8.40	0.60	4.92	1.58	0.67	7.34	2.62	0.71	8.71	3.33	0.80	10.99	4.70
K1.2	K1.2	0.97	48.38%	51.62%	15.54	0.47	3.82	1.75	0.53	5.73	2.96	0.58	6.84	3.83	0.66	8.81	5.61
A1.0	A1.0	0.76	46.34%	53.66%	15.61	0.46	3.81	1.34	0.52	5.72	2.26	0.56	6.82	2.93	0.64	8.79	4.30
A1.1	A1.1	0.06	77.56%	22.44%	5.00	0.63	5.76	0.20	0.70	8.57	0.33	0.75	10.11	0.42	0.83	12.54	0.58
A1.2	A1.2	0.91	50.67%	49.33%	17.34	0.48	3.62	1.59	0.54	5.44	2.69	0.59	6.50	3.48	0.67	8.40	5.11
A1.3	A1.3	0.97	45.48%	54.52%	17.20	0.46	3.64	1.60	0.51	5.46	2.71	0.56	6.52	3.52	0.64	8.43	5.19
A1.4	A1.4	0.98	44.59%	55.41%	16.75	0.45	3.69	1.63	0.51	5.53	2.75	0.55	6.61	3.58	0.63	8.53	5.28
A1.5	A1.5	1.10	55.64%	44.36%	15.62	0.51	3.81	2.15	0.57	5.71	3.61	0.62	6.82	4.65	0.70	8.79	6.78
A1.6	A1.6	0.93	49.63%	50.37%	16.17	0.48	3.75	1.66	0.54	5.62	2.80	0.58	6.72	3.63	0.66	8.66	5.32
A1.7	A1.7	0.91	44.05%	55.95%	13.36	0.45	4.10	1.67	0.51	6.13	2.82	0.55	7.31	3.66	0.63	9.36	5.36
A1.8	A1.8	0.77	52.62%	47.38%	15.49	0.49	3.83	1.46	0.56	5.74	2.46	0.60	6.85	3.18	0.68	8.82	4.64
A1.9	A1.9	0.58	64.87%	35.13%	14.35	0.56	3.97	1.28	0.63	5.94	2.14	0.67	7.08	2.74	0.76	9.10	3.96
A1.10	A1.10	1.28	42.95%	57.05%	16.23	0.44	3.74	2.12	0.50	5.61	3.60	0.54	6.70	4.68	0.62	8.65	6.91
A1.11	A1.11	1.27	69.22%	30.78%	18.75	0.58	3.48	2.58	0.65	5.23	4.33	0.70	6.26	5.56	0.78	8.11	8.07
A1.12	A1.12	1.14	47.97%	52.03%	18.62	0.47	3.50	1.86	0.53	5.25	3.15	0.57	6.28	4.09	0.65	8.14	6.04
A1.13	A1.13	0.68	66.25%	33.75%	16.50	0.57	3.71	1.43	0.63	5.57	2.40	0.68	6.65	3.08	0.76	8.59	4.46
A2.0	A2.0	1.03	34.49%	65.51%	17.92	0.40	3.56	1.45	0.45	5.35	2.48	0.49	6.40	3.25	0.57	8.28	4.87
A2.1	A2.1	0.67	31.46%	68.54%	17.07	0.38	3.65	0.93	0.43	5.48	1.59	0.48	6.55	2.09	0.55	8.46	3.14
A2.2	A2.2	0.40	57.88%	42.12%	14.60	0.52	3.93	0.83	0.59	5.89	1.39	0.63	7.03	1.79	0.71	9.04	2.59
A2.3	A2.3	0.47	51.51%	48.49%	15.04	0.49	3.88	0.89	0.55	5.81	1.49	0.59	6.94	1.93	0.67	8.93	2.82
A3.0	A3.0	0.82	51.77%	48.23%	17.36	0.49	3.62	1.44	0.55	5.43	2.44	0.60	6.50	3.15	0.68	8.40	4.63
A3.1	A3.1	1.19	51.90%	48.10%	18.01	0.49	3.56	2.08	0.55	5.34	3.50	0.60	6.38	4.53	0.68	8.26	6.66
A4.0	A4.0	0.93	27.65%	72.35%	17.39	0.36	3.62	1.22	0.41	5.43	2.08	0.45	6.49	2.75	0.53	8.39	4.15
A5.0	A5.0	1.08	49.81%	50.19%	15.38	0.48	3.84	1.99	0.54	5.75	3.36	0.58	6.87	4.35	0.66	8.85	6.36
A5.1	A5.1	0.83	47.79%	52.21%	16.47	0.47	3.72	1.44	0.53	5.57	2.44	0.57	6.66	3.16	0.65	8.59	4.65
A5.2	A5.2	0.63	47.72%	52.28%	12.35	0.47	4.24	1.26	0.53	6.34	2.12	0.57	7.55	2.73	0.65	9.65	3.98
A5.3	A5.3	1.44	58.17%	41.83%	13.74	0.52	4.05	3.05	0.59	6.05	5.12	0.63	7.22	6.58	0.71	9.26	9.53
A6.0	A6.0	0.60	33.78%	66.22%	12.05	0.39	4.28	1.00	0.45	6.40	1.70	0.49	7.62	2.23	0.57	9.74	3.29
A7.0	A7.0	0.78	64.96%	35.04%	13.22	0.56	4.11	1.81	0.63	6.16	3.03	0.67	7.34	3.87	0.76	9.40	5.57
A7.1	A7.1	0.93	59.54%	40.46%	17.69	0.53	3.59	1.78	0.60	5.39	2.99	0.64	6.44	3.85	0.72	8.33	5.62
A7.2A	A7.2A	0.84	33.10%	66.90%	15.73	0.39	3.80	1.25	0.44	5.69	2.12	0.49	6.80	2.78	0.56	8.76	4.15
A7.2B	A7.2B	0.49	61.06%	38.94%	11.95	0.54	4.30	1.14	0.60	6.43	1.90	0.65	7.65	2.44	0.73	9.77	3.51
A7.3A	A7.3A	0.64	43.70%	56.30%	14.98	0.45	3.89	1.11	0.50	5.82	1.88	0.55	6.95	2.45	0.63	8.94	3.60
A7.3B	A7.3B	0.19	35.37%	64.63%	7.22	0.40	5.18	0.40	0.46	7.72	0.68	0.50	9.14	0.89	0.58	11.48	1.28
A8.0	A8.0	1.29	37.52%	62.48%	16.91	0.41	3.67	1.96	0.47	5.50	3.33	0.51	6.58	4.35	0.59	8.50	6.47
B1.0A	B1.0A	0.86	43.47%	56.53%	16.54	0.44	3.71	1.42	0.50	5.56	2.41	0.55	6.65	3.13	0.63	8.58	4.63
B1.0B	B1.0B	0.67	52.71%	47.29%	17.62	0.49	3.60	1.20	0.56	5.40	2.02	0.60	6.45	2.61	0.68	8.35	3.83
B1.1A	B1.1A	0.14	74.00%	26.00%	6.79	0.61	5.28	0.44	0.68	7.87	0.73	0.73	9.32	0.93	0.81	11.67	1.30
B1.1B	B1.1B	0.06	74.00%	26.00%	5.00	0.61	5.76	0.19	0.68	8.57	0.32	0.73	10.11	0.40	0.81	12.54	0.56
B1.2	B1.2	0.76	45.02%	54.98%	15.56	0.45	3.82	1.32	0.51	5.72	2.24	0.56	6.83	2.90	0.63	8.80	4.27
B1.3	B1.3	0.73	44.09%	55.91%	15.54	0.45	3.82	1.25	0.51	5.73	2.11	0.55	6.84	2.74	0.63	8.81	4.03
B1.4	B1.4	0.81	45.67%	54.33%	15.75	0.46	3.80	1.41	0.51	5.69	2.38	0.56	6.80	3.08	0.64	8.76	4.53
B1.5	B1.5	0.90	55.81%	44.19%	14.77	0.51	3.91	1.80	0.57	5.86	3.03	0.62	6.99	3.90	0.70	8.99	5.67
B1.6	B1.6	1.06	49.28%	50.72%	14.23	0.48	3.98	2.00	0.54	5.96	3.38	0.58	7.11	4.37	0.66	9.13	6.38
B1.7	B1.7	0.83	47.44%	52.56%	16.06	0.47	3.76	1.46	0.53	5.64	2.47	0.57	6.74	3.20	0.65	8.69	4.70
B1.8	B1.8	0.81	56.99%	43.01%	14.15	0.52	3.99	1.67	0.58	5.98	2.81	0.63	7.13	3.61	0.71	9.15	5.24
B1.9	B1.9	0.99	10.00%	90.00%	13.34	0.26	4.10	1.07	0.31	6.13	1.87	0.35	7.31	2.53	0.42	9.37	3.91
B1.10	B1.10	1.19	59.71%	40.29%	19.13	0.53	3.45	2.18	0.60	5.18	3.68	0.64	6.20	4.74	0.72	8.04	6.93
B1.11	B1.11	0.74	56.66%	43.34%	15.02	0.52	3.88	1.48	0.58	5.82	2.48	0.62	6.94	3.19	0.71	8.93	4.64
B2.0	B2.0	0.94	42.55%	57.45%	15.81	0.44	3.79	1.56	0.50	5.68	2.64	0.54	6.78	3.44	0.62	8.74	5.07
B2.1	B2.1	0.96	56.84%	43.16%	15.40	0.52	3.84	1.90	0.58	5.75	3.19	0.63	6.87	4.10	0.71	8.84	5.97
B2.2	B2.2	0.58	29.64%	70.36%	14.32	0.37	3.97	0.85	0.42	5.94	1.45	0.46	7.09	1.91	0.54	9.11	2.86
B2.3	B2.3	0.98	36.25%	63.75%	15.86	0.41	3.78	1.51	0.46	5.67	2.56	0.50	6.78	3.35	0.58	8.73	4.98
B2.4	B2.4	0.78	54.44%	45.56%	13.89	0.50	4.02	1.59	0.57	6.02	2.67	0.61	7.18	3.44	0.69	9.22	5.00
B2.5	B2.5	0.51	43.82%	56.18%	13.68	0.45	4.05	0.92	0.50	6.07	1.55	0.55	7.23	2.01	0.63	9.28	2.95
B3.0	B3.0	1.16	52.45%	47.55%	16.26	0.49	3.74	2.14	0.55	5.61	3.61	0.60	6.70	4.67	0.68	8.64	6.83
B3.1	B3.1	1.08	48.68%	51.32%	16.55	0.47	3.71	1.90	0.53	5.56	3.21	0.58	6.64	4.16	0.66	8.58	6.11
C1.0	C1.0	0.96	49.96%	50.04%	16.06	0.48	3.76	1.73	0.54	5.64	2.92	0.58	6.74	3.78	0.66	8.69	5.54
C1.1A	C1.1A	0.70	51.98%	48.02%	16.44	0.49	3.72	1.27	0.55	5.58	2.14	0.60	6.66	2.77	0.68	8.60	4.05
C1.1B	C1.1B	0.66	53.46%	46.54%	15.82	0.50	3.79	1.24	0.56	5.68	2.09	0.61	6.78	2.70	0.69	8.74	3.95
C1.1	C1.1	0.55	10.30%	89.70%	7.91	0.27	5.03	0.74	0.31	7.50	1.28	0.35	8.89	1.72	0.42	11.19	2.60
C1.2A	C1.2A	0.28	73.94%	26.06%	5.85	0.61	5.52	0.93	0.68	8.22	1.54	0.73	9.71	1.95	0.81	12.11	2.72
C1.2B	C1.2B	0.12	73.61%	26.39%	5.00	0.61	5.76	0.41	0.68	8.57	0.69	0.72	10.11	0.87	0.81	12.54	1.20
C1.3	C1.3	0.07	74.22%	25.78%	5.00	0.61	5.76	0.23	0.68	8.57	0.38	0.73	10.11	0.48	0.81	12.54	0.67
C1.4	C1.4	0.66	31.77%	68.23%	14.70	0.38	3.92	0.98	0.43	5.87	1.67	0.48	7.01	2.19	0.55	9.01	3.27
CULVERT A	CULVERT A	2.89	35.44%	64.56%	16.48	0.40	3.72	4.31	0.46	5.57	7.33	0.50	6.66	9.59	0.58	8.59	14.29
OFFISTE 9	OFFISTE 9	17.76	0.00%	100.00%	18.60	0.21	3.50	13.04	0.25	5.25	23.32	0.29	6.29	32.37	0.36	8.14	52.06
HARVEST A	HARVEST A	1.13	53.28%	46.72%	19.81	0.50	3.39	1.90	0.56	5.09	3.21	0.60	6.10	4.15	0.68	7.91	6.11
HARVEST B	HARVEST B	0.43	72.03%	27.97%	12.14	0.60	4.27	1.10	0.67	6.38	1.83	0.72	7.60	2.33	0.80	9.71	3.33
OS-1	OS-1	0.67	47.26%	52.74%	17.25	0.47	3.63	1.13	0.52	5.45	1.92	0.57	6.52	2.49	0.65	8.42	3.66
Total		78.06	37.22%	62.78%				92.73			156.56			202.85			297.57

GRAY CIVIL, INC.
512-452-0371
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8834 N. Capital of Texas Highway, Suite 140
5316 W. US Highway 290 Service Road, Suite 220
TBPELS FIRM #2946

GRAY

NO.	BY	DATE	REVISION DESCRIPTION

HARVEST RIDGE
SECTION 5

INLET BASIN DRAINAGE CALCULATIONS
(SHEET 3 OF 4)

PROJECT NO: 1636-11996

DESIGNED BY: MRC

DRAWN BY: DPG/BE

CHECKED BY: JAB

NOTICE:
ALTERATION OF A SEALED DRAWING WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS A VIOLATION OF THE TEXAS ENGINEERING PRACTICE ACT.

THESE PLANS ARE RELEASED UNDER THE AUTHORITY OF J. ADAM BERRY, PE, ON 01/13/2026, FOR THE PURPOSES OF REVIEW AND ARE NOT TO BE USED FOR BIDDING OR CONSTRUCTION

H:\PROJECTS\1636 - BROHN HOMES\11996 - HARVEST RIDGE - SEC 5\CAD\SHEETS\11996-C-DAM.DWG DATE: 1/7/2026 11:17:51 AM BY: DPEREZ-GUERRA

100 Year Storm																								
						Street Capacity						Inlet on Grade							Sump Inlet					
Drainage Area	Inlet	Type	Upstream	Qadd (ft³/s)	Qpeak (ft³/s)	Street Width (ft)	Slope (%)	Gutter Depression (ft)	Water Depth (ft)	Ponded Width	Alley Capacity (cfs)	Qa/La	Length Needed (ft)	Length (ft)	L/Lneed	a/Y_0	Possible Q (ft³/s)	Qpass (ft³/s)	Clogging Factor	Q (ft³/s)	Allowable head (ft)	Inlet Length (ft)	Calculated head (ft)	Remarks
A1.9	A1.9	GRADE			3.96	28	2.00%	0.42	0.22	9.3	-	0.67	5.88	10	1.00	1.89	6.74	0.00						
A1.10	A1.10	GRADE			6.91	28	1.00%	0.42	0.31	13.0	-	0.76	9.05	10	1.00	1.34	7.63	0.00						
A1.11	A1.11	GRADE			8.07	28	0.50%	0.42	0.37	14.0	-	0.83	9.71	10	1.00	1.11	8.31	0.00						
A1.12	A1.12	GRADE	A5.3	1.66	7.70	28	0.50%	0.42	0.37	14.0	-	0.82	9.34	10	1.00	1.13	8.24	0.00						
A1.13	A1.13	GRADE			4.46	28	0.50%	0.42	0.30	12.6	-	0.75	5.93	10	1.00	1.39	7.53	0.00						
A2.0	A2.0	GRADE			4.87	28	1.00%	0.42	0.27	11.4	-	0.72	6.72	10	1.00	1.53	7.24	0.00						
A2.1	A2.1	GRADE			3.14	28	1.00%	0.42	0.23	9.7	-	0.68	4.59	10	1.00	1.81	6.83	0.00						
A2.2	A2.2	GRADE			2.59	28	0.50%	0.42	0.24	10.3	-	0.70	3.72	10	1.00	1.70	6.97	0.00						
A2.3	A2.3	GRADE			2.82	28	0.50%	0.42	0.25	10.6	-	0.70	4.00	10	1.00	1.65	7.05	0.00						
A3.0	A3.0	GRADE			4.63	28	0.50%	0.42	0.30	12.8	-	0.76	6.11	10	1.00	1.37	7.57	0.00						
A3.1	A3.1	GRADE			6.66	28	0.50%	0.42	0.35	14.0	-	0.80	8.29	10	1.00	1.20	8.03	0.00						
A4.0	A4.0	GRATE			4.15	14	0.64%				7.00						4.71	0.00	35%					2-3'X3'
A5.0	A5.0	GRADE			6.36	14	0.50%	0.42	0.38	7.0	-	0.83	7.62	10	1.00	1.10	8.35	0.00						
A5.1	A5.1	GRADE			4.65	35	0.50%	0.42	0.34	10.9	-	0.79	5.88	10	1.00	1.24	7.90	0.00						
A5.2	A5.2	GRADE			3.98	35	0.50%	0.42	0.32	10.2	-	0.77	5.17	10	1.00	1.31	7.71	0.00						
A5.3	A5.3	GRADE			9.53	28	1.30%	0.42	0.33	14.0	-	0.79	12.11	10	0.83	1.25	7.87	1.66						
A6.0	A6.0	GRATE			3.29	14	0.64%				7.00						1.97	1.32	35%					
A7.0	A7.0	GRADE			5.57	28	1.00%	0.42	0.29	12.0	-	0.74	7.54	10	1.00	1.46	7.39	0.00						
A7.1	A7.1	GRADE			5.62	28	0.50%	0.42	0.33	13.7	-	0.78	7.19	10	1.00	1.28	7.81	0.00						
A7.2A	A7.2	SUMP	A8.0	0.55	4.83	28	0.50%	0.42	0.31	13.0	-								10%	9.66	0.583	10	0.50	
A7.2B	A7.2	SUMP	A6.0	1.32	4.83	28	0.50%	0.42	0.31	13.0	-													
A7.3A	A7.3	SUMP			3.60	28	0.62%	0.42	0.27	11.2	-								10%	4.88	0.583	10	0.32	
A7.3B	A7.3	SUMP			1.28	28	0.50%	0.42	0.19	7.9	-													
A8.0	A8.0	GRATE			6.70	18	0.55%				12.69						6.14	0.55	35%					2-3'X3'

25 Year Storm																								
						Street Capacity						Inlet on Grade							Sump Inlet					
Drainage Area	Inlet	Type	Upstream	Qadd (ft³/s)	Qpeak (ft³/s)	Street Width (ft)	Slope (%)	Gutter Depression (ft)	Water Depth (ft)	Ponded Width	Alley Capacity (cfs)	Qa/La	Length Needed (ft)	Length (ft)	L/Lneed	a/Y_0	Possible Q (ft³/s)	Qpass (ft³/s)	Clogging Factor	Q (ft³/s)	Allowable head (ft)	Inlet Length (ft)	Calculated head (ft)	Remarks
A1.9	A1.9	GRADE			2.74	28	2.00%	0.42	0.19	8.1	-	0.65	4.25	10	1.00	2.16	6.46	0.00						
A1.10	A1.10	GRADE			4.68	28	1.00%	0.42	0.27	11.3	-	0.72	6.49	10	1.00	1.56	7.20	0.00						
A1.11	A1.11	GRADE			5.56	28	0.50%	0.42	0.33	13.7	-	0.78	7.13	10	1.00	1.28	7.79	0.00						
A1.12	A1.12	GRADE			4.09	28	0.50%	0.42	0.29	12.2	-	0.74	5.51	10	1.00	1.44	7.43	0.00						
A1.13	A1.13	GRADE			3.08	28	0.50%	0.42	0.26	11.0	-	0.71	4.32	10	1.00	1.60	7.13	0.00						
A2.0	A2.0	GRADE			3.25	28	1.00%	0.42	0.23	9.8	-	0.69	4.74	10	1.00	1.78	6.86	0.00						
A2.1	A2.1	GRADE			2.09	28	1.00%	0.42	0.20	8.3	-	0.65	3.21	10	1.00	2.10	6.51	0.00						
A2.2	A2.2	GRADE			1.79	28	0.50%	0.42	0.21	8.9	-	0.67	2.68	10	1.00	1.96	6.65	0.00						
A2.3	A2.3	GRADE			1.93	28	0.50%	0.42	0.22	9.2	-	0.67	2.87	10	1.00	1.90	6.71	0.00						
A3.0	A3.0	GRADE			3.15	28	0.50%	0.42	0.26	11.1	-	0.72	4.41	10	1.00	1.58	7.16	0.00						
A3.1	A3.1	GRADE			4.53	28	0.50%	0.42	0.30	12.7	-	0.75	6.01	10	1.00	1.38	7.55	0.00						
A4.0	A4.0	GRATE			2.75	14	0.64%				7.00						3.58	0.00	35%					2-3'X3'
A5.0	A5.0	GRADE			4.35	14	0.50%	0.42	0.33	10.6	-	0.78	5.56	10	1.00	1.27	7.82	0.00						
A5.1	A5.1	GRADE			3.16	35	0.50%	0.42	0.29	9.4	-	0.74	4.25	10	1.00	1.43	7.44	0.00						
A5.2	A5.2	GRADE			2.73	35	0.50%	0.42	0.28	8.9	-	0.73	3.76	10	1.00	1.51	7.28	0.00						
A5.3	A5.3	GRADE			6.58	28	1.30%	0.42	0.29	12.2	-	0.74	8.86	10	1.00	1.44	7.43	0.00						
A6.0	A6.0	GRATE			2.23	14	0.64%				7.00						1.53	0.70	35%					
A7.0	A7.0	GRADE			3.87	28	1.00%	0.42	0.25	10.5	-	0.70	5.52	10	1.00	1.67	7.02	0.00						
A7.1	A7.1	GRADE			3.85	28	0.50%	0.42	0.28	11.9	-	0.74	5.23	10	1.00	1.47	7.36	0.00						
A7.2A	A7.2	SUMP			2.88	28	0.50%	0.42	0.25	10.7	-								10%	6.02	0.583	10	0.37	
A7.2B	A7.2	SUMP	A6.0	0.70	3.14	28	0.50%	0.42	0.26	11.0	-													
A7.3A	A7.3	SUMP			2.45	28	0.62%	0.42	0.23	9.7	-								10%	3.33	0.583	10	0.25	
A7.3B	A7.3	SUMP			0.89	28	0.50%	0.42	0.16	6.9	-													
A8.0	A8.0	GRATE			4.52	18	0.55%				12.69						4.90	0.00	35%					2-3'X3'

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HARVEST RIDGE
SECTION 5

INLET BASIN DRAINAGE CALCULATIONS
(SHEET 4 OF 4)

PROJECT NO: 1636-11996

DESIGNED BY: MRC

DRAWN BY: DPG/BE

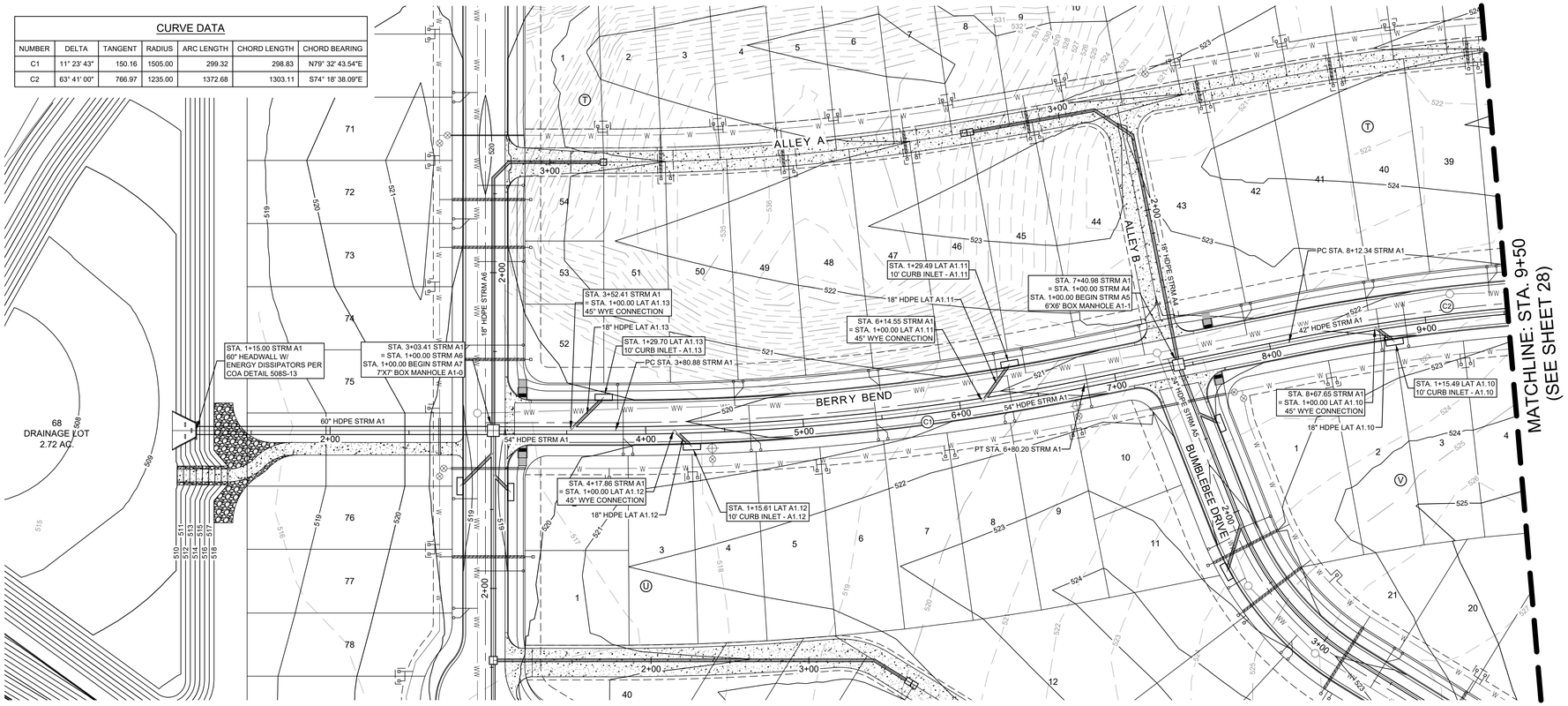
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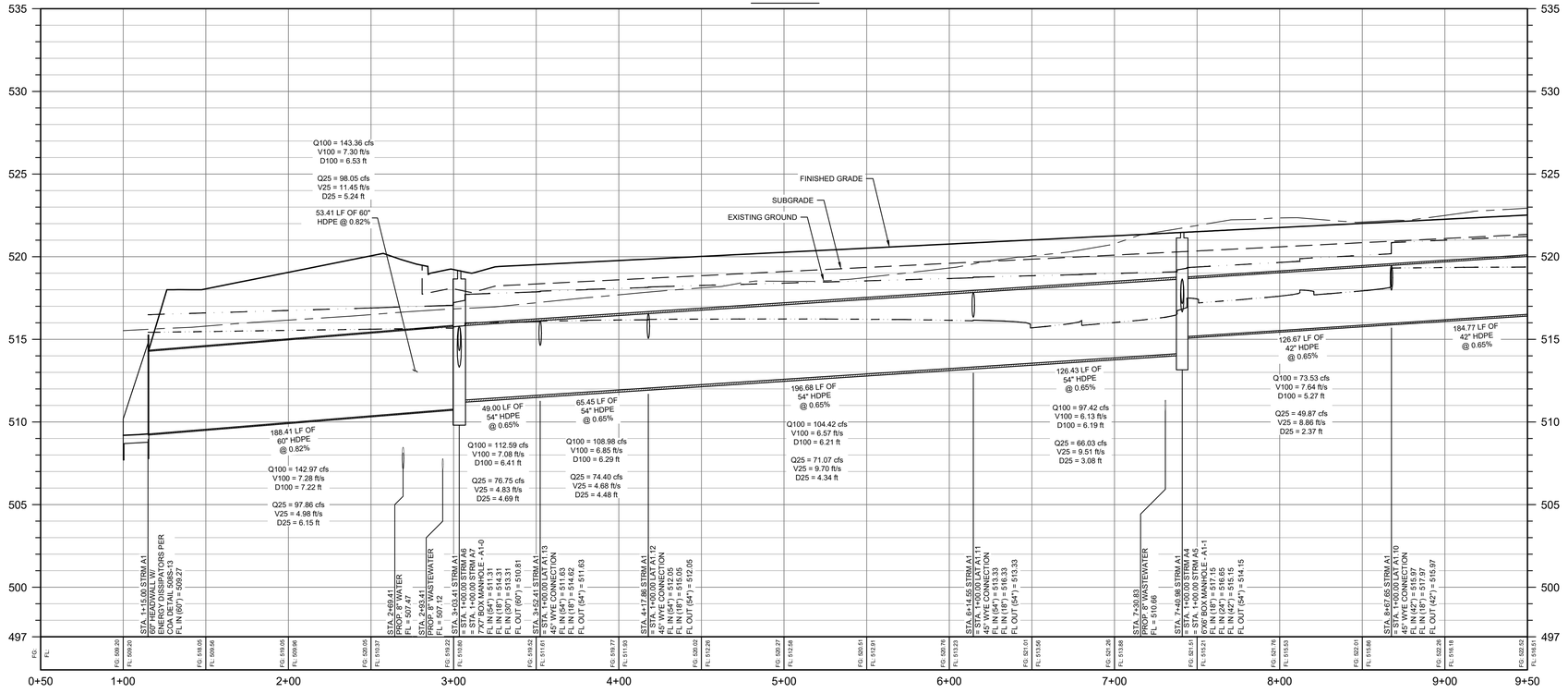
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CURVE DATA						
NUMBER	DELTA	TANGENT	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING
C1	11° 23' 43"	150.16	1505.00	299.32	298.83	N79° 32' 43.54"E
C2	63° 41' 00"	766.97	1235.00	1372.68	1303.11	S74° 18' 38.09"E





SCALE: 1" = 40'
GRAPHIC SCALE IN FEET
0 20' 40' 80'

LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- 950 EXISTING CONTOUR
- 950 EXISTING CONTOUR
- 950 PROPOSED CONTOUR
- PROPOSED CONTOUR
- STORM SEWER FLOW DIRECTION
- PROPOSED MANHOLE
- PROPOSED BOX MANHOLE
- 10' CURB INLET
- 15' CURB INLET

PROFILE LEGEND

- PROPERTY GRADE LINE
- PROPOSED SUBGRADE
- EXISTING GROUND AT CENTERLINE
- 25YR HGL
- 100 YR HGL

NOTES:
1. ALL INLET WYE CONNECTIONS TO BE 45 DEGREES UNLESS OTHERWISE NOTED
2. ALL STORM LATERALS TO BE RCP UNLESS OTHERWISE NOTED.
3. ALL FITTINGS AND WYES SHALL BE PRECAST AND NOT CAST-IN-PLACE WITHOUT PRIOR APPROVAL.
4. ALL CURB INLETS TO BE 10' UNLESS OTHERWISE NOTED.
5. TYPICAL SSL ASSIGNMENTS 5 FT. FROM STREET CENTERLINE, UNLESS OTHERWISE NOTED.
6. UTILITY CROSSING INFORMATION SHOWN HERE IN PROFILE IS FOR GENERAL REFERENCE. REFER TO THE APPROPRIATE UTILITY DESIGN SHEETS AND STANDARDS DETAILS FOR ADDITIONAL AND FINAL GRADE INFORMATION.
7. TOP OF MANHOLE, INLETS, PAVEMENT GRADES SHOWN FOR GENERAL REFERENCE, THE STREET DESIGN SHEETS (PLAN/PROFILE) TAKE PRECEDENCE FOR FINISHED GRADES

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HARVEST RIDGE
SECTION 5

STORM SEWER LINE A1
PLAN AND PROFILE
(STA. 1+00 TO 9+50)

PROJECT NO: 1636-11996

DESIGNED BY: MRC

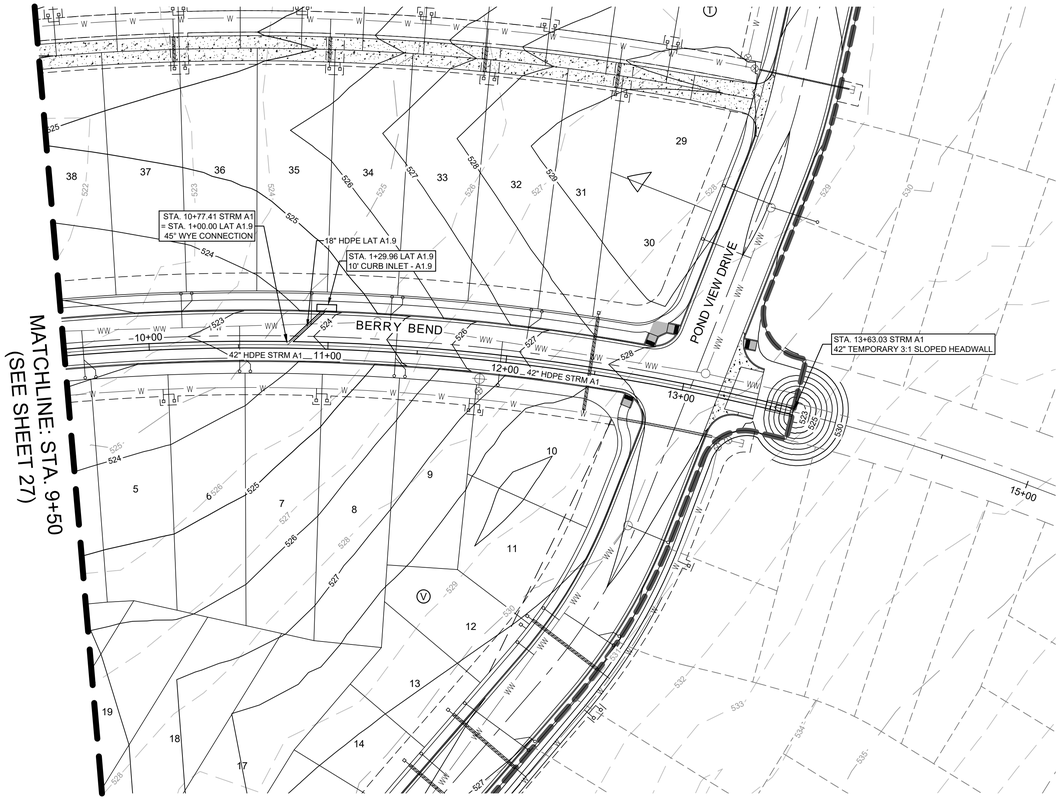
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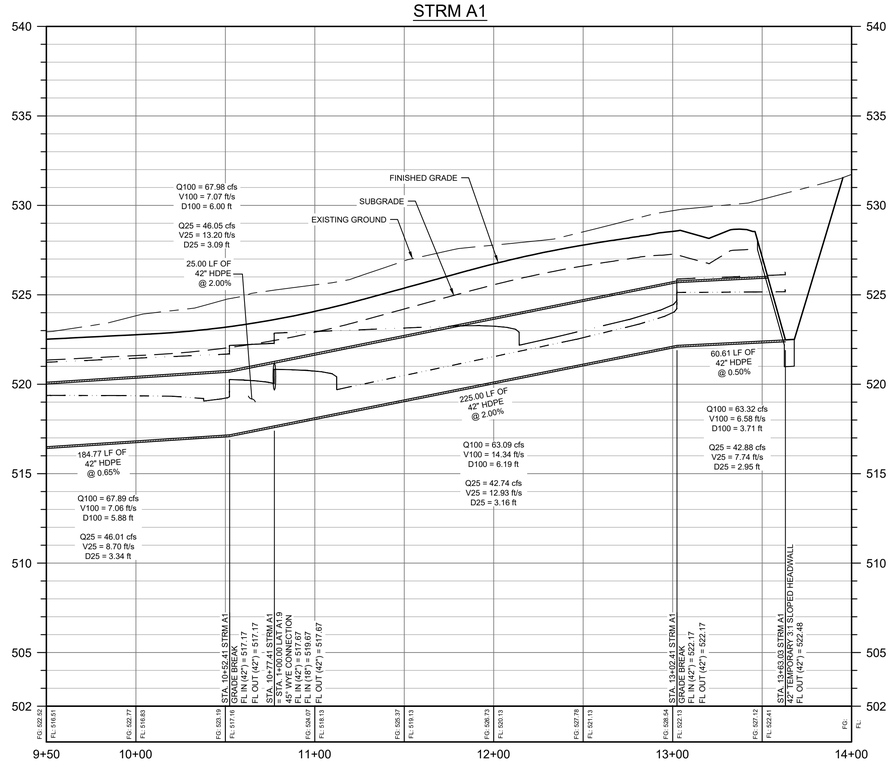
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SCALE: 1" = 40'
GRAPHIC SCALE IN FEET
0 20' 40' 80'

LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- EXISTING CONTOUR
- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED CONTOUR
- STORM SEWER FLOW DIRECTION
- PROPOSED MANHOLE
- PROPOSED BOX MANHOLE
- 10' CURB INLET
- 15' CURB INLET

NOTES:
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PROFILE LEGEND

- PROPERTY GRADE LINE
- PROPOSED SUBGRADE
- EXISTING GROUND AT CENTERLINE
- 25YR HGL
- 100 YR HGL

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HARVEST RIDGE
SECTION 5

STORM SEWER LINE A1
PLAN AND PROFILE
(STA. 9+50 TO END)

PROJECT NO: 1636-11996

DESIGNED BY: MRC

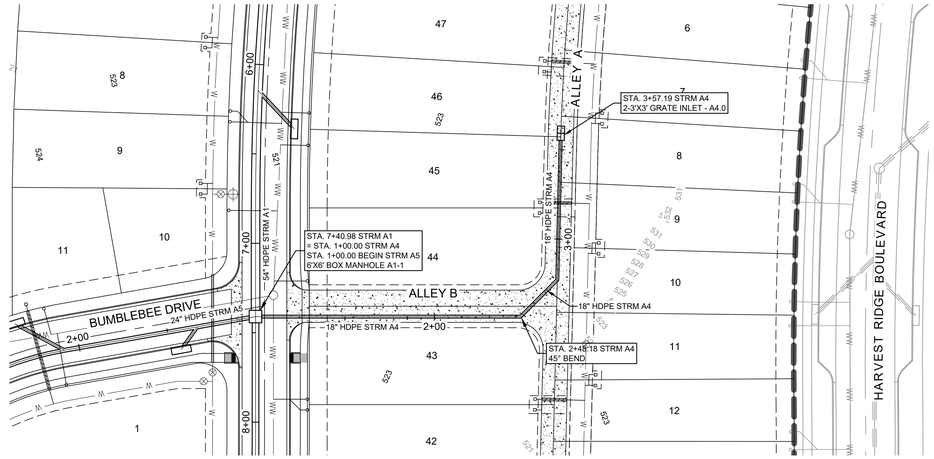
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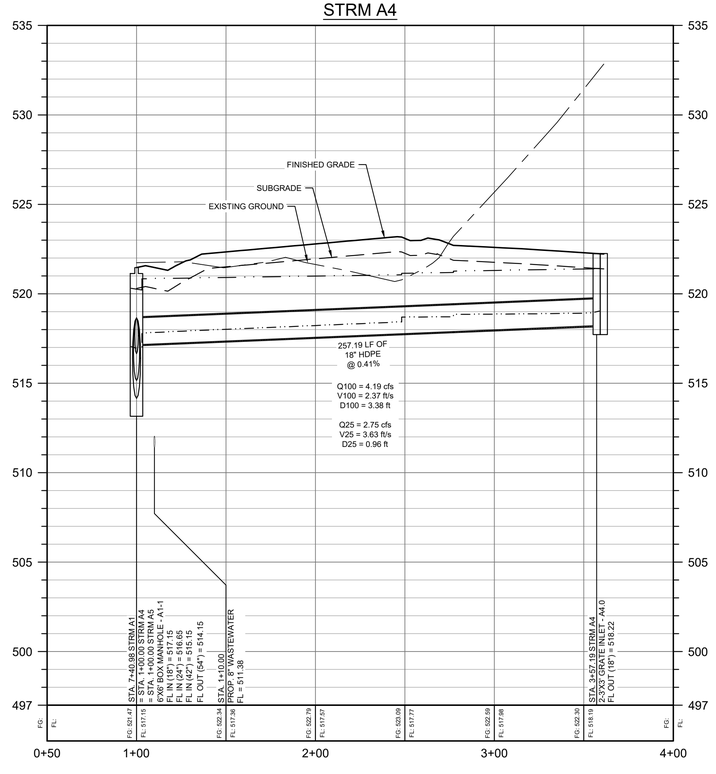
SCALE: 1" = 40'
GRAPHIC SCALE IN FEET
0 20' 40' 80'

LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- EXISTING CONTOUR (950)
- EXISTING CONTOUR (950)
- PROPOSED CONTOUR (950)
- PROPOSED CONTOUR
- STORM SEWER FLOW DIRECTION
- PROPOSED MANHOLE
- PROPOSED BOX MANHOLE
- 10' CURB INLET
- 15' CURB INLET

NOTES:
1. ALL INLET WYE CONNECTIONS TO BE 45 DEGREES UNLESS OTHERWISE NOTED
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STRM A4



PROFILE LEGEND

- PROPERTY GRADE LINE
- PROPOSED SUBGRADE
- EXISTING GROUND AT CENTERLINE
- 25YR HGL
- 100 YR HGL

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HARVEST RIDGE
SECTION 5

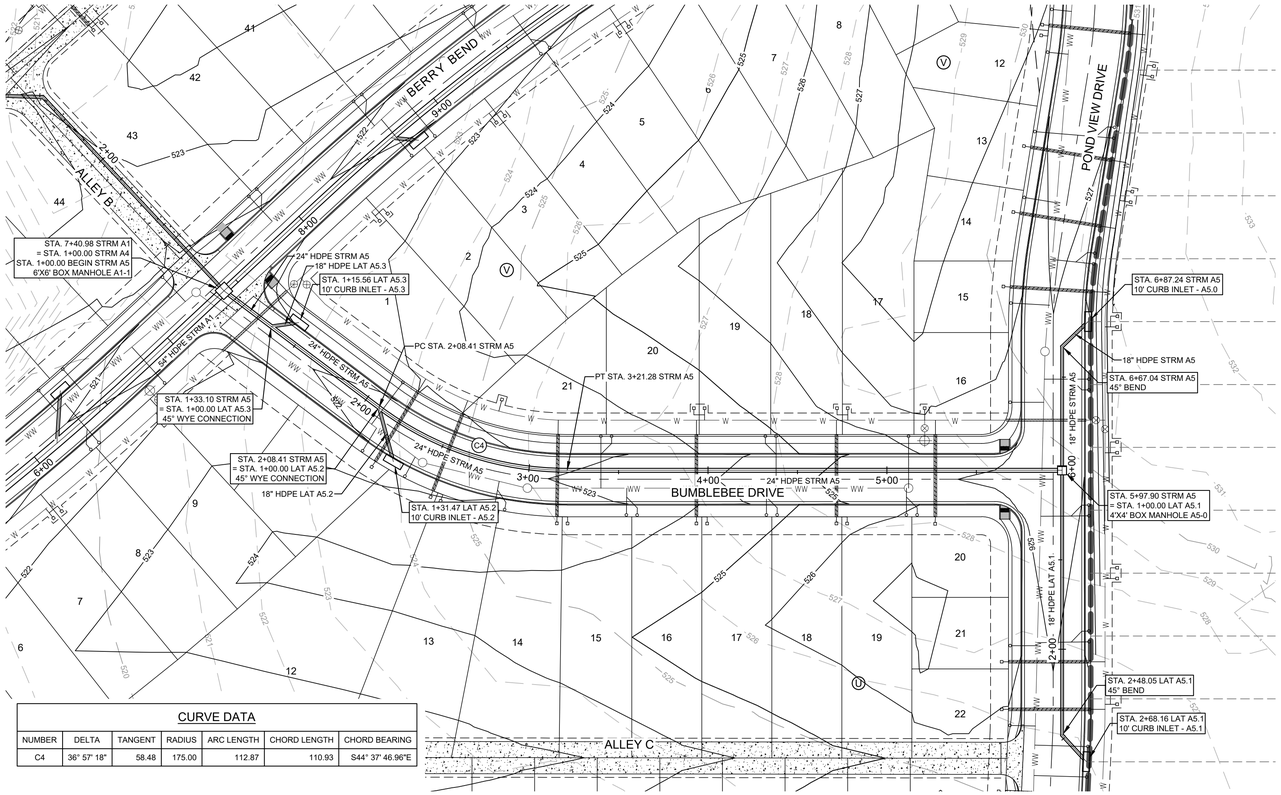
STORM SEWER LINE
A4 PLAN AND PROFILE
(STA. 1+00 TO END)

PROJECT NO: 1636-11996
DESIGNED BY: MRC
DRAWN BY: DPG/BE
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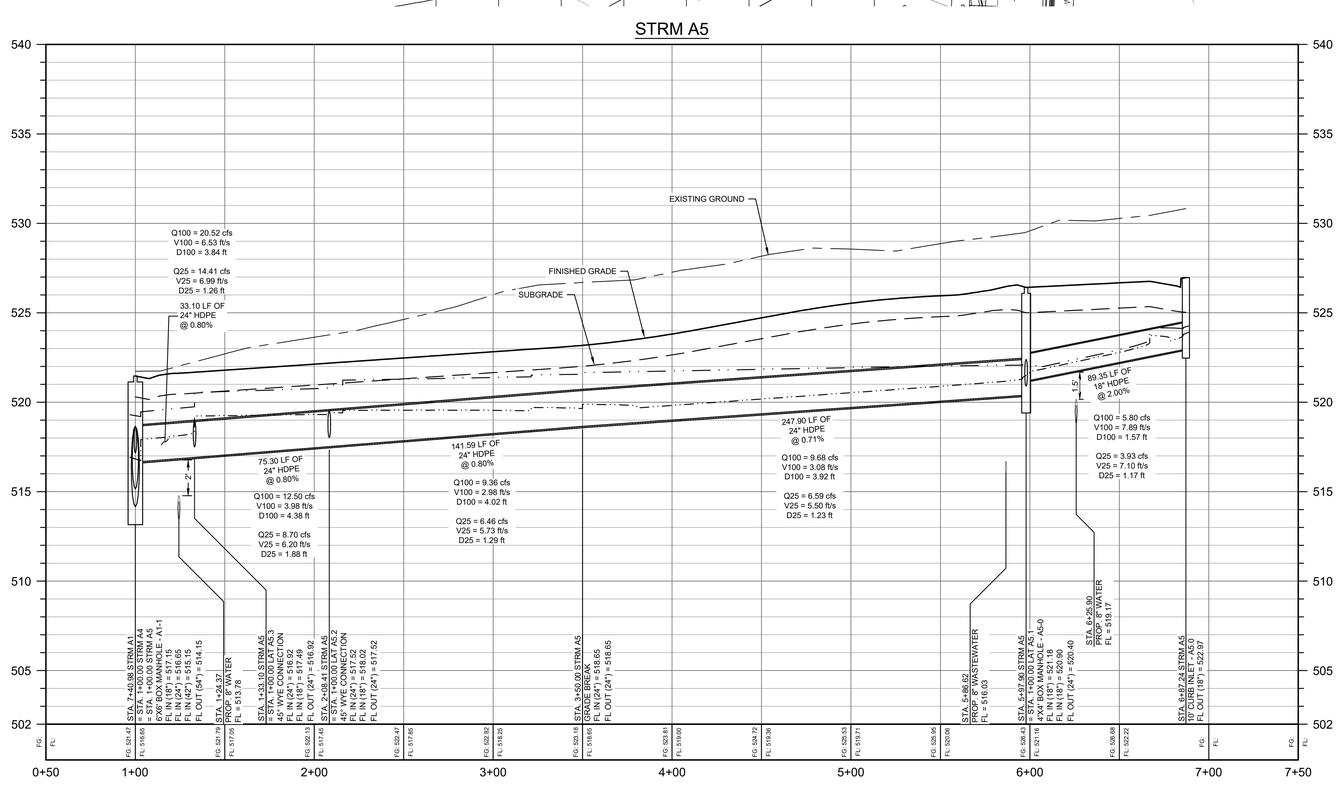
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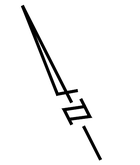
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CURVE DATA						
NUMBER	DELTA	TANGENT	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING
C4	36° 57' 18"	58.48	175.00	112.87	110.93	S44° 37' 46.96"E





SCALE: 1" = 40'
GRAPHIC SCALE IN FEET
0 20' 40' 80'

LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- EXISTING CONTOUR (950)
- EXISTING CONTOUR (950)
- PROPOSED CONTOUR (950)
- PROPOSED CONTOUR
- STORM SEWER FLOW DIRECTION
- PROPOSED MANHOLE
- PROPOSED BOX MANHOLE
- 10' CURB INLET
- 15' CURB INLET

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PROFILE LEGEND

- PROPERTY GRADE LINE
- PROPOSED SUBGRADE
- EXISTING GROUND AT CENTERLINE
- 25YR HGL
- 100 YR HGL

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HARVEST RIDGE
SECTION 5

STORM SEWER LINE
A5 PLAN AND PROFILE
(STA. 1+00 TO END)

PROJECT NO: 1636-11996

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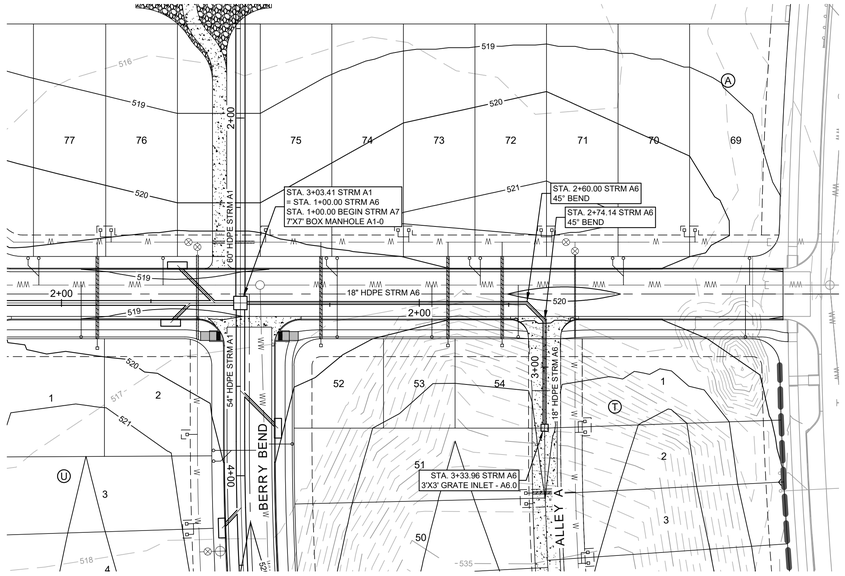
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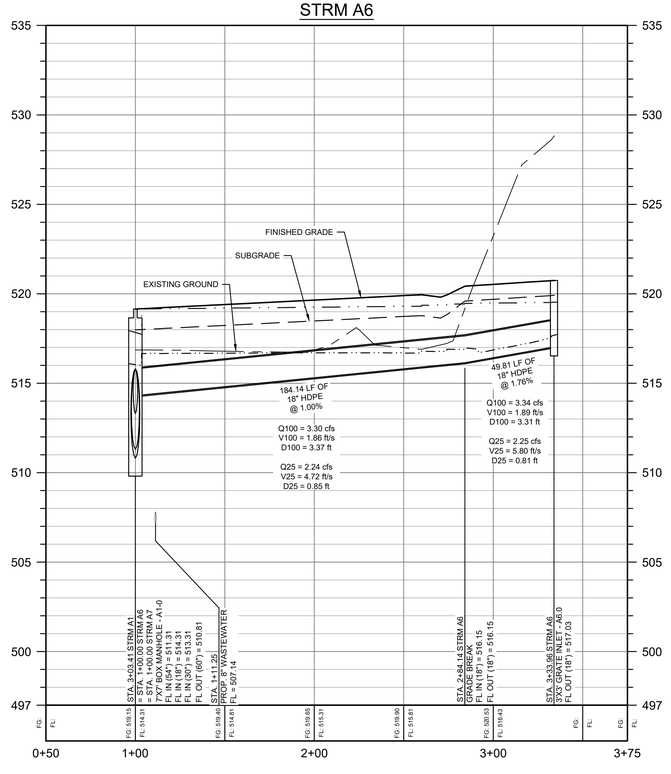
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STRM A6





SCALE: 1" = 40'
GRAPHIC SCALE IN FEET
0 20' 40' 80'

LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- EXISTING CONTOUR (950)
- EXISTING CONTOUR (950)
- PROPOSED CONTOUR (950)
- PROPOSED CONTOUR
- STORM SEWER FLOW DIRECTION
- PROPOSED MANHOLE
- PROPOSED BOX MANHOLE
- 10' CURB INLET
- 15' CURB INLET

NOTES:
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PROFILE LEGEND

- PROPERTY GRADE LINE
- PROPOSED SUBGRADE
- EXISTING GROUND AT CENTERLINE
- 25YR HGL
- 100 YR HGL

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HARVEST RIDGE
SECTION 5

STORM SEWER LINE
A6 PLAN AND PROFILE
(STA. 1+00 TO END)

PROJECT NO: 1636-11996

DESIGNED BY: MRC

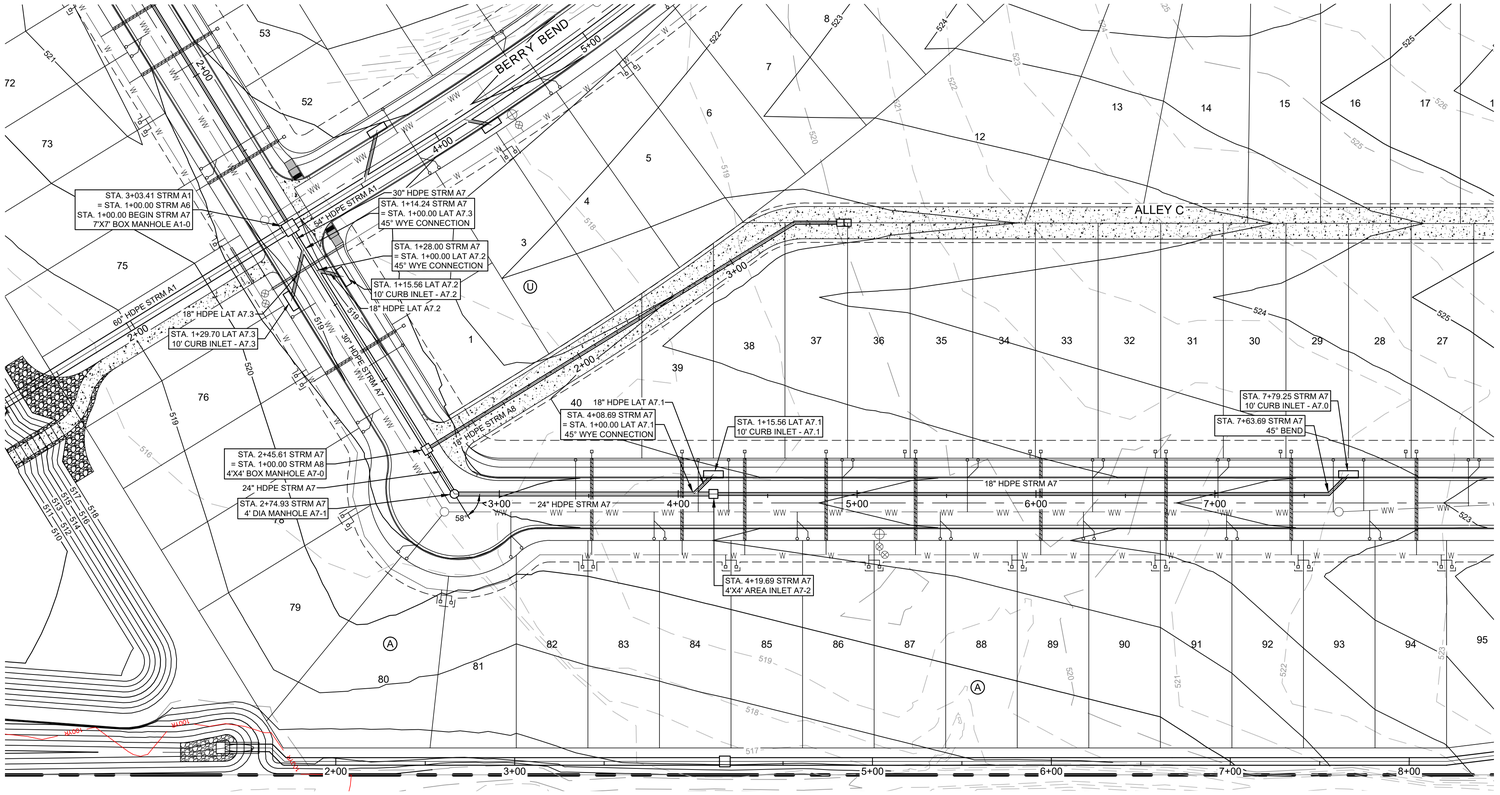
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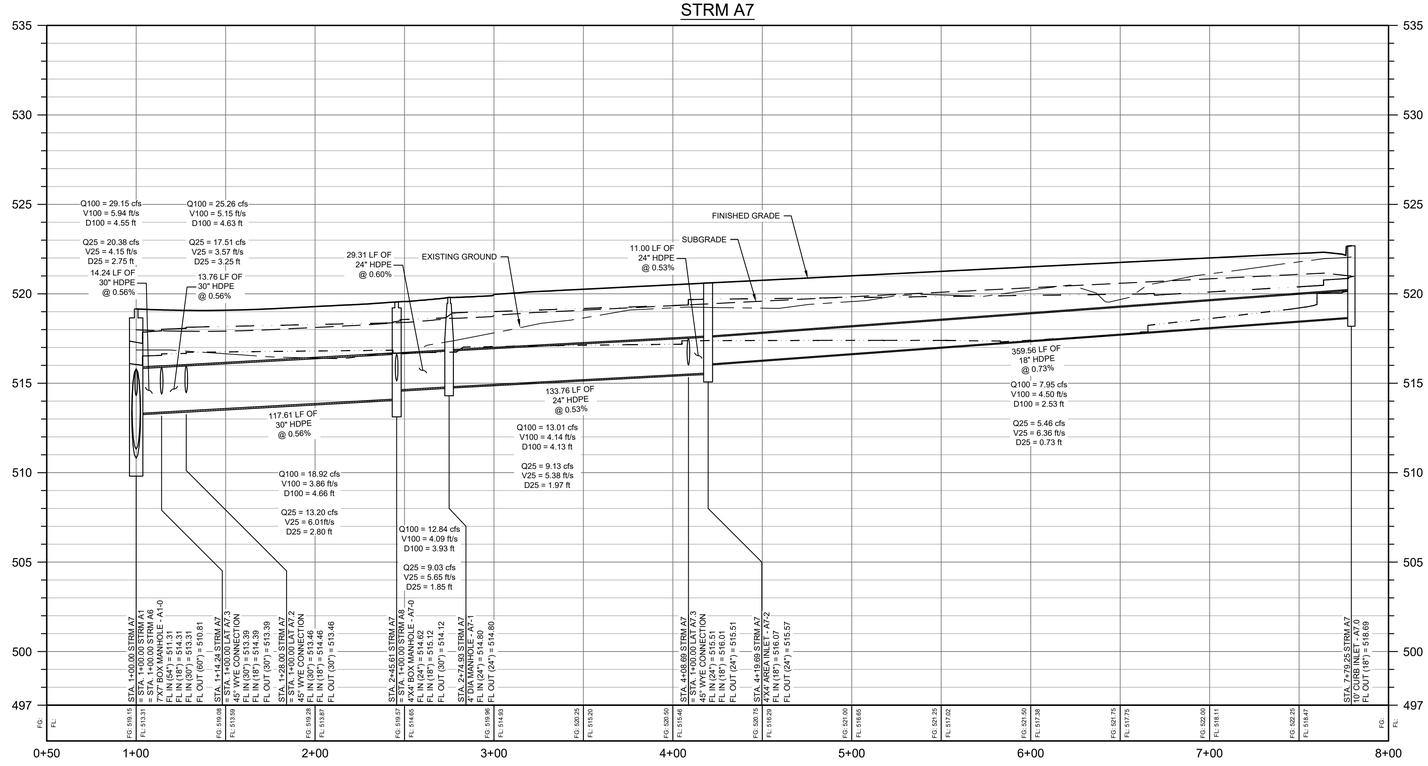
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SCALE: 1" = 40'
GRAPHIC SCALE IN FEET
0 20' 40' 80'

LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- 950 EXISTING CONTOUR
- 950 EXISTING CONTOUR
- 950 PROPOSED CONTOUR
- PROPOSED CONTOUR
- STORM SEWER FLOW DIRECTION
- PROPOSED MANHOLE
- PROPOSED BOX MANHOLE
- 10' CURB INLET
- 15' CURB INLET

NOTES:
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PROFILE LEGEND

- PROPERTY GRADE LINE
- PROPOSED SUBGRADE
- EXISTING GROUND AT CENTERLINE
- 25YR HGL
- 100 YR HGL

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NO.	BY	DATE	REVISION DESCRIPTION

HARVEST RIDGE
SECTION 5

STORM SEWER LINE
A7 PLAN AND PROFILE
(STA. 1+00 TO END)

PROJECT NO: 1636-11996

DESIGNED BY: MRC

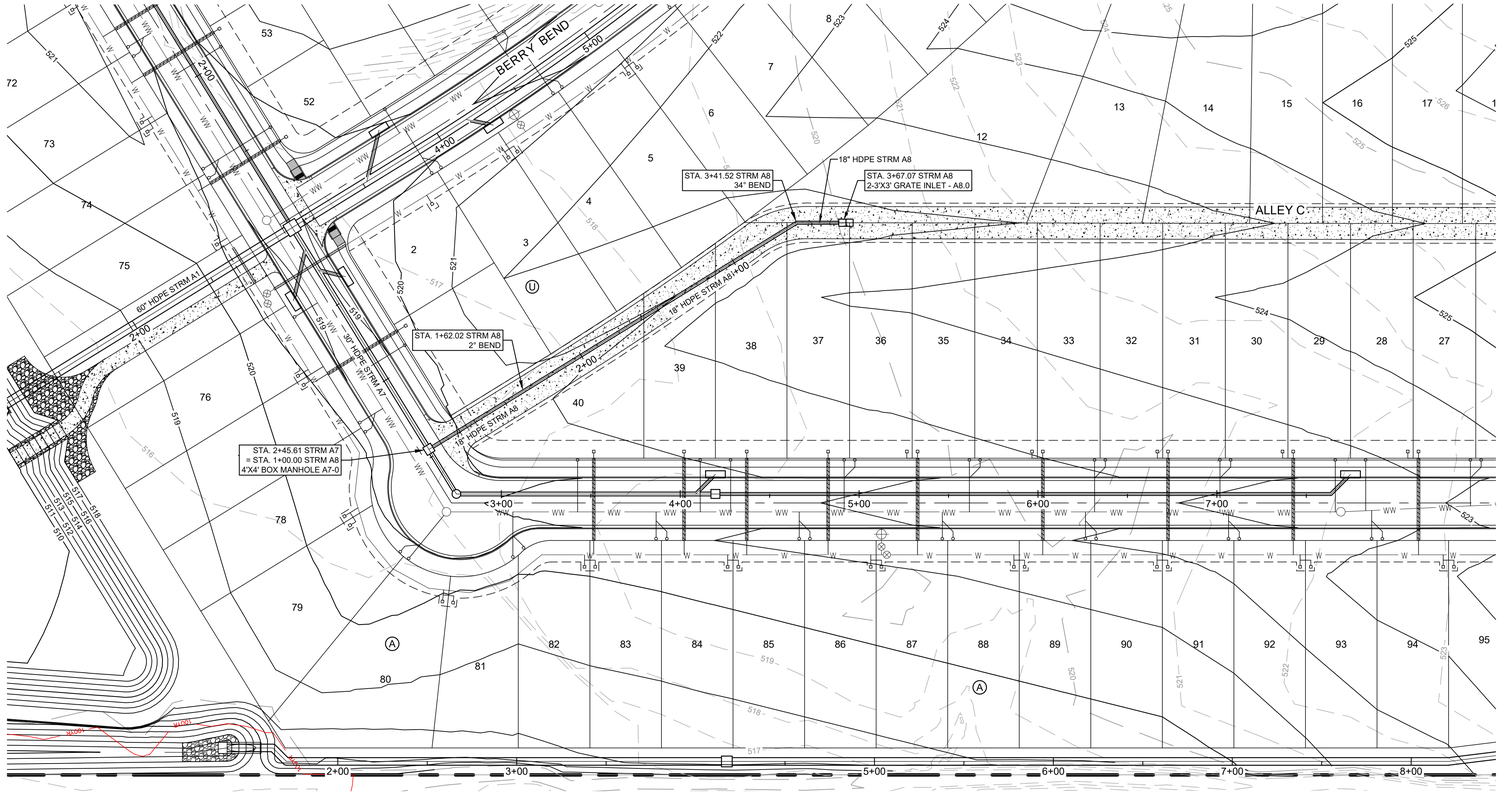
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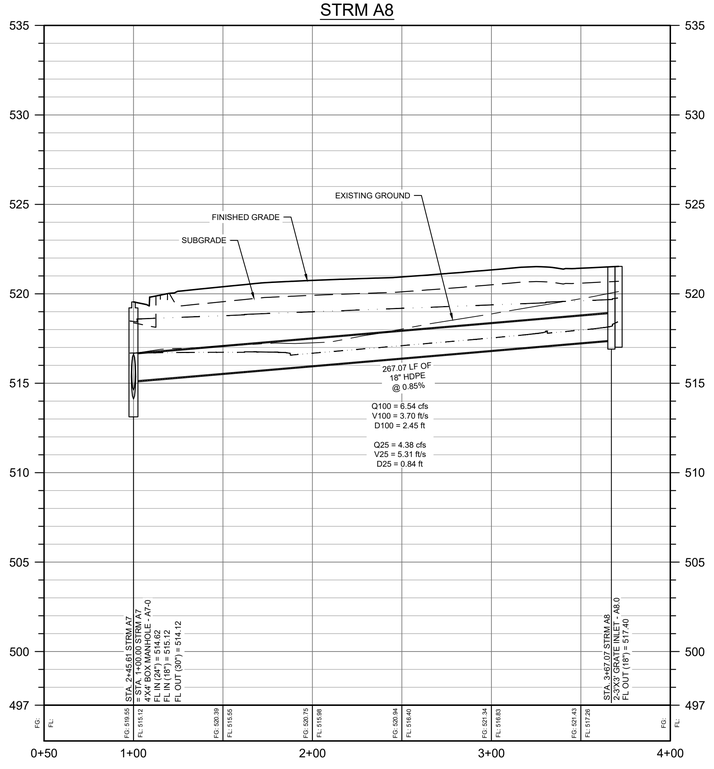
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NOTICE:
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SCALE: 1" = 40'
GRAPHIC SCALE IN FEET
0 20' 40' 80'

LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- 950 EXISTING CONTOUR
- 950 EXISTING CONTOUR
- 950 PROPOSED CONTOUR
- PROPOSED CONTOUR
- STORM SEWER FLOW DIRECTION
- PROPOSED MANHOLE
- PROPOSED BOX MANHOLE
- 10' CURB INLET
- 15' CURB INLET

NOTES:
1. ALL INLET WYE CONNECTIONS TO BE 45 DEGREES UNLESS OTHERWISE NOTED
2. ALL STORM LATERALS TO BE RCP UNLESS OTHERWISE NOTED.
3. ALL FITTINGS AND WYES SHALL BE PRECAST AND NOT CAST-IN-PLACE WITHOUT PRIOR APPROVAL.
4. ALL CURB INLETS TO BE 10' UNLESS OTHERWISE NOTED.
5. TYPICAL SSL ASSIGNMENTS 5 FT. FROM STREET CENTERLINE, UNLESS OTHERWISE NOTED.
6. UTILITY CROSSING INFORMATION SHOWN HERE IN PROFILE IS FOR GENERAL REFERENCE. REFER TO THE APPROPRIATE UTILITY DESIGN SHEETS AND STANDARDS DETAILS FOR ADDITIONAL AND FINAL GRADE INFORMATION.
7. TOP OF MANHOLE, INLETS, PAVEMENT GRADES SHOWN FOR GENERAL REFERENCE, THE STREET DESIGN SHEETS (PLAN/PROFILE) TAKE PRECEDENCE FOR FINISHED GRADES

PROFILE LEGEND

- PROPERTY GRADE LINE
- PROPOSED SUBGRADE
- EXISTING GROUND AT CENTERLINE
- 25YR HGL
- 100 YR HGL

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HARVEST RIDGE
SECTION 5

STORM SEWER LINE
A8 PLAN AND PROFILE
(STA. 1+00 TO END)

PROJECT NO: 1636-11996

DESIGNED BY: MRC

DRAWN BY: DPG/BE

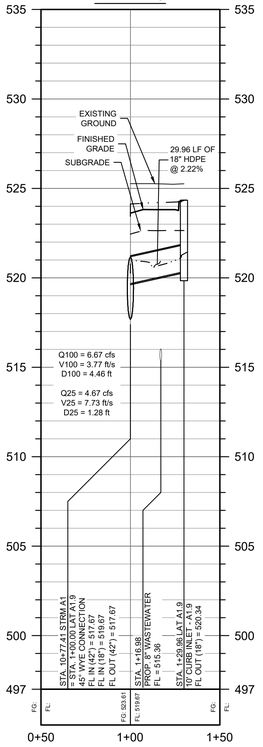
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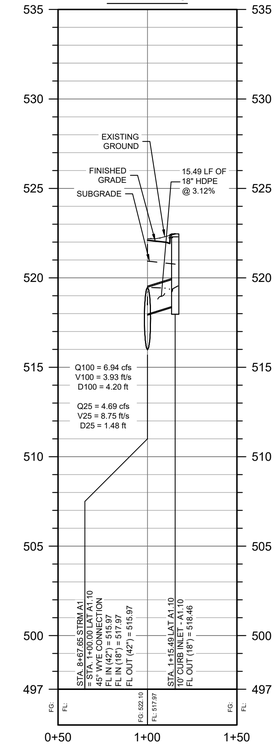
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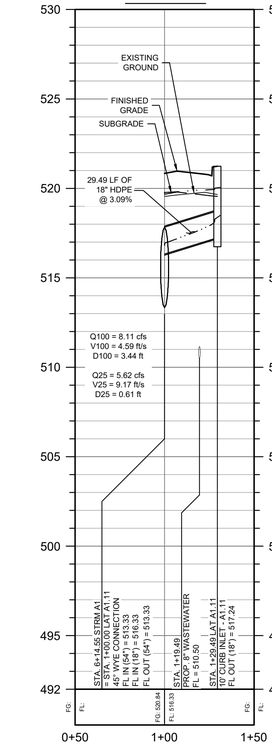
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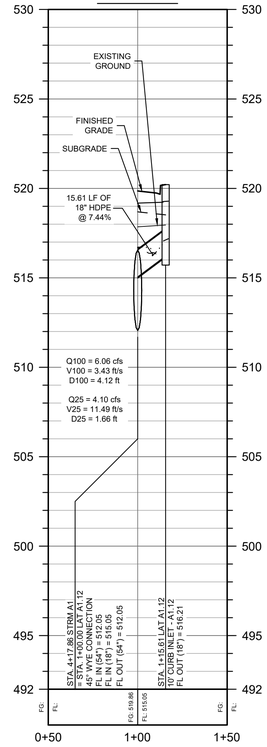
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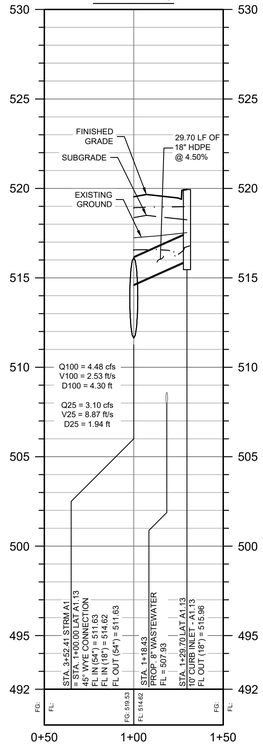
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LAT A1.12



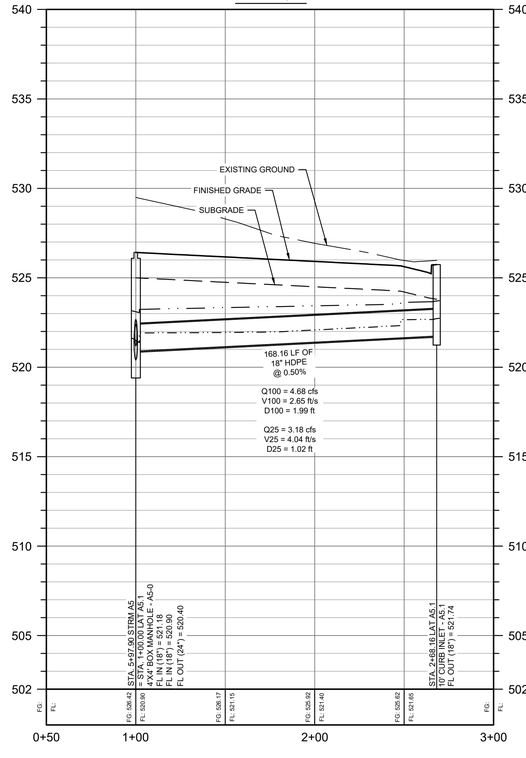
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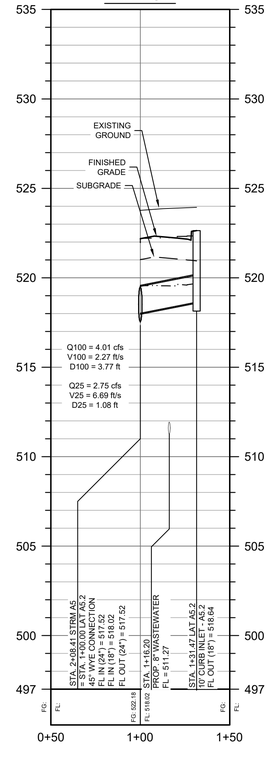
PROFILE LEGEND

- PROPERTY GRADE LINE
- PROPOSED SUBGRADE
- EXISTING GROUND AT CENTERLINE
- 25YR HGL
- 100 YR HGL

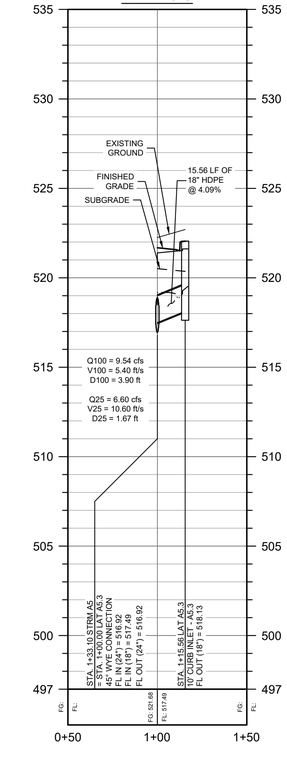
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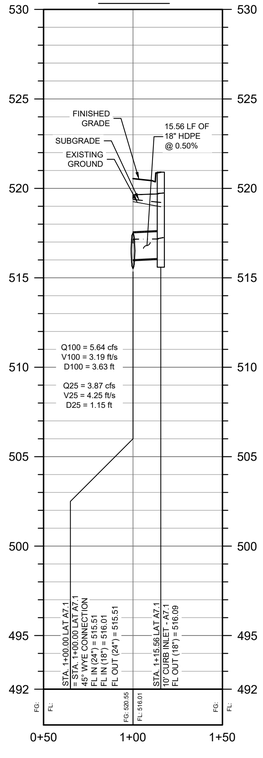
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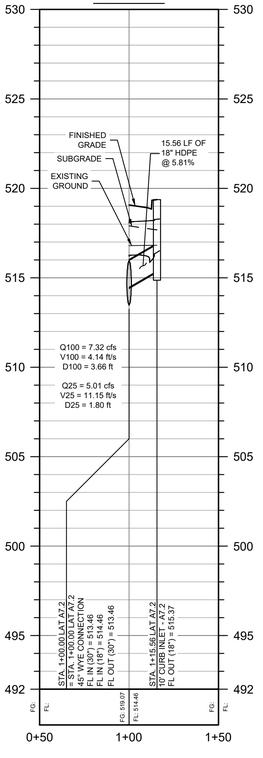
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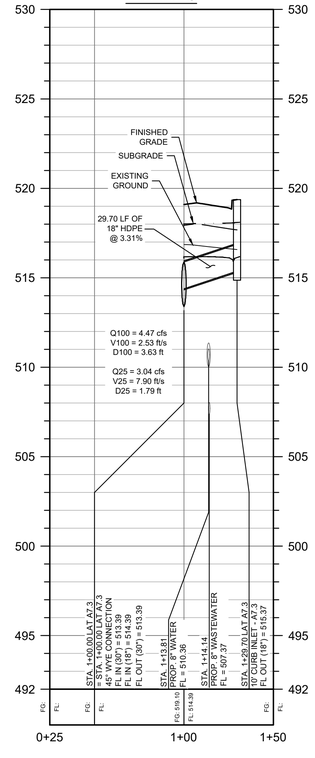
LAT A7.1



LAT A7.2



LAT A7.3



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NO.	BY	DATE	REVISION DESCRIPTION

HARVEST RIDGE
SECTION 5

STORM SEWER A LATERALS

PROJECT NO: 1636-11996

DESIGNED BY: MRC

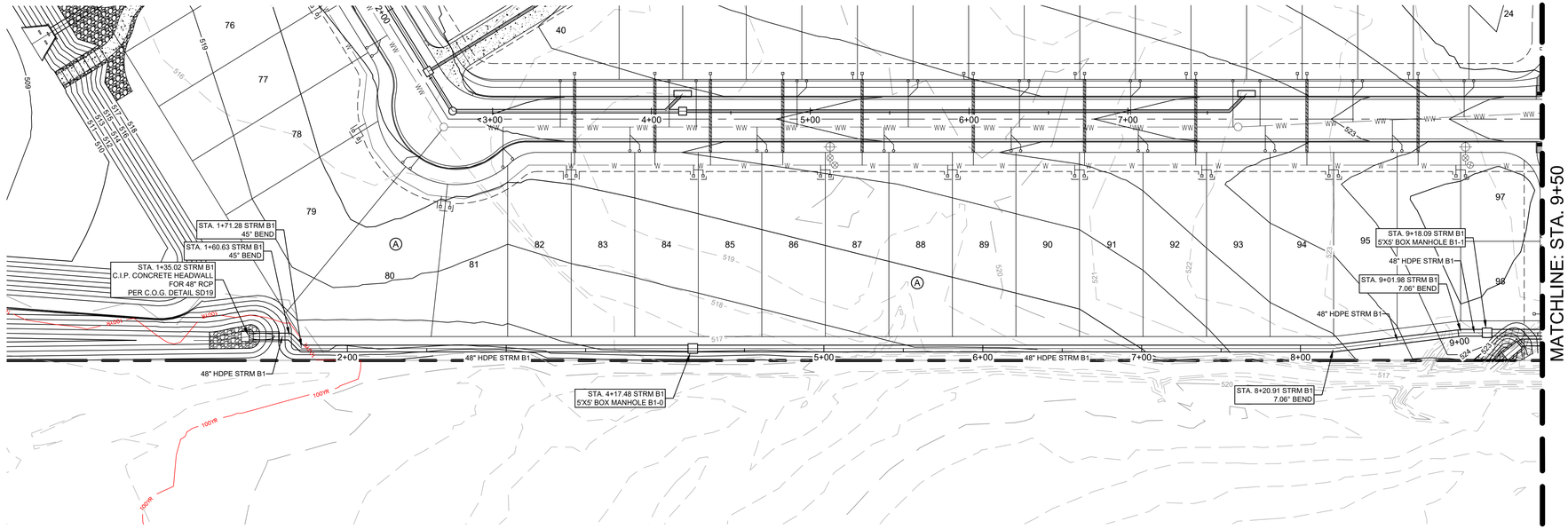
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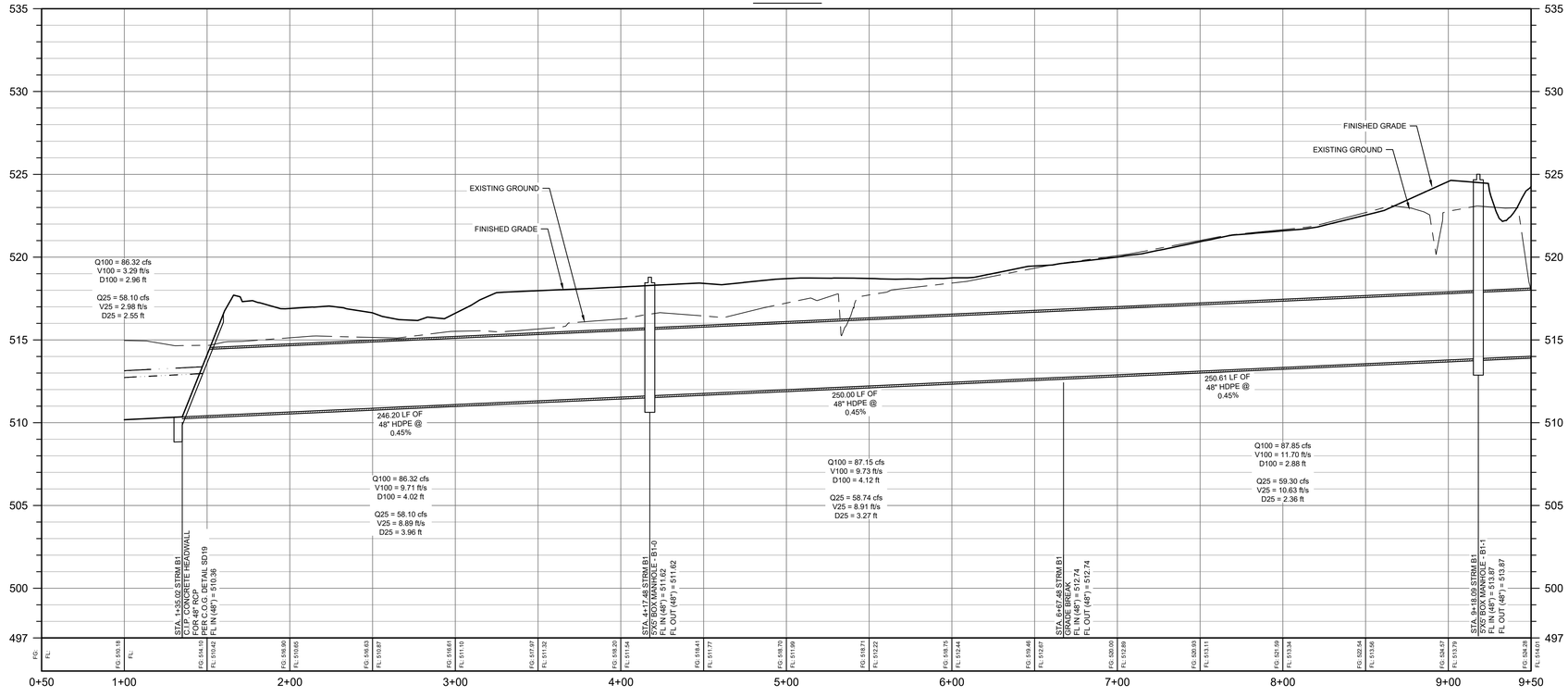
CHECKED BY: JAB

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SCALE: 1" = 40'
GRAPHIC SCALE IN FEET
0 20' 40' 80'

LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- EXISTING CONTOUR
- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED CONTOUR
- STORM SEWER FLOW DIRECTION
- PROPOSED MANHOLE
- PROPOSED BOX MANHOLE
- 10' CURB INLET
- 15' CURB INLET

NOTES:
1. ALL INLET WYE CONNECTIONS TO BE 45 DEGREES UNLESS OTHERWISE NOTED
2. ALL STORM LATERALS TO BE RCP UNLESS OTHERWISE NOTED.
3. ALL FITTINGS AND WYES SHALL BE PRECAST AND NOT CAST-IN-PLACE WITHOUT PRIOR APPROVAL.
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PROFILE LEGEND

- PROPERTY GRADE LINE
- PROPOSED SUBGRADE
- EXISTING GROUND AT CENTERLINE
- 25YR HGL
- 100 YR HGL

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NO.	BY	DATE	REVISION DESCRIPTION

HARVEST RIDGE
SECTION 5

STORM SEWER LINE B1
PLAN AND PROFILE
(STA. 1+00 TO 9+50)

PROJECT NO: 1636-11996

DESIGNED BY: MRC

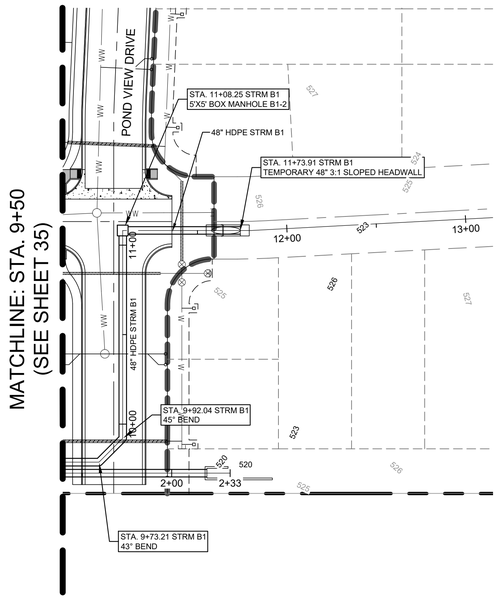
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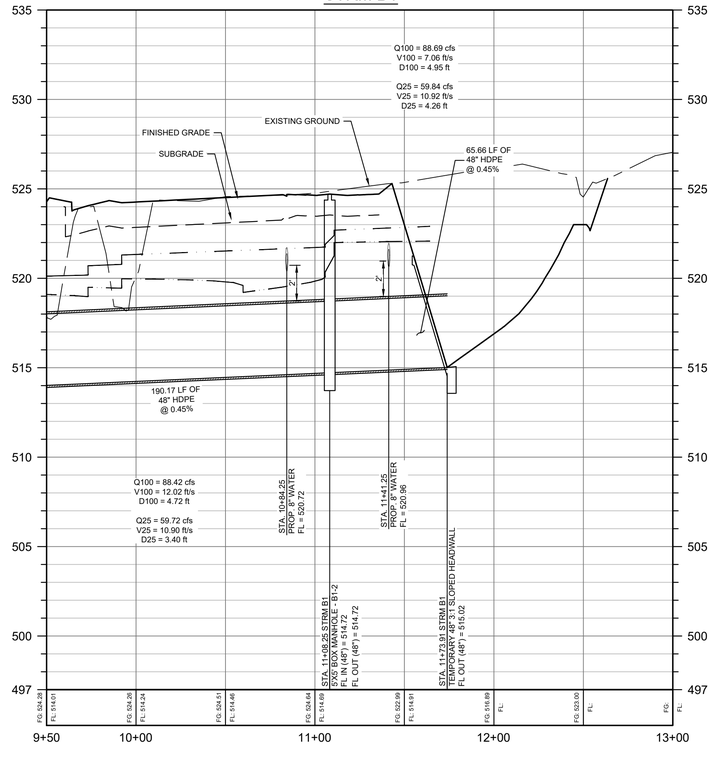
CHECKED BY: JAB

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SCALE: 1" = 40'
GRAPHIC SCALE IN FEET
0 20' 40' 80'

LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- EXISTING CONTOUR
- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED CONTOUR
- STORM SEWER FLOW DIRECTION
- PROPOSED MANHOLE
- PROPOSED BOX MANHOLE
- 10' CURB INLET
- 15' CURB INLET

NOTES:
1. ALL INLET WYE CONNECTIONS TO BE 45 DEGREES UNLESS OTHERWISE NOTED
2. ALL STORM LATERALS TO BE RCP UNLESS OTHERWISE NOTED.
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PROFILE LEGEND

- PROPERTY GRADE LINE
- PROPOSED SUBGRADE
- EXISTING GROUND AT CENTERLINE
- 25YR HGL
- 100 YR HGL

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HARVEST RIDGE
SECTION 5

STORM SEWER LINE B1
PLAN AND PROFILE
(STA. 9+50 TO END)

PROJECT NO: 1636-11996

DESIGNED BY: MRC

DRAWN BY: DPG/BE

CHECKED BY: JAB

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100-YR CULVERT CALCULATIONS

Section
- Shape: Circular
- Material: Corrugated HDPE (Smooth In
- Size: 48 inch
- Number: 1
- Mannings: 0.012

Inlet
- Entrance: Beveled ring, 33.7° bevels
- Ke: 0.20

Inverts
- Solve For: Slope
- Invert Upstream: 518.14 ft
- Invert Downstream: 517.37 ft
- Length: 107.37 ft
- Slope: 0.007171 ft/ft

Headwater Elevations
- Computed Headwater: 522.64 ft
- Inlet Control: 522.56 ft
- Outlet Control: 522.64 ft

Exit Results
- Discharge: 90.35 cfs
- Velocity: 7.71 ft/s
- Depth: 3.52 ft
- Tailwater Elevation: 520.89 ft

25-YR CULVERT CALCULATIONS

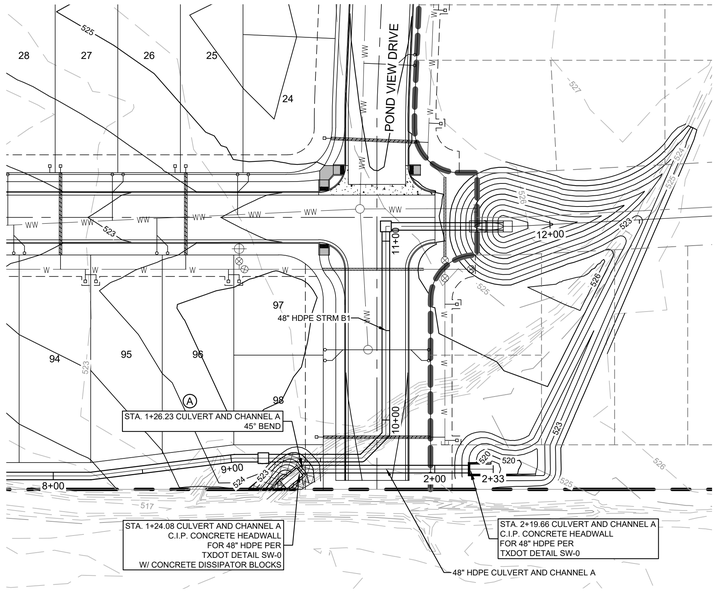
Section
- Shape: Circular
- Material: Corrugated HDPE (Smooth In
- Size: 48 inch
- Number: 1
- Mannings: 0.012

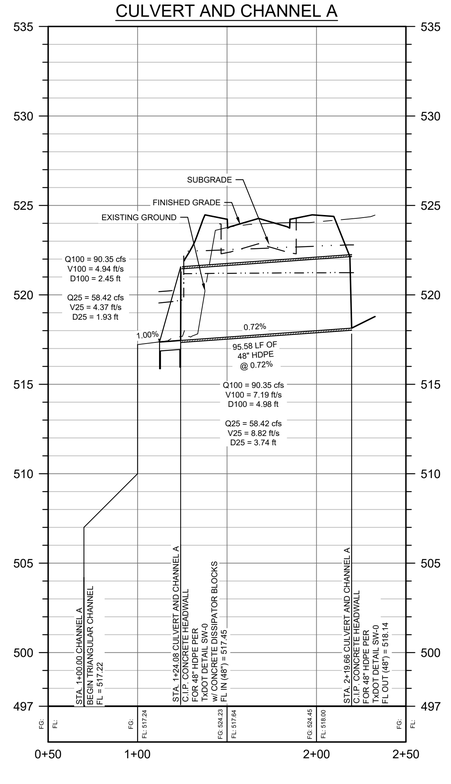
Inlet
- Entrance: Beveled ring, 33.7° bevels
- Ke: 0.20

Inverts
- Solve For: Slope
- Invert Upstream: 518.14 ft
- Invert Downstream: 517.37 ft
- Length: 107.37 ft
- Slope: 0.007171 ft/ft

Headwater Elevations
- Computed Headwater: 521.58 ft
- Inlet Control: 521.43 ft
- Outlet Control: 521.58 ft

Exit Results
- Discharge: 58.42 cfs
- Velocity: 5.80 ft/s
- Depth: 2.99 ft
- Tailwater Elevation: 520.36 ft







SCALE: 1" = 40'
GRAPHIC SCALE IN FEET
0 20' 40' 80'

LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- EXISTING CONTOUR (950)
- EXISTING CONTOUR (950)
- PROPOSED CONTOUR (950)
- PROPOSED CONTOUR
- STORM SEWER FLOW DIRECTION
- PROPOSED MANHOLE
- PROPOSED BOX MANHOLE
- 10' CURB INLET
- 15' CURB INLET

NOTES:
1. ALL INLET WYE CONNECTIONS TO BE 45 DEGREES UNLESS OTHERWISE NOTED
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PROFILE LEGEND

- PROPERTY GRADE LINE
- PROPOSED SUBGRADE
- EXISTING GROUND AT CENTERLINE
- 25YR HGL
- 100 YR HGL

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HARVEST RIDGE
SECTION 5

CULVERT A PLAN AND PROFILE
(STA. 1+00 TO END)

PROJECT NO: 1636-11996

DESIGNED BY: MRC

DRAWN BY: DPG/BE

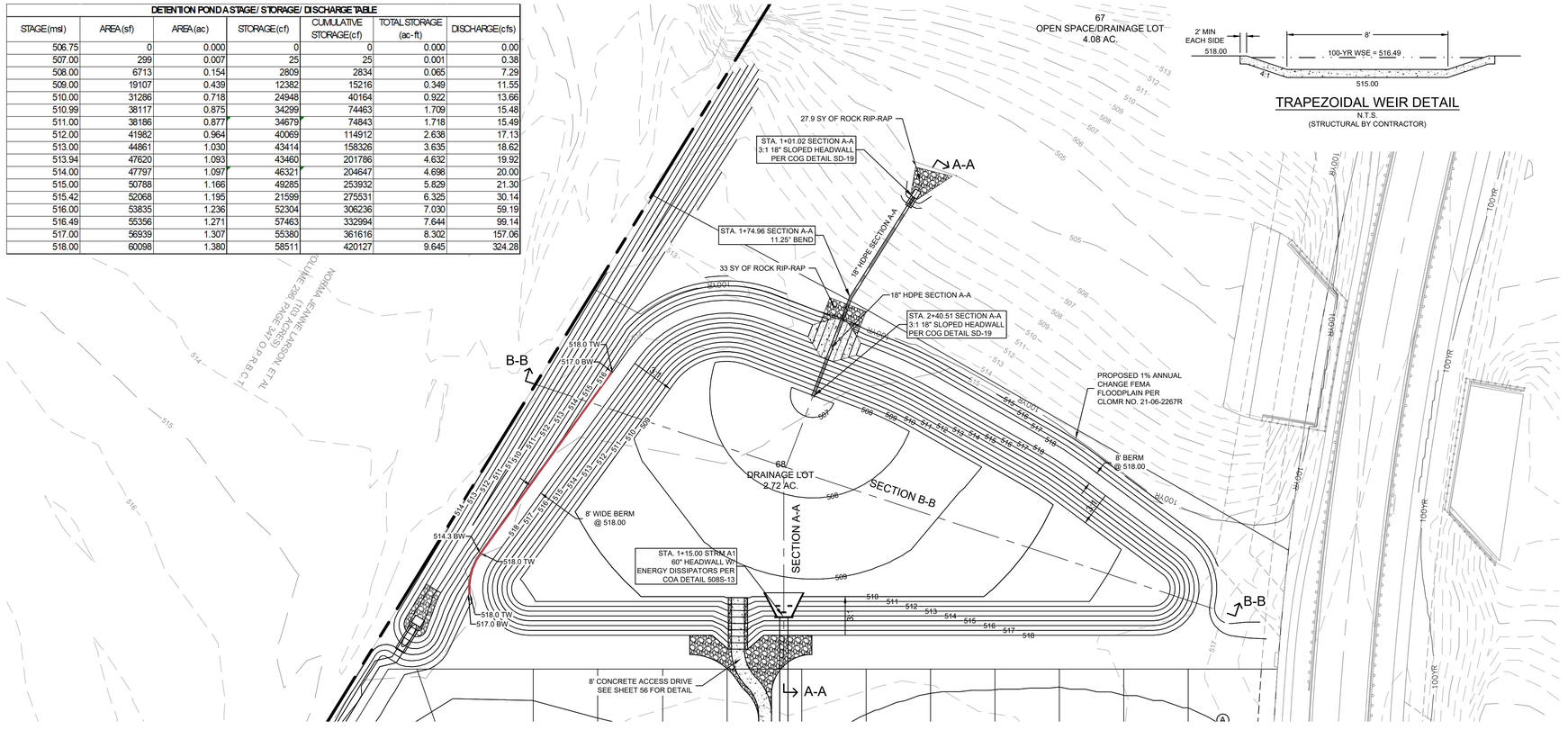
CHECKED BY: JAB

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DETENTION POND A STAGE/ STORAGE/ DISCHARGE TABLE						
STAGE (msl)	AREA (sf)	AREA (ac)	STORAGE (cf)	CUMULATIVE STORAGE (cf)	TOTAL STORAGE (ac-ft)	DISCHARGE (cfs)
506.75	0	0.000	0	0	0.000	0.00
507.00	299	0.007	25	25	0.001	0.38
508.00	6713	0.154	2809	2834	0.065	7.29
509.00	19107	0.439	12382	15216	0.349	11.55
510.00	31286	0.718	24948	40164	0.922	13.66
510.99	38117	0.875	34299	74463	1.709	15.48
511.00	38186	0.877	34679	74843	1.718	15.49
512.00	41982	0.964	40069	114912	2.638	17.13
513.00	44861	1.030	43414	158326	3.635	18.62
513.94	47620	1.093	43460	201786	4.632	19.92
514.00	47797	1.097	46321	204647	4.698	20.00
515.00	50788	1.166	49285	253932	5.829	21.30
515.42	52068	1.195	21599	275531	6.325	30.14
516.00	53835	1.236	52304	306236	7.030	59.19
516.49	55356	1.271	57463	332994	7.644	99.14
517.00	56939	1.307	55380	361616	8.302	157.06
518.00	60098	1.380	58511	420127	9.645	324.28



TRAPEZOIDAL WEIR DETAIL
N.T.S.
(STRUCTURAL BY CONTRACTOR)

SCALE: 1" = 40'
GRAPHIC SCALE IN FEET
0 20' 40' 80'

LEGEND

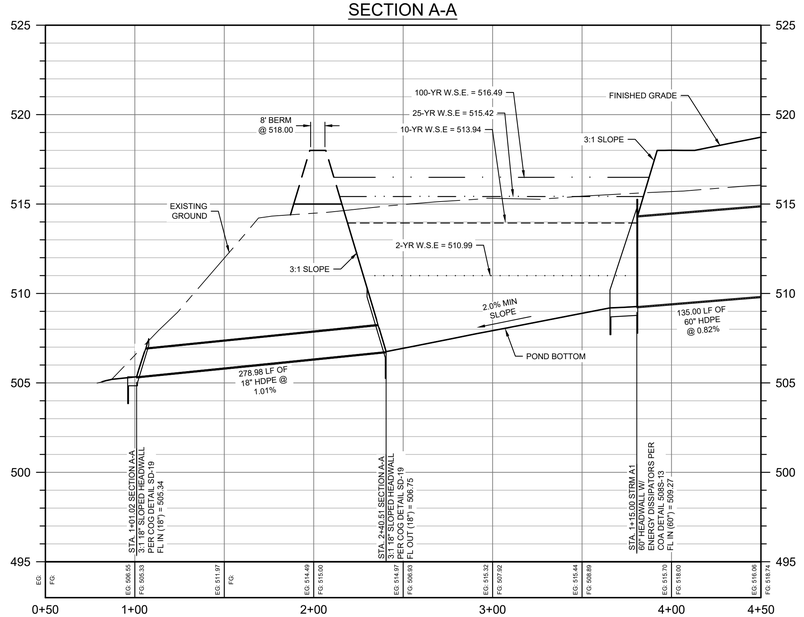
- PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- 950 EXISTING CONTOUR
- 950 EXISTING CONTOUR
- 950 PROPOSED CONTOUR
- PROPOSED CONTOUR
- STORM SEWER FLOW DIRECTION
- PROPOSED MANHOLE
- PROPOSED BOX MANHOLE
- 10' CURB INLET
- 15' CURB INLET

NOTES:
1. PER GENERAL NOTE #8, THE POND SHALL BE REVEGETATED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. REVEGETATION SHALL CONSIST OF SODDING OR SEEDING AT THE CONTRACTOR'S OPTION. HOWEVER, THE TYPE OF REVEGETATION MUST EQUAL OR EXCEED THE TYPE OF VEGETATION PRESENT BEFORE CONSTRUCTION.

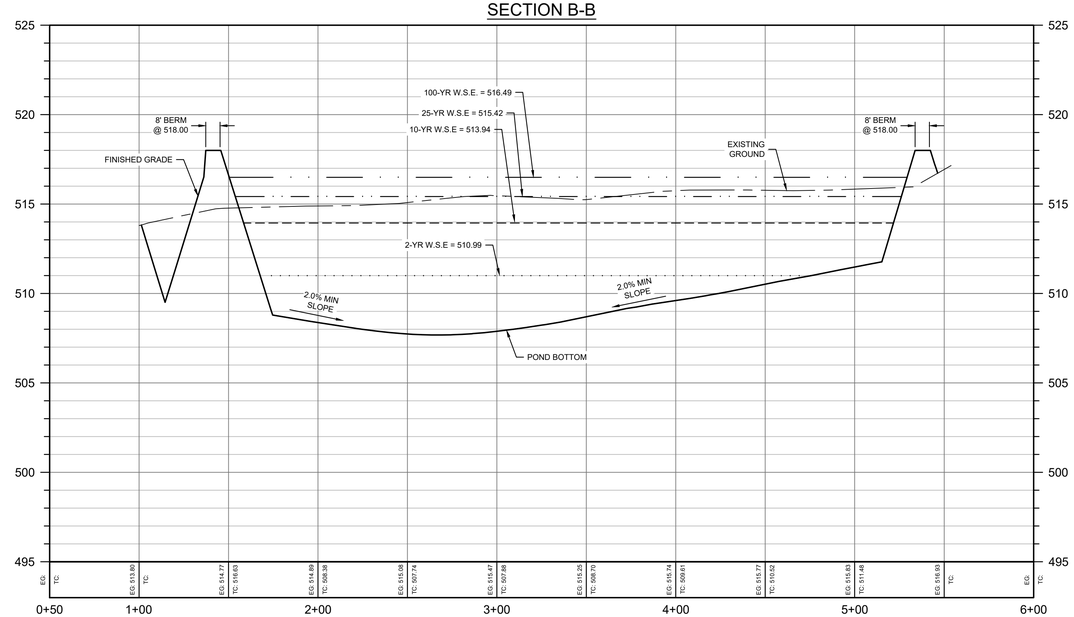
PROFILE LEGEND

- PROPERTY GRADE LINE
- PROPOSED SUBGRADE
- EXISTING GROUND AT CENTERLINE
- 25YR HGL
- 100 YR HGL

SECTION A-A



SECTION B-B



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NO.	BY	DATE	REVISION DESCRIPTION

HARVEST RIDGE
SECTION 5

DETENTION POND PLAN

PROJECT NO: 1636-11996

DESIGNED BY: MRC

DRAWN BY: DPG/BE

CHECKED BY: JAB

NOTICE:
ALTERATION OF A SEALED DRAWING WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS A VIOLATION OF THE TEXAS ENGINEERING PRACTICE ACT.

THESE PLANS ARE RELEASED UNDER THE AUTHORITY OF J. ADAM BERRY, PE, ON 01/13/2026, FOR THE PURPOSES OF REVIEW AND ARE NOT TO BE USED FOR BIDDING OR CONSTRUCTION

H:\PROJECTS\1636 - BROHN HOMES\11996 - HARVEST RIDGE - SEC 5\CAD\SHEETS\11996-C-POND.DWG DATE: 1/7/2026 11:19:35 AM BY: DPEREZ-GUERRA



SCALE: 1" = 60'
GRAPHIC SCALE IN FEET
0 30' 60' 120'

LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED WATER LINE
- EXISTING WATER LINE
- FIRE HYDRANT ASSEMBLY (SEE NOTE BELOW)
- GATE VALVE
- PLUG
- DOUBLE WATER SERVICE
- SINGLE WATER SERVICE
- DOUBLE WASTEWATER SERVICE
- SINGLE WASTEWATER SERVICE

* ALL WATER SYMBOLS ARE NOT TO SCALE AND ARE ONLY SHOWN FOR ILLUSTRATION PURPOSES.

NOTES:

1. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLY FOR ANY AND ALL DAMAGES WHICH MIGHT BE ASSOCIATED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
2. WHERE A NEW POTABLE WATERLINE CROSSES A NEW, NON-PRESSURE RATED WASTEWATER MAIN OR LATERAL AND THE STANDARD PIPE SEGMENT LENGTH OF THE WASTEWATER MAIN OR LATERAL IS AT LEAST 18 FEET, ONE SEGMENT OF THE WATERLINE PIPE SHALL BE CENTERED OVER THE WASTEWATER MAIN OR LATERAL SUCH THAT THE JOINTS OF THE WATERLINE PIPE ARE EQUIDISTANT AND AT LEAST NINE FEET HORIZONTALLY FROM THE CENTERLINE OF THE WASTEWATER MAIN OR LATERAL. THE POTABLE WATERLINE SHALL BE AT LEAST TWO FEET ABOVE THE WASTEWATER MAIN OR LATERAL. WHENEVER POSSIBLE, THE CROSSING SHALL BE CENTERED BETWEEN THE JOINTS OF THE WASTEWATER MAIN OR LATERAL. THE WASTEWATER PIPE SHALL HAVE A MINIMUM STIFFNESS OF 115 PSI AT 5.0% DEFLECT. THE WASTEWATER MAIN OR LATERAL SHALL BE EMBEDDED IN CEMENT STABILIZED (SEE CLAUSE (vi) OF THIS SUBPARAGRAPH) SAND FOR THE TOTAL LENGTH OF ONE PIPE SEGMENT PLUS 12 INCHES BEYOND THE JOINT ON EACH END.
3. FIRE HYDRANTS ARE SHOWN FOR SCHEMATIC PURPOSES ONLY. SEE DETAIL SHEET FOR PLACEMENT OF APPURTENANCES. FIRE HYDRANT ASSEMBLY CONSISTS OF, BUT NOT LIMITED TO 5 1/4" FIRE HYDRANT, 6" GATE VALVE, AND 6" D.I. FIRE LEAD.
4. ALL 45° BENDS SHALL INCLUDE MEGA LUG RESTRAINED JOINT.
5. NO WATER METERS LOCATED IN SIDEWALK AREA.
6. SERVICES TO BE LOCATED AND INSTALLED PER AQUA DETAIL ON SHEET 64.
7. TYPICAL WATERLINE ASSIGNMENT 8" FROM R.O.W. LINE.
8. CONTRACTOR TO VERIFY ACTUAL DEPTH OF ALL EXISTING UTILITIES TO BE EXTENDED OR TIED INTO PRIOR TO EXCAVATING.
9. THRUST BLOCKING REQUIRED PER AQUA DETAIL SHEET 63.
10. ALL WATERLINES SHALL BE 8-INCH PVC, AWWA C-900, PR 235 PSI (DR18), UNLESS NOTED OTHERWISE HEREON THE PLANS.
11. ALL NEWLY-INSTALLED PIPE AND FITTINGS MUST CONFORM TO ANSI/NSF STANDARD 61 AND MUST BE CERTIFIED BY AN ORGANIZATION ACCREDITED BY ANSI
12. DO NOT INSTALL SERVICES AND FITTINGS WITHIN THREE (3') FEET OF A PIPE JOINT OR ANOTHER FITTING.
13. LONG WATER SLEEVED SERVICES TO BE SLEEVED WITH 4-INCH SCH 40 PER AQUA DETAILS.
14. CONNECTION TO THE AQUA WSC WATER SYSTEM WILL NOT BE ALLOWED UNTIL ALL PROPOSED WATER LINES HAVE BEEN INSTALLED OR AFTER THE AQUA WSC HAS ACCEPTED PORTIONS THAT HAVE PASSED TESTING AND DISINFECTION REQUIREMENTS. UNDER NO CIRCUMSTANCES WILL AN AQUA WSC CONNECTION BE ALLOWED WHERE COMPACTED COVER OVER NEW WATERLINES STILL IS NEEDED OR IS INCOMPLETE AT THE TIME OF CONNECTION.
15. FOR ALL LINES TERMINATING WITH A CAP, CAP AND WATER LINE(S) SHALL BE FULLY RESTRAINED A MINIMUM OF 60 FEET UPSTREAM OF THE CAP.
16. JOINTED CARRIER PIPE SHALL HAVE ALL JOINTS RESTRAINED BY INTEGRAL BELL RESTRAINT (CERTA-LOK YELOMINE OR APPROVED EQUAL).
17. REFER TO DETAIL ON SHEET 65 FOR ALL WATER LINE / WASTEWATER LINE CROSSINGS.
18. ALL VALVE BOXES INSTALLED WITHIN DRIVEWAYS SHALL BE CAST IRON.
19. ALL WATER SERVICES TO ABIDE BY MINIMUM WASTEWATER CROSSING SEPARATION REQUIREMENTS PER TCEQ RULE 290.44(e)(4)(B). SEE WATER LINE/WASTEWATER LINE CROSSING DETAIL ON SHEET 65 FOR CONSTRUCTION REQUIREMENTS AT CROSSINGS.

FRANCHISE UTILITY NOTE:

OTHER UTILITIES SUCH AS GAS, ELECTRIC, TELEPHONE, CABLE, ETC. SHALL NOT BE INSTALLED IN THE SAME TRENCH AS WATER.

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5316 W. US Highway 290 Service Road, Suite 220
TBPELS FIRM #2946

GRAY

NO.	BY	DATE	REVISION DESCRIPTION

HARVEST RIDGE SECTION 5

OVERALL WATER DISTRIBUTION PLAN

PROJECT NO: 1636-11996

DESIGNED BY: MRC

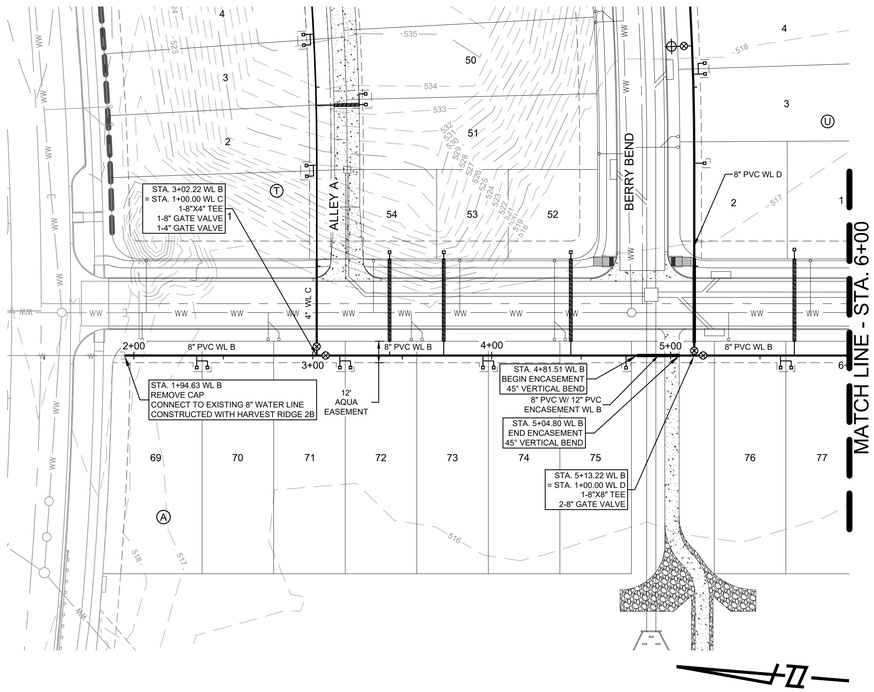
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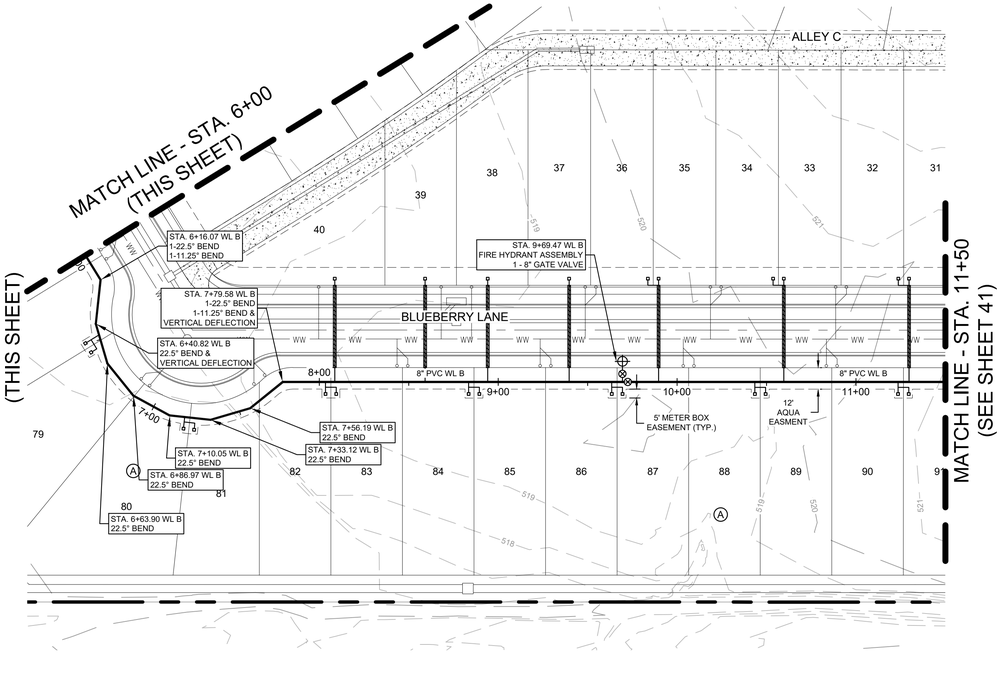
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SCALE: 1" = 40'
GRAPHIC SCALE IN FEET
0 20' 40' 80'

LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED WATER LINE
- EXISTING WATER LINE
- FIRE HYDRANT ASSEMBLY (SEE NOTE BELOW)
- GATE VALVE
- PLUG W/ 2" FLUSHING ASSEMBLY
- DOUBLE WATER SERVICE
- SINGLE WATER SERVICE
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- SINGLE WASTEWATER SERVICE

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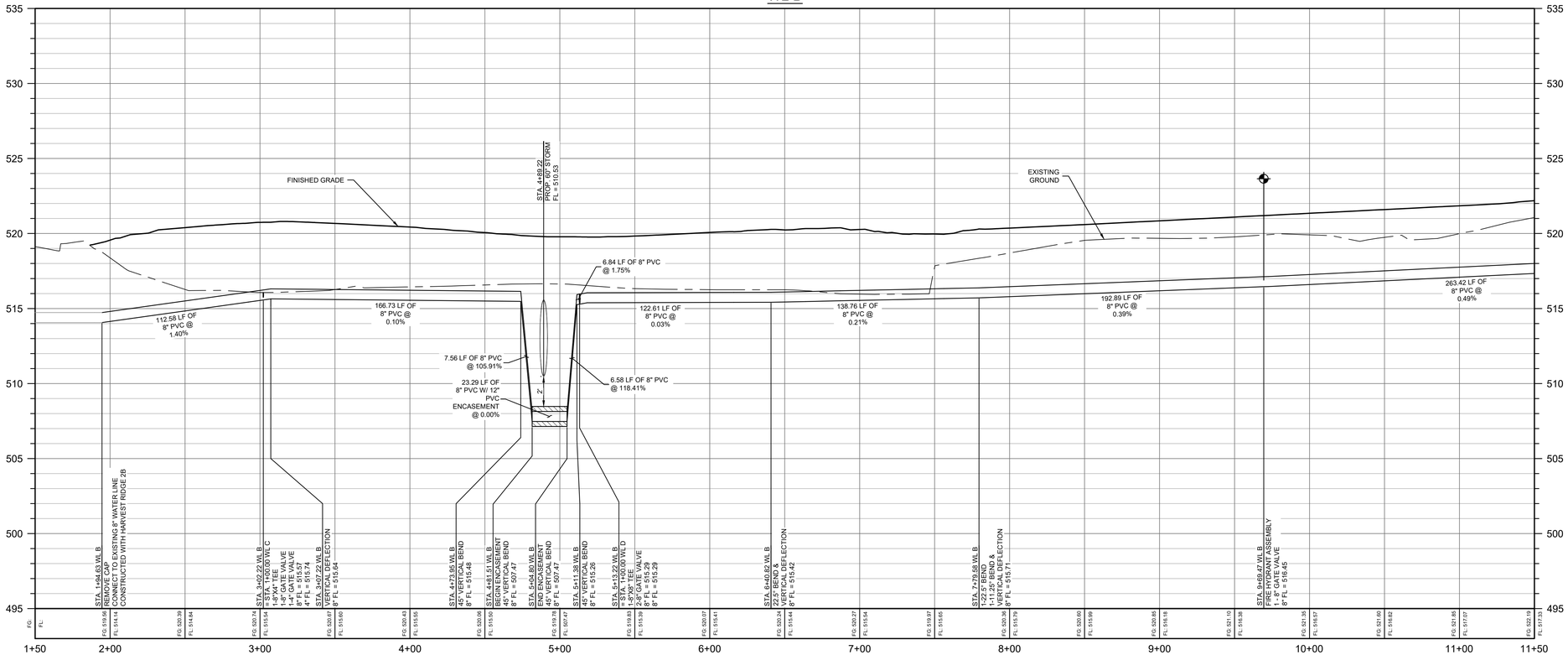
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4. ALL 45° BENDS SHALL INCLUDE MEGA LUG RESTRAINED JOINT.
5. NO WATER METERS LOCATED IN SIDEWALK AREA.
6. SERVICES TO BE LOCATED AND INSTALLED PER AQUA DETAIL ON SHEET 60.
7. TYPICAL WATERLINE ASSIGNMENT 8' FROM R.O.W. LINE.
8. CONTRACTOR TO VERIFY ACTUAL DEPTH OF ALL EXISTING UTILITIES TO BE EXTENDED OR TIED INTO PRIOR TO EXCAVATING.
9. THRUST BLOCKING REQUIRED PER AQUA DETAIL SHEET 59.
10. ALL WATERLINES SHALL BE 8-INCH PVC, AWWA C-900, PR 235 PSI (DR18), UNLESS NOTED OTHERWISE HEREON THE PLANS.
11. ALL NEWLY-INSTALLED PIPE AND FITTINGS MUST CONFORM TO ANSI/NSF STANDARD 61 AND MUST BE CERTIFIED BY AN ORGANIZATION ACCREDITED BY ANSI.
12. DO NOT INSTALL SERVICES AND FITTINGS WITHIN THREE (3') FEET OF A PIPE JOINT OR ANOTHER FITTING.
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FRANCHISE UTILITY NOTE:

OTHER UTILITIES SUCH AS GAS, ELECTRIC, TELEPHONE, CABLE, ETC. SHALL NOT BE INSTALLED IN THE SAME TRENCH AS WATER.

WL B



PROFILE LEGEND

- FINISHED GRADE
- PROPOSED SUBGRADE
- EXISTING GROUND
- PROPOSED WATER LINE
- STEEL ENCASEMENT WITH SPACERS
- FIRE HYDRANT
- GATE VALVE
- PLUG

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NO.	BY	DATE	REVISION DESCRIPTION

HARVEST RIDGE
SECTION 5

8" WATER LINE B PLAN AND PROFILE (STA. 1+95 TO 11+50)

PROJECT NO: 1636-11996

DESIGNED BY: MRC

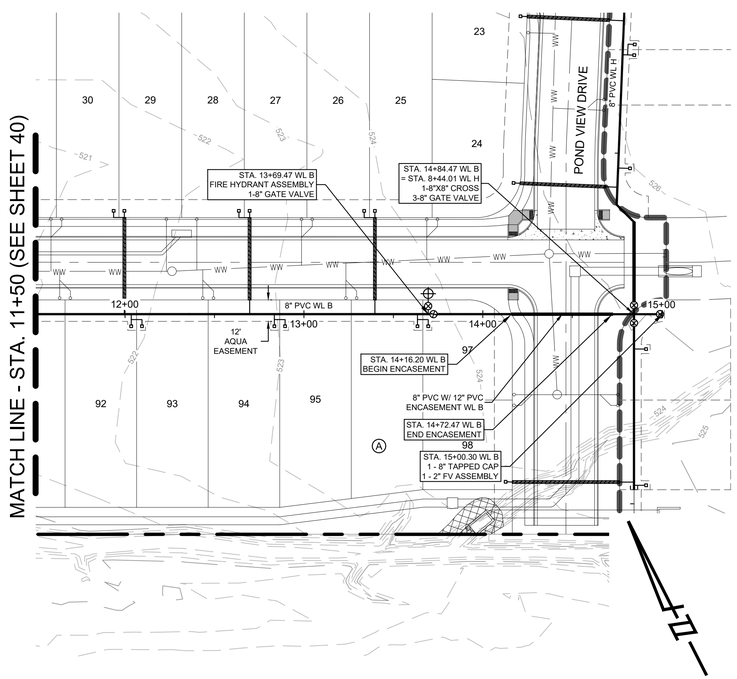
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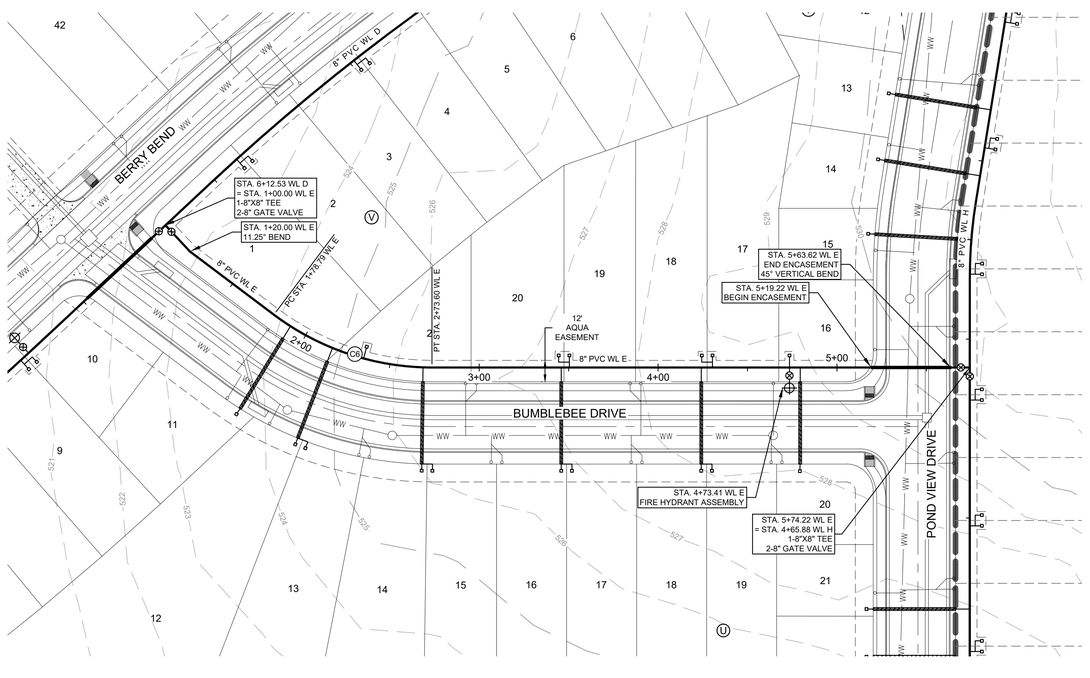
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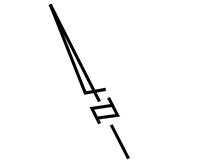
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LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED WATER LINE
- EXISTING WATER LINE
- FIRE HYDRANT ASSEMBLY (SEE NOTE BELOW)
- GATE VALVE
- PLUG W/ 2" FLUSHING ASSEMBLY
- DOUBLE WATER SERVICE
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4. ALL 45° BENDS SHALL INCLUDE MEGA LUG RESTRAINED JOINT.
5. NO WATER METERS LOCATED IN SIDEWALK AREA.
6. SERVICES TO BE LOCATED AND INSTALLED PER AQUA DETAIL ON SHEET 60.
7. TYPICAL WATERLINE ASSIGNMENT 8' FROM R.O.W. LINE.
8. CONTRACTOR TO VERIFY ACTUAL DEPTH OF ALL EXISTING UTILITIES TO BE EXTENDED OR TIED INTO PRIOR TO EXCAVATING.
9. THRUST BLOCKING REQUIRED PER AQUA DETAIL SHEET 59.
10. ALL WATERLINES SHALL BE 8-INCH PVC, AWWA C-900, PR 235 PSI (DR18), UNLESS NOTED OTHERWISE HEREON THE PLANS.
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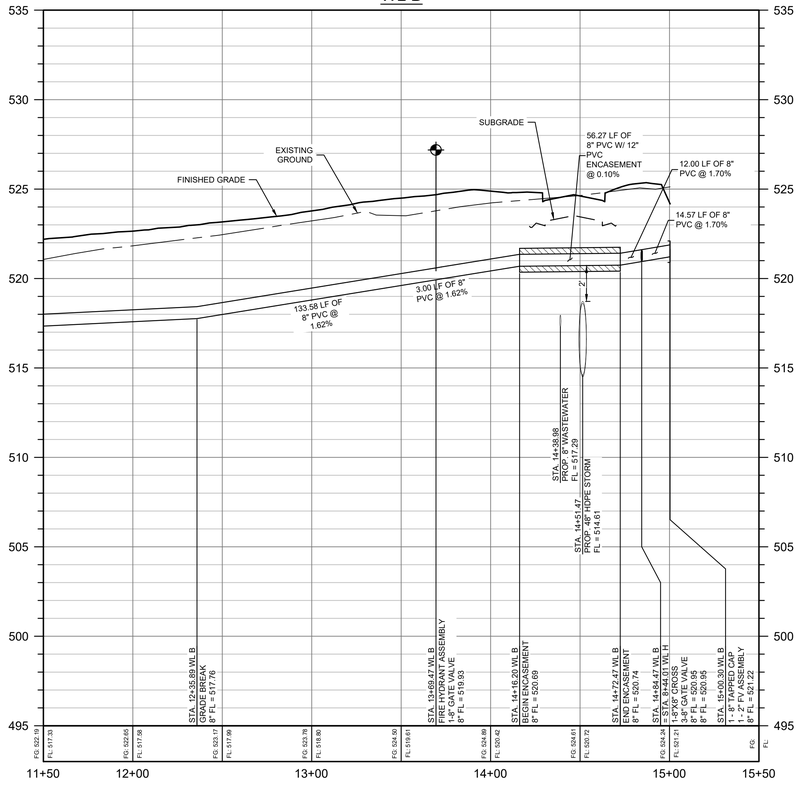
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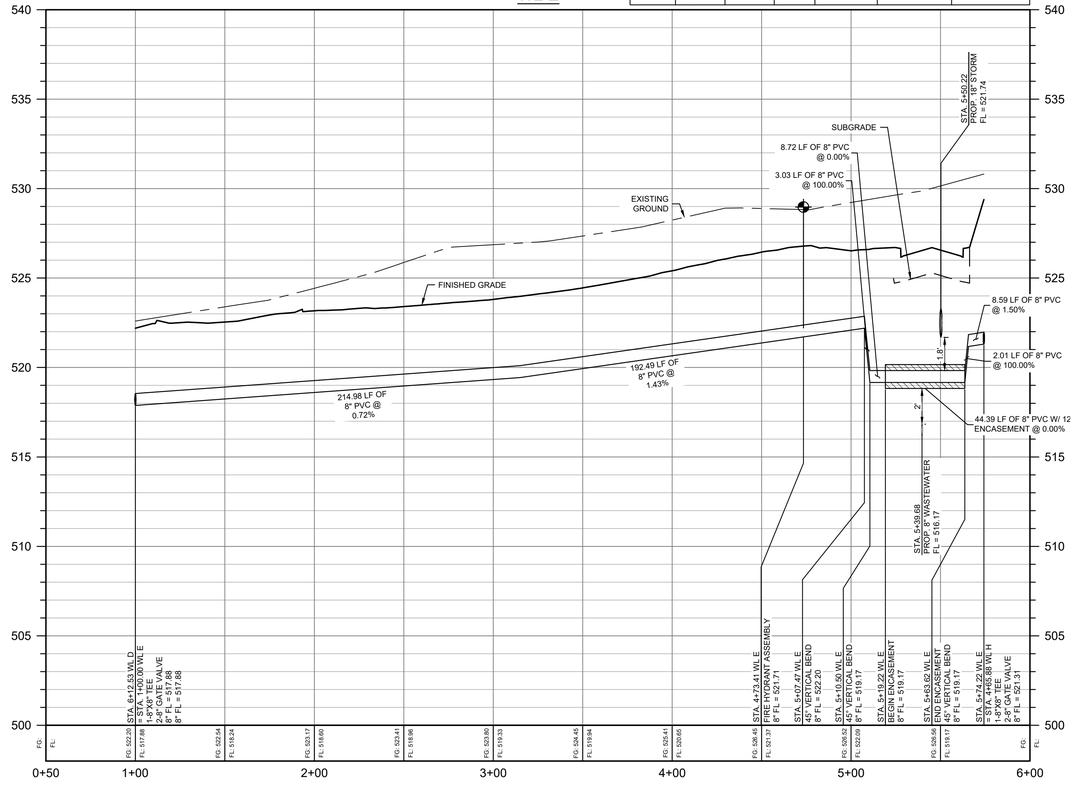
CURVE DATA

NUMBER	DELTA	TANGENT	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING
C6	36° 57' 18"	49.12	147.00	94.81	93.18	S44° 37' 46.96"E

WL B



WL E



PROFILE LEGEND

- FINISHED GRADE
- PROPOSED SUBGRADE
- EXISTING GROUND
- PROPOSED WATER LINE
- STEEL ENCASEMENT WITH SPACERS
- FIRE HYDRANT
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NO.	BY	DATE	REVISION DESCRIPTION

HARVEST RIDGE
SECTION 5

8" WATER LINE B AND E PLAN AND PROFILE (STA. 11+50 TO END)

PROJECT NO: 1636-11996

DESIGNED BY: MRC

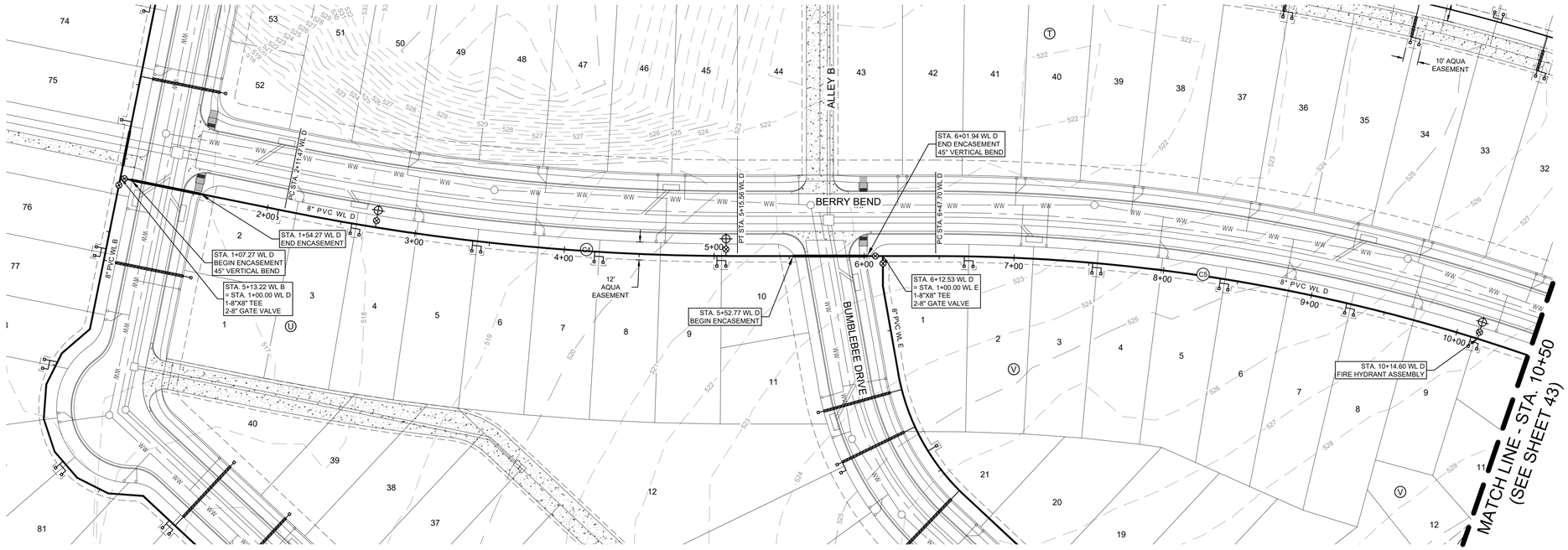
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SCALE: 1" = 40'
GRAPHIC SCALE IN FEET
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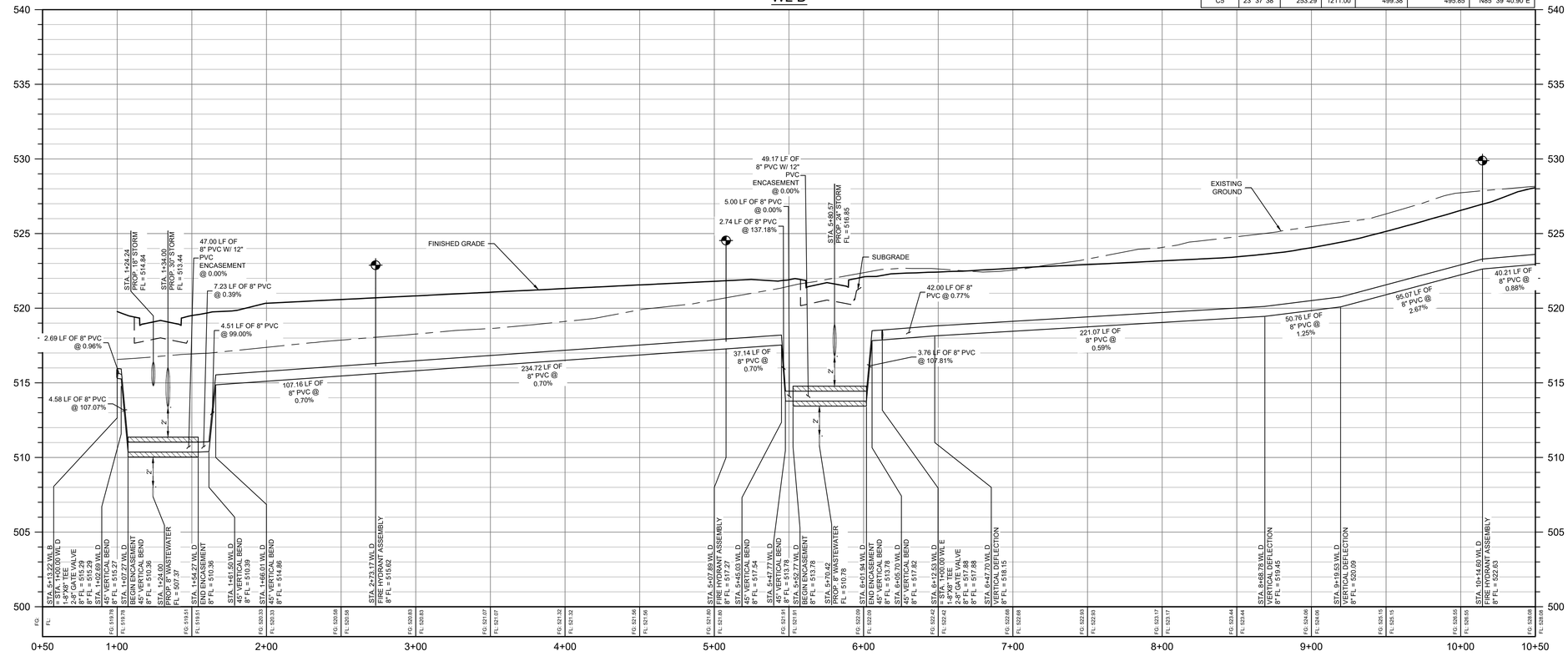
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14. CONNECTION TO THE AQUA WSC WATER SYSTEM WILL NOT BE ALLOWED UNTIL ALL PROPOSED WATER LINES HAVE BEEN INSTALLED OR AFTER THE AQUA WSC HAS ACCEPTED PORTIONS THAT HAVE PASSED TESTING AND DISINFECTION REQUIREMENTS. UNDER NO CIRCUMSTANCES WILL AN AQUA WSC CONNECTION BE ALLOWED WHERE COMPACTED COVER OVER NEW WATERLINES STILL IS NEEDED OR IS INCOMPLETE AT THE TIME OF CONNECTION.
15. FOR ALL LINES TERMINATING WITH A CAP, CAP AND WATER LINE(S) SHALL BE FULLY RESTRAINED. A MINIMUM OF 60 FEET UPSTREAM OF THE CAP.
16. JOINTED CARRIER PIPE SHALL HAVE ALL JOINTS RESTRAINED BY INTEGRAL BELL RESTRAINT (CERTA-LOK YELOMINE OR APPROVED EQUAL).
17. REFER TO DETAIL ON SHEET 61 FOR ALL WATER LINE / WASTEWATER LINE CROSSINGS.
18. ALL VALVE BOXES INSTALLED WITHIN DRIVEWAYS SHALL BE CAST IRON.
19. ALL WATER SERVICES TO ABIDE BY MINIMUM WASTEWATER CROSSING SEPARATION REQUIREMENTS PER TCEQ RULE 290.44(e)(4)(B). SEE WATER LINE/WASTEWATER LINE CROSSING DETAIL ON SHEET 61 FOR CONSTRUCTION REQUIREMENTS AT CROSSINGS.

FRANCHISE UTILITY NOTE:

OTHER UTILITIES SUCH AS GAS, ELECTRIC, TELEPHONE, CABLE, ETC. SHALL NOT BE INSTALLED IN THE SAME TRENCH AS WATER.

CURVE DATA

NUMBER	DELTA	TANGENT	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING
C4	11° 23' 43"	152.55	1529.00	304.09	303.59	N79° 32' 43.54"E
C5	23° 37' 38"	253.29	1211.00	499.38	495.85	N85° 39' 40.90"E



PROFILE LEGEND

- FINISHED GRADE
- PROPOSED SUBGRADE
- EXISTING GROUND
- PROPOSED WATER LINE
- STEEL ENCASEMENT WITH SPACERS
- FIRE HYDRANT
- GATE VALVE
- PLUG

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NO.	BY	DATE	REVISION DESCRIPTION

HARVEST RIDGE
SECTION 5

8" WATER LINE D PLAN AND PROFILE (STA. 1+00 TO 10+50)

PROJECT NO: 1636-11996

DESIGNED BY: MRC

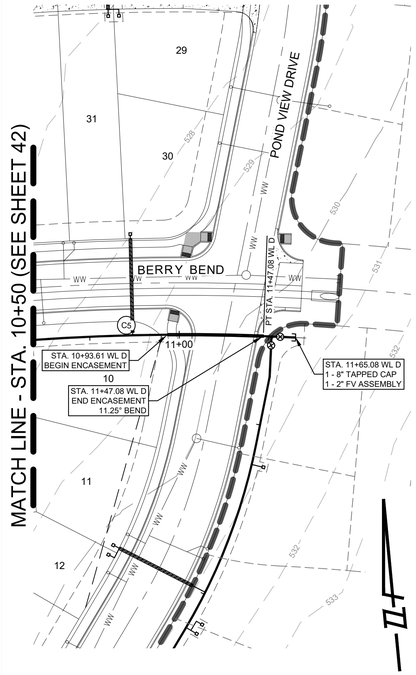
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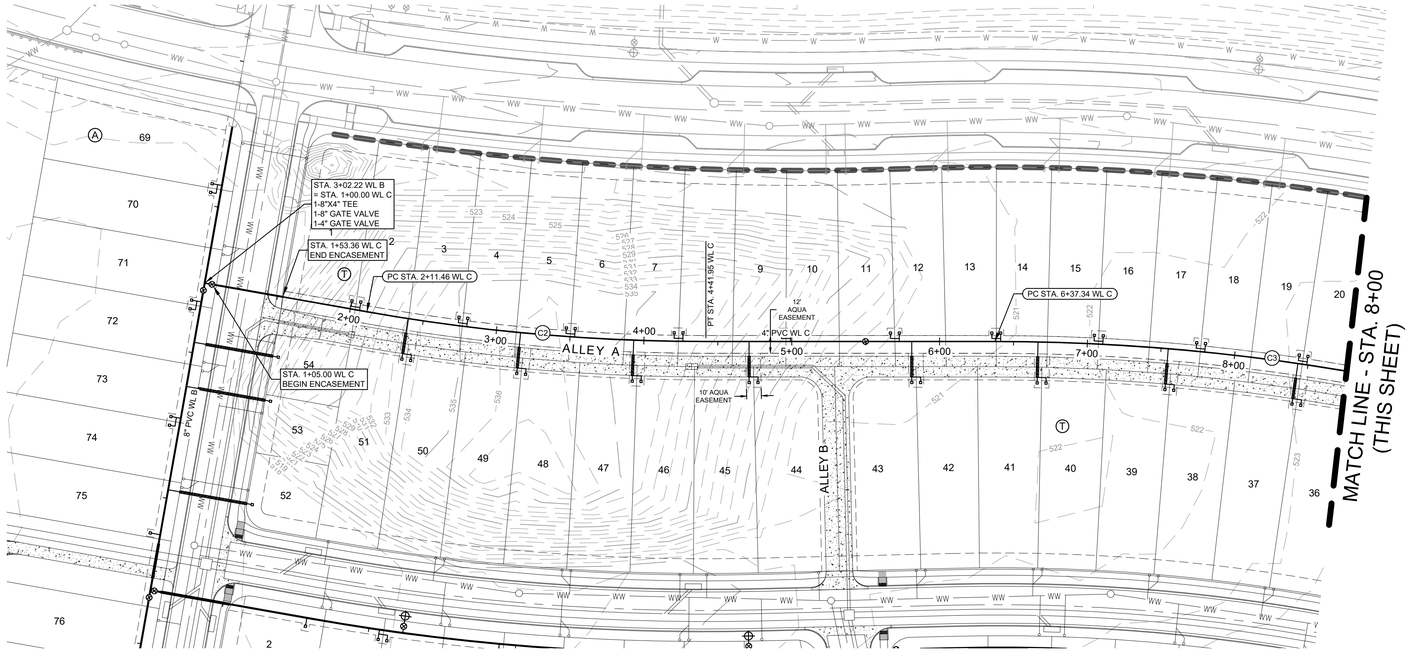
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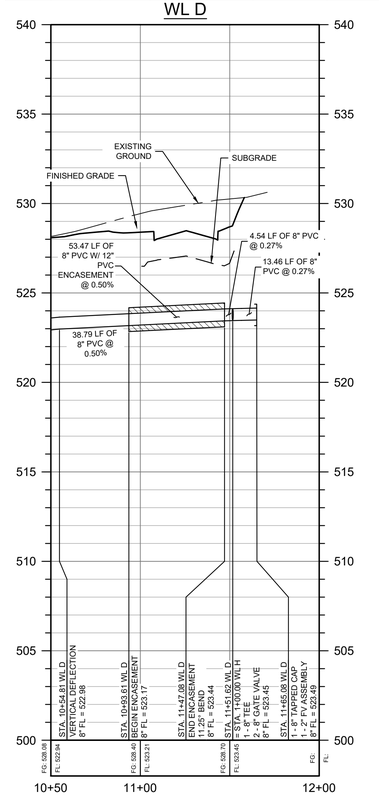
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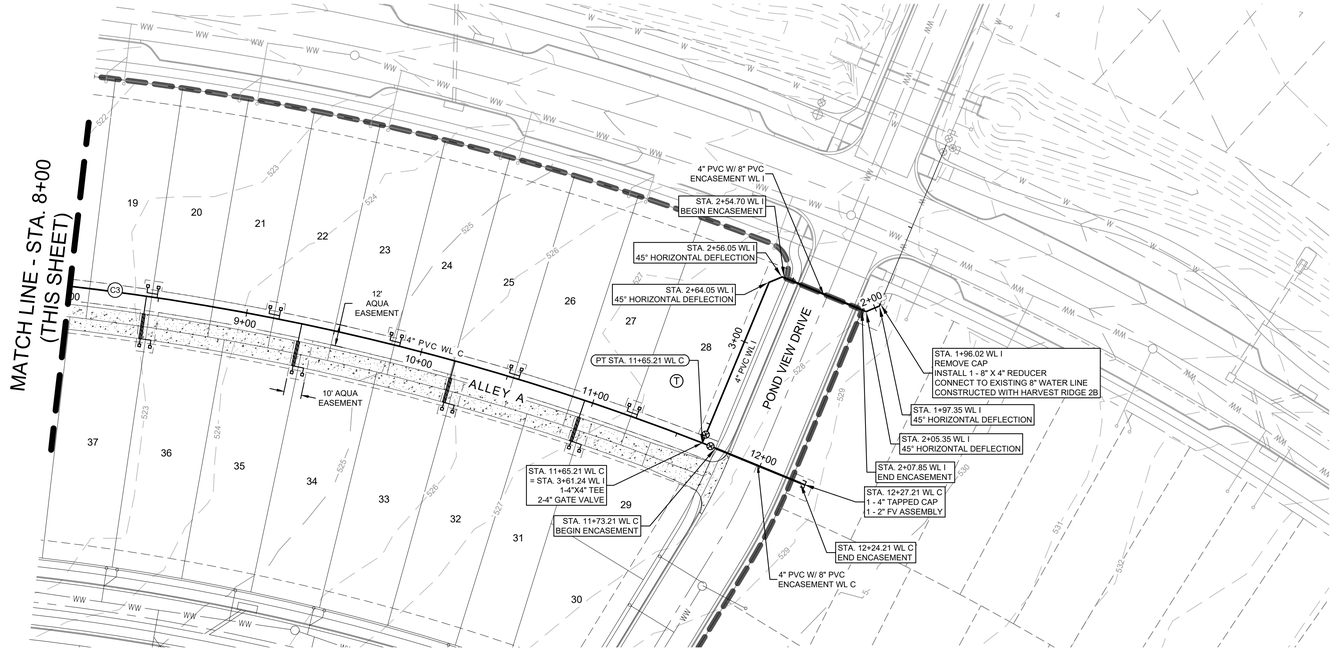




CURVE DATA						
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C5	23° 37' 38"	253.29	1211.00	499.38	495.85	N85° 39' 40.90"E

CURVE DATA						
NUMBER	DELTA	TANGENT	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING
C2	10° 01' 11"	115.54	1318.00	230.49	230.20	N80° 13' 59.55"E
C3	21° 16' 08"	267.01	1422.00	527.87	524.84	N85° 51' 28.09"E







LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED WATER LINE
- EXISTING WATER LINE
- FIRE HYDRANT ASSEMBLY (SEE NOTE BELOW)
- GATE VALVE
- PLUG W/ 2" FLUSHING ASSEMBLY
- DOUBLE WATER SERVICE
- SINGLE WATER SERVICE
- DOUBLE WASTEWATER SERVICE
- SINGLE WASTEWATER SERVICE

* ALL WATER SYMBOLS ARE NOT TO SCALE AND ARE ONLY SHOWN FOR ILLUSTRATION PURPOSES.

NOTES:

1. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLY FOR ANY AND ALL DAMAGES WHICH MIGHT BE ASSOCIATED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
2. WHERE A NEW POTABLE WATERLINE CROSSES A NEW, NON-PRESSURE RATED WASTEWATER MAIN OR LATERAL AND THE STANDARD PIPE SEGMENT LENGTH OF THE WASTEWATER MAIN OR LATERAL IS AT LEAST 18 FEET, ONE SEGMENT OF THE WATERLINE PIPE SHALL BE CENTERED OVER THE WASTEWATER MAIN OR LATERAL SUCH THAT THE JOINTS OF THE WATERLINE PIPE ARE EQUIDISTANT AND AT LEAST NINE FEET HORIZONTALLY FROM THE CENTERLINE OF THE WASTEWATER MAIN OR LATERAL. THE POTABLE WATERLINE SHALL BE AT LEAST TWO FEET ABOVE THE WASTEWATER MAIN OR LATERAL. WHENEVER POSSIBLE, THE CROSSING SHALL BE CENTERED BETWEEN THE JOINTS OF THE WASTEWATER MAIN OR LATERAL. THE WASTEWATER PIPE SHALL HAVE A MINIMUM STIFFNESS OF 115 PSI AT 5.0% DEFLECT. THE WASTEWATER MAIN OR LATERAL SHALL BE EMBEDDED IN CEMENT STABILIZED (SEE CLAUSE (vi) OF THIS SUBPARAGRAPH) SAND FOR THE TOTAL LENGTH OF ONE PIPE SEGMENT PLUS 12 INCHES BEYOND THE JOINT ON EACH END.
3. FIRE HYDRANTS ARE SHOWN FOR SCHEMATIC PURPOSES ONLY. SEE DETAIL SHEET FOR PLACEMENT OF APPURTENANCES. FIRE HYDRANT ASSEMBLY CONSISTS OF, BUT NOT LIMITED TO 5 1/4" FIRE HYDRANT, 6" GATE VALVE, AND 6" D.I. FIRE LEAD.
4. ALL 45° BENDS SHALL INCLUDE MEGA LUG RESTRAINED JOINT.
5. NO WATER METERS LOCATED IN SIDEWALK AREA.
6. SERVICES TO BE LOCATED AND INSTALLED PER AQUA DETAIL ON SHEET 60.
7. TYPICAL WATERLINE ASSIGNMENT 8' FROM R.O.W. LINE.
8. CONTRACTOR TO VERIFY ACTUAL DEPTH OF ALL EXISTING UTILITIES TO BE EXTENDED OR TIED INTO PRIOR TO EXCAVATING.
9. THRUST BLOCKING REQUIRED PER AQUA DETAIL SHEET 59.
10. ALL WATERLINES SHALL BE 8-INCH PVC, AWWA C-900, PR 235 PSI (DR18), UNLESS NOTED OTHERWISE HEREON THE PLANS.
11. ALL NEWLY-INSTALLED PIPE AND FITTINGS MUST CONFORM TO ANSI/NSF STANDARD 61 AND MUST BE CERTIFIED BY AN ORGANIZATION ACCREDITED BY ANSI.
12. DO NOT INSTALL SERVICES AND FITTINGS WITHIN THREE (3') FEET OF A PIPE JOINT OR ANOTHER FITTING.
13. LONG WATER SLEEVED SERVICES TO BE SLEEVED WITH 4-INCH SCH 40 PER AQUA DETAILS.
14. CONNECTION TO THE AQUA WSC WATER SYSTEM WILL NOT BE ALLOWED UNTIL ALL PROPOSED WATER LINES HAVE BEEN INSTALLED OR AFTER THE AQUA WSC HAS ACCEPTED PORTIONS THAT HAVE PASSED TESTING AND DISINFECTION REQUIREMENTS. UNDER NO CIRCUMSTANCES WILL AN AQUA WSC CONNECTION BE ALLOWED WHERE COMPACTED COVER OVER NEW WATERLINES STILL IS NEEDED OR IS INCOMPLETE AT THE TIME OF CONNECTION.
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OTHER UTILITIES SUCH AS GAS, ELECTRIC, TELEPHONE, CABLE, ETC. SHALL NOT BE INSTALLED IN THE SAME TRENCH AS WATER.

PROFILE LEGEND

- FINISHED GRADE
- PROPOSED SUBGRADE
- EXISTING GROUND
- PROPOSED WATER LINE
- STEEL ENCASEMENT WITH SPACERS
- FIRE HYDRANT
- GATE VALVE
- PLUG

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HARVEST RIDGE SECTION 5

8" WATER LINE D PLAN AND PROFILE (STA 10+50 TO END) 4" C AND I

PROJECT NO: 1636-11996

DESIGNED BY: MRC

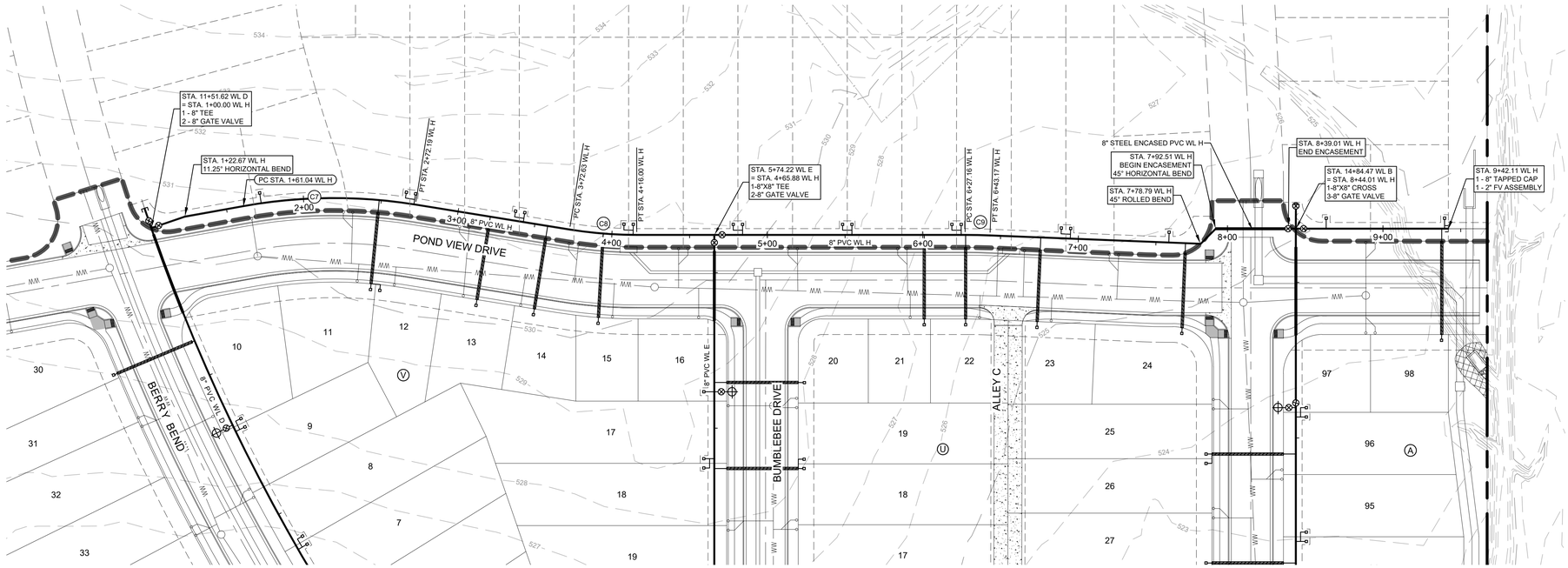
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CURVE DATA						
NUMBER	DELTA	TANGENT	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING
C7	19° 21' 23"	56.11	329.00	111.15	110.62	S26° 22' 56.36"W
C8	9° 10' 04"	21.73	271.00	43.36	43.32	S31° 28' 36.02"W
C9	2° 16' 29"	8.01	403.30	16.01	16.01	S28° 01' 48.42"W

SCALE: 1" = 40'
GRAPHIC SCALE IN FEET
0 20' 40' 80'

LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED WATER LINE
- EXISTING WATER LINE
- FIRE HYDRANT ASSEMBLY (SEE NOTE BELOW)
- GATE VALVE
- PLUG W/ 2" FLUSHING ASSEMBLY
- DOUBLE WATER SERVICE
- SINGLE WATER SERVICE
- DOUBLE WASTEWATER SERVICE
- SINGLE WASTEWATER SERVICE

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NOTES:

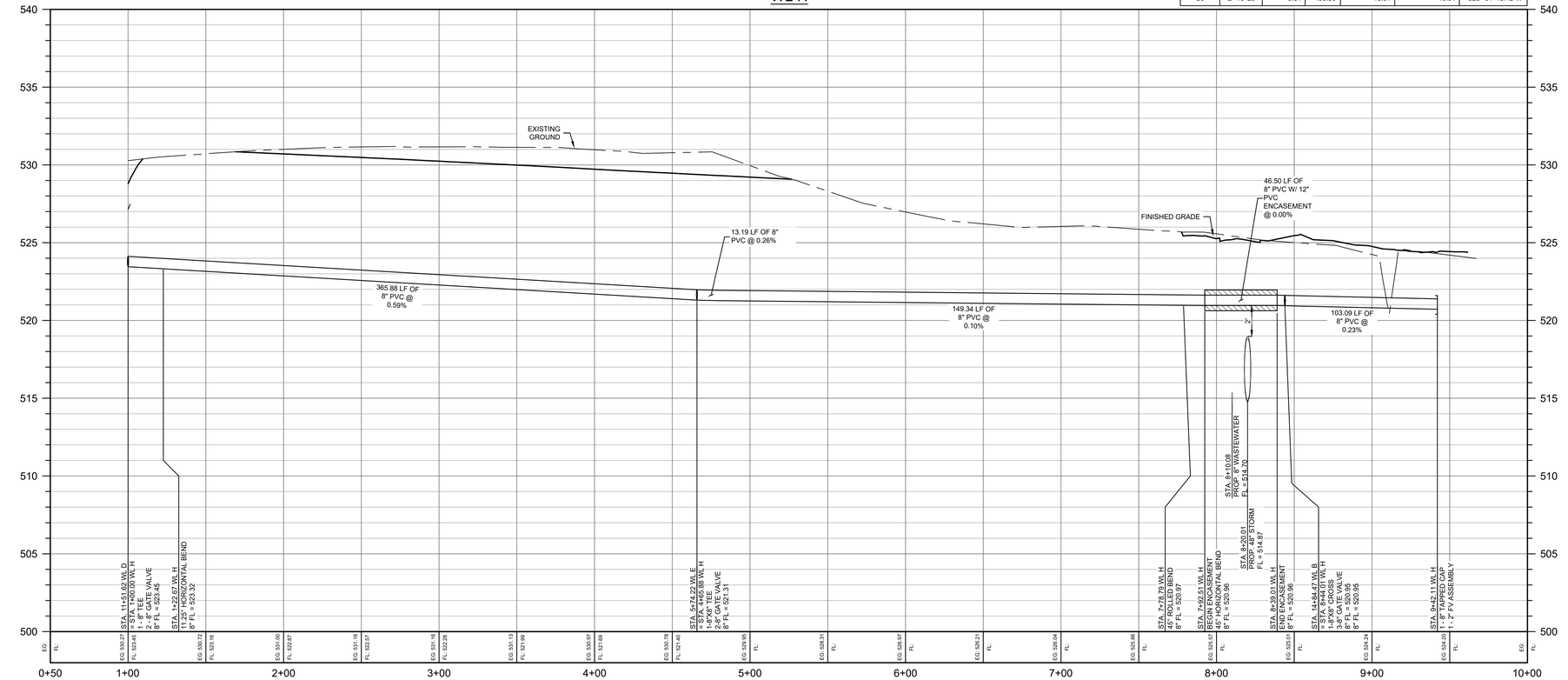
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6. SERVICES TO BE LOCATED AND INSTALLED PER AQUA DETAIL ON SHEET 60.
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12. DO NOT INSTALL SERVICES AND FITTINGS WITHIN THREE (3') FEET OF A PIPE JOINT OR ANOTHER FITTING.
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FRANCHISE UTILITY NOTE:

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PROFILE LEGEND

- FINISHED GRADE
- PROPOSED SUBGRADE
- EXISTING GROUND
- PROPOSED WATER LINE
- STEEL ENCASEMENT WITH SPACERS
- FIRE HYDRANT
- GATE VALVE
- PLUG



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HARVEST RIDGE
SECTION 5

8" WATER LINE H PLAN AND PROFILE (STA. 1+00 TO END)

PROJECT NO: 1636-11996

DESIGNED BY: MRC

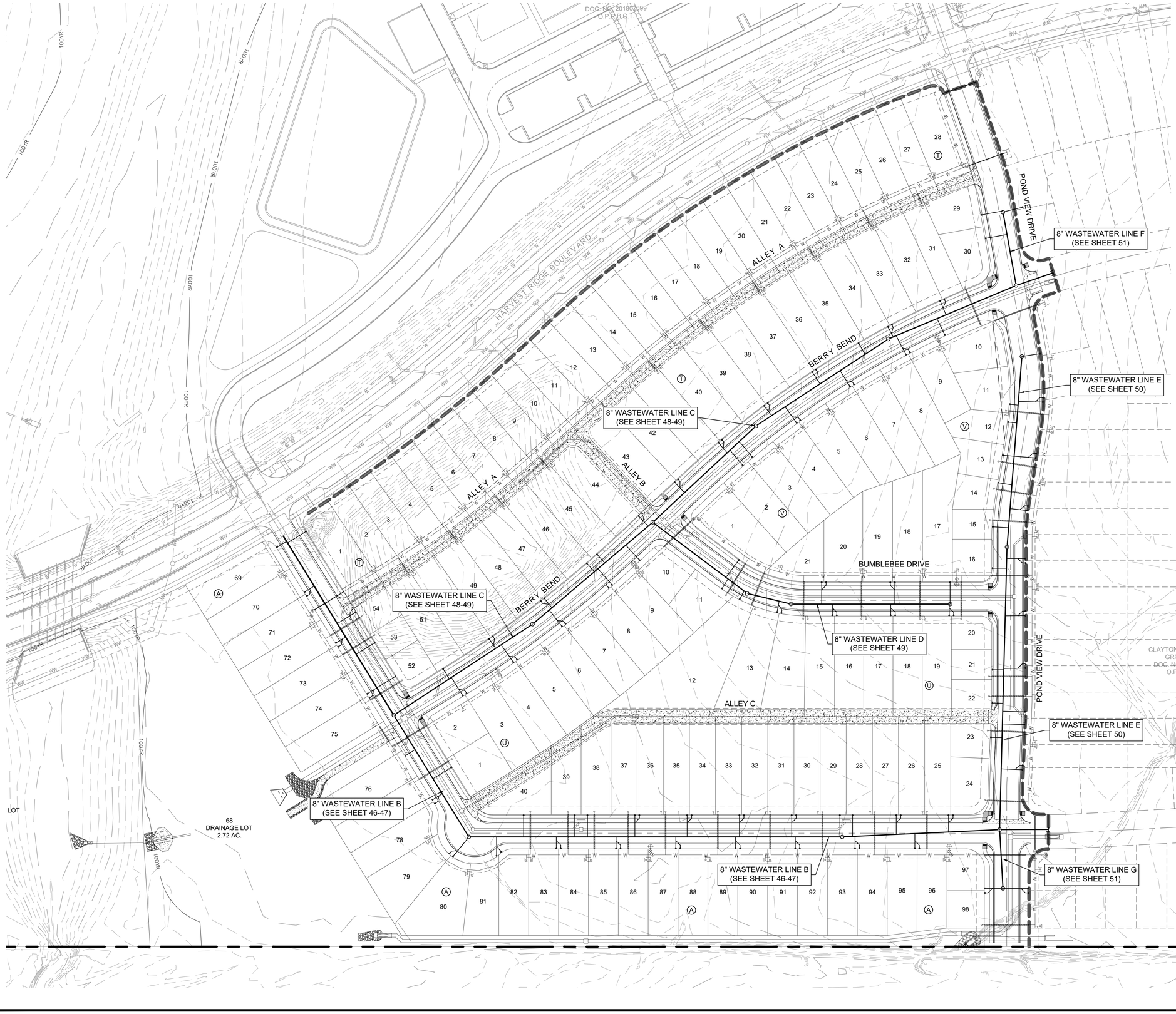
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SCALE: 1" = 60'

GRAPHIC SCALE IN FEET

0 30' 60' 120'

LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- WASTEWATER LINE
- WASTEWATER MANHOLE
- DIRECTION OF FLOW
- DOUBLE WATER SERVICE
- SINGLE WATER SERVICE
- DOUBLE WASTEWATER SERVICE
- SINGLE WASTEWATER SERVICE

* ALL WASTEWATER SYMBOLS ARE NOT TO SCALE AND ARE ONLY SHOWN FOR ILLUSTRATION PURPOSES. REFER TO DETAILS SHOWN IN THIS PLAN SET

NOTE:

1. CONTRACTOR SHALL FIELD LOCATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
2. BEDDING MATERIAL SHALL COMPLY WITH THE CITY OF AUSTIN ITEM 510S, AND GBRA SPECIFICATIONS.
3. DRY UTILITIES SHOWN ARE SCHEMATIC IN NATURE AND ARE SHOWN FOR REVIEW AND COORDINATION PURPOSES ONLY. FOR CONSTRUCTION, REFER TO DRY UTILITY DESIGN DRAWINGS.

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NO.	BY	DATE	REVISION DESCRIPTION

HARVEST RIDGE SECTION 5

OVERALL WASTEWATER COLLECTION PLAN

PROJECT NO: 1636-11996

DESIGNED BY: MRC

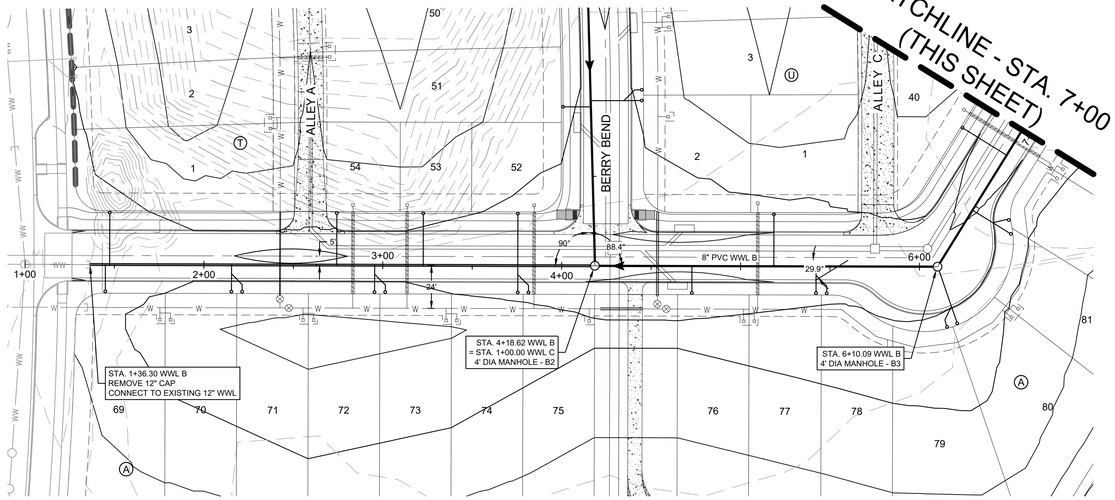
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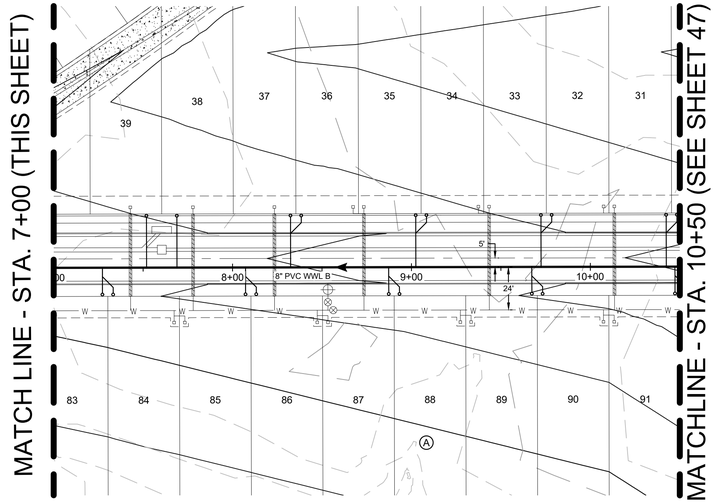
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LEGEND

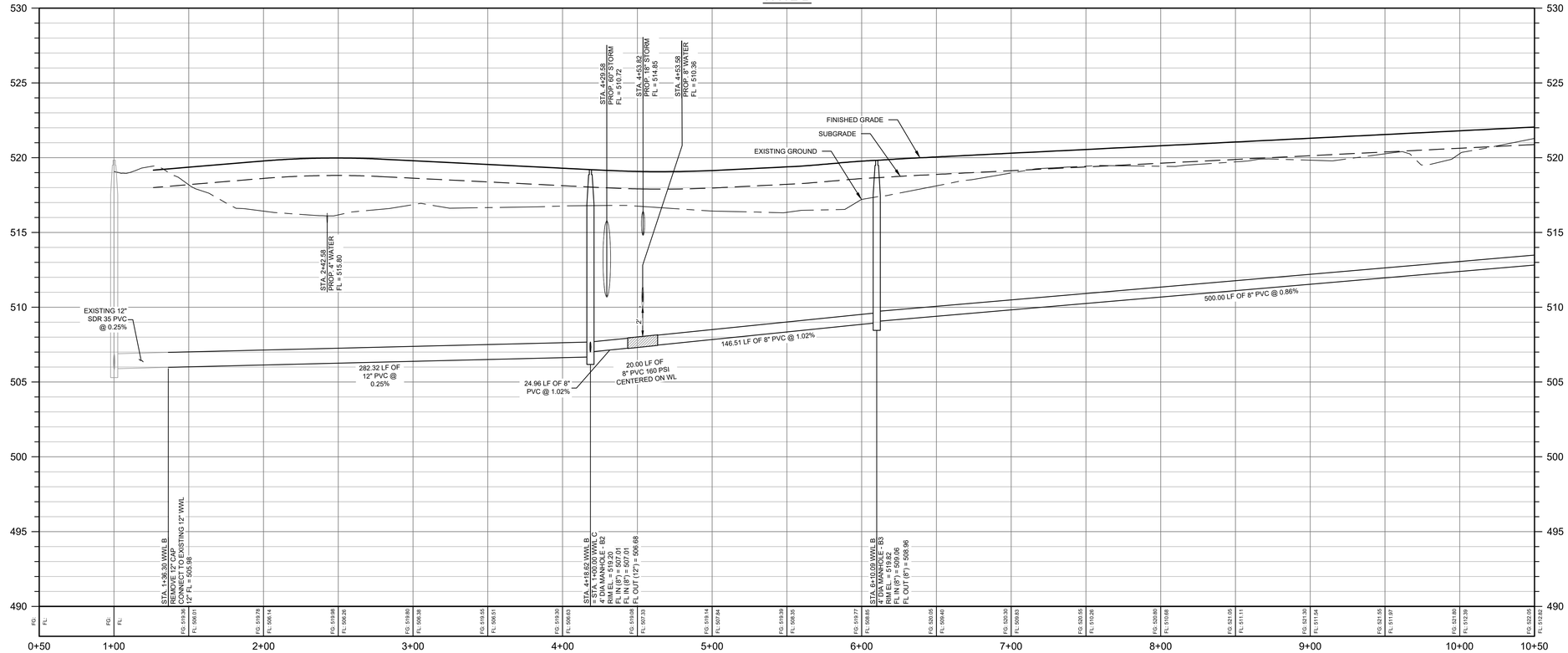
- PROPERTY BOUNDARY
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- SINGLE WATER SERVICE
- DOUBLE WASTEWATER SERVICE
- SINGLE WASTEWATER SERVICE

* ALL WASTEWATER SYMBOLS ARE NOT TO SCALE AND ARE ONLY SHOWN FOR ILLUSTRATION PURPOSES.

NOTES:

1. ALL MANHOLES SHALL BE VACUUM TESTED.
2. CONTRACTOR TO VERIFY ACTUAL DEPTH OF ALL EXISTING UTILITIES TO BE EXTENDED OR TIED INTO PRIOR TO EXCAVATING/TRENCHING OF NEW LINES.
3. ALL MANHOLE LIDS OUTSIDE R.O.W. TO BE BOLTED AND GASKETED.
4. ALL WWL PIPE MATERIAL SHALL BE SDR 35 PVC MEETING ASTM D3034, MINIMUM AND BE RATED FOR FILL/COVER DEPTHS SHOWN, UNLESS OTHERWISE SHOWN.
5. SERVICES SHOWN CONCEPTUALLY AND TO BE LOCATED PER DETAIL SHEET.
6. ALL MANHOLE CONE SECTIONS OUTSIDE OF PAVED AREAS THIS CONTRACT TO ALLOW FOR FINISHED TOP OF RIM (FUTURE CONDITION) TO BE SET AT APPROXIMATED 6 INCHES ABOVE NATURAL GRADE. THIS MAY REQUIRE ALTERNATE 1-FOOT TALL (W' DIAMETER) FINAL MANHOLE SECTIONS IN ORDER TO ALLOW FOR CONE AND RIM LEVELING IN THE FUTURE TO ACHIEVE DESIRED FINISHED RIM ELEVATIONS. CONTRACTOR TO PROVIDE SUBMITTAL DRAWING TO THE DESIGN ENGINEER FOR REVIEW AND CONSIDERATION FOR APPROVAL.
7. ALL MANHOLES SHALL BE COATED TO COA CURRENT STANDARD SPECIFICATIONS AFTER TESTING, UNLESS MANHOLES ARE FACTORY COATED WITH AN EQUAL OR BETTER MATERIAL.
8. WATER LINES AND OTHER UTILITY INFORMATION SHOWN ON THE WASTEWATER PLAN/PROFILE SHEETS ARE FOR REFERENCE ONLY. ALL WATER LINES, FIRE HYDRANTS, VALVES, AND RELATED UTILITY INFRASTRUCTURE SHALL BE INSTALLED AT LOCATIONS INDICATED ON THE WATER DISTRIBUTION PLANS.
9. SEE DETAIL SHEET 61 FOR WASTEWATER SERVICE/LATERAL INFORMATION.
10. REFER TO DETAIL ON SHEET 61 FOR ALL WATER LINE/WASTEWATER LINE CROSSINGS.

WWL B



PROFILE LEGEND

- FINISHED GRADE
- PROPOSED SUBGRADE
- EXISTING GROUND
- PROPOSED WASTEWATER LINE
- PROPOSED WASTEWATER MANHOLE

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NO.	BY	DATE	REVISION DESCRIPTION

HARVEST RIDGE
SECTION 5

12" & 8" WWL B PLAN AND PROFILE
(STA. 1+00 TO 10+50)

PROJECT NO: 1636-11996

DESIGNED BY: MRC

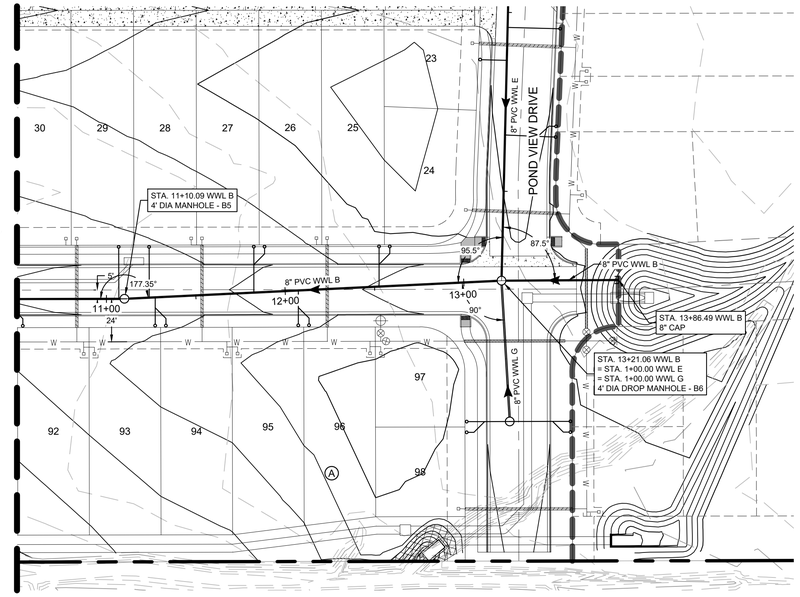
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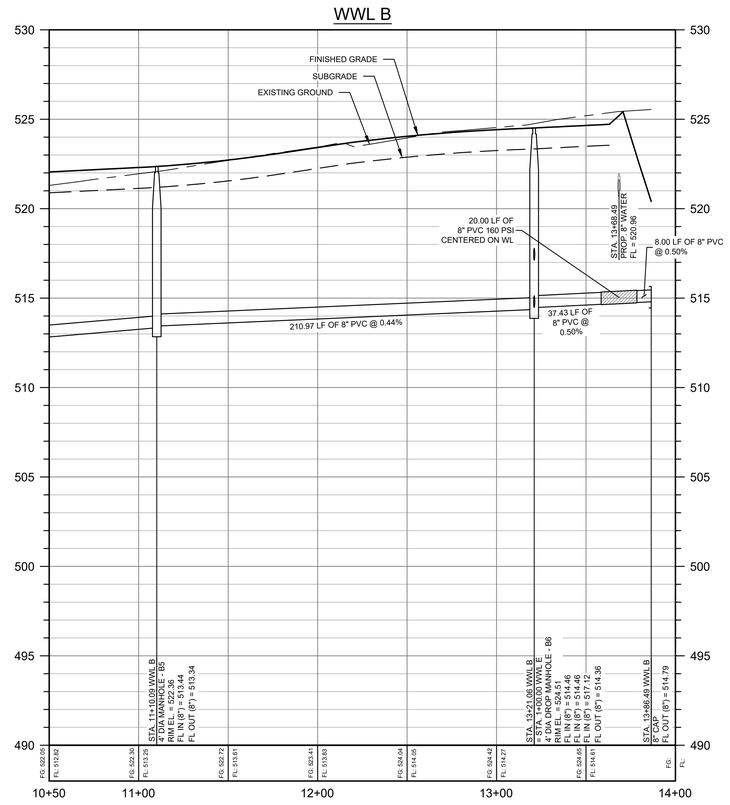
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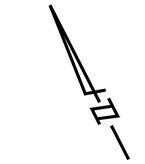
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SCALE: 1" = 40'
GRAPHIC SCALE IN FEET
0 20' 40' 80'

LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- WASTEWATER LINE
- WASTEWATER MANHOLE
- DIRECTION OF FLOW
- DOUBLE WATER SERVICE
- SINGLE WATER SERVICE
- DOUBLE WASTEWATER SERVICE
- SINGLE WASTEWATER SERVICE

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9. SEE DETAIL SHEET 61 FOR WASTEWATER SERVICE/LATERAL INFORMATION.
10. REFER TO DETAIL ON SHEET 61 FOR ALL WATER LINE/WASTEWATER LINE CROSSINGS.

PROFILE LEGEND

- FINISHED GRADE
- PROPOSED SUBGRADE
- EXISTING GROUND
- PROPOSED WASTEWATER LINE
- PROPOSED WASTEWATER MANHOLE

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NO.	BY	DATE	REVISION DESCRIPTION

HARVEST RIDGE
SECTION 5

8" WWL B PLAN AND PROFILE (STA. 10+50 TO END)

PROJECT NO: 1636-11996

DESIGNED BY: MRC

DRAWN BY: DPG/BE

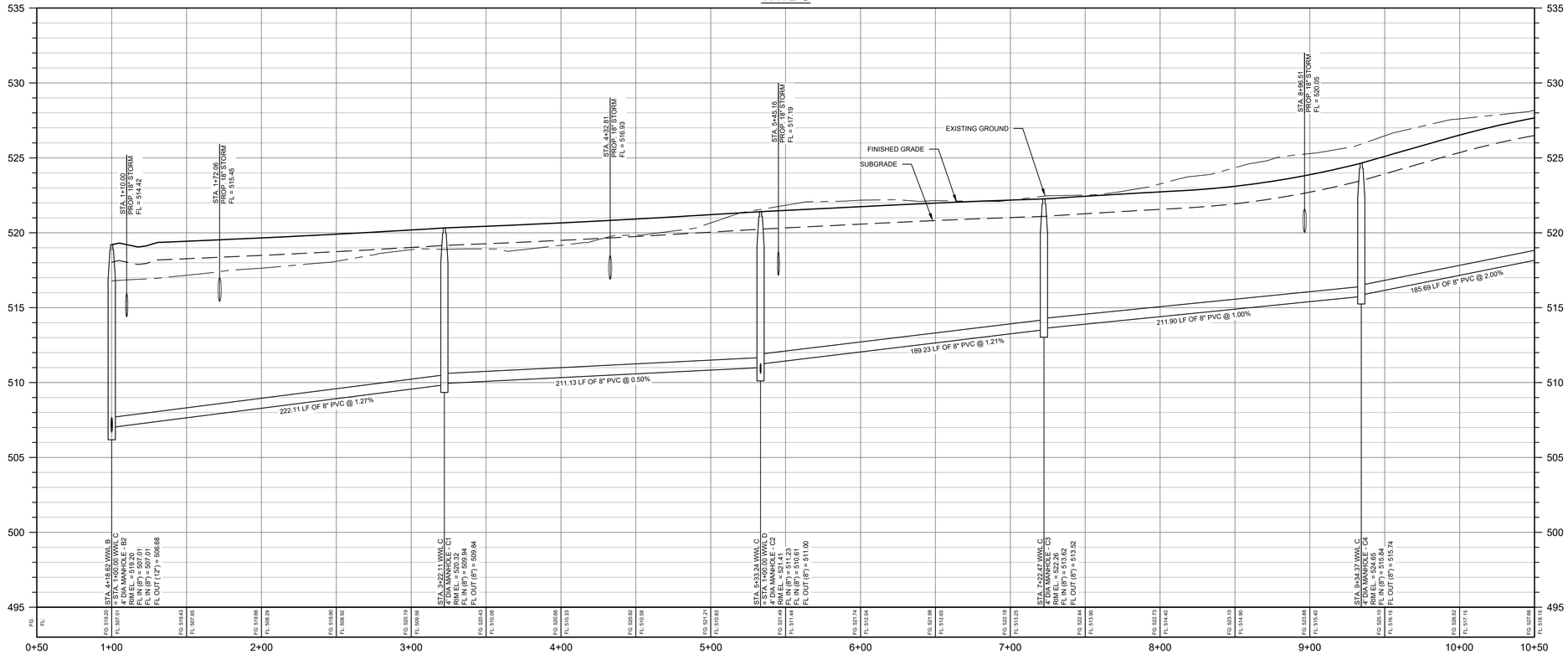
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SCALE: 1" = 40'
GRAPHIC SCALE IN FEET
0 20' 40' 80'

LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- WASTEWATER LINE
- WASTEWATER MANHOLE
- DIRECTION OF FLOW
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PROFILE LEGEND

- FINISHED GRADE
- PROPOSED SUBGRADE
- EXISTING GROUND
- PROPOSED WASTEWATER LINE
- PROPOSED WASTEWATER MANHOLE

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NO.	BY	DATE	REVISION DESCRIPTION

HARVEST RIDGE
SECTION 5

8" WWL C PLAN AND PROFILE
(STA. 1+00 TO 10+50)

PROJECT NO: 1636-11996

DESIGNED BY: MRC

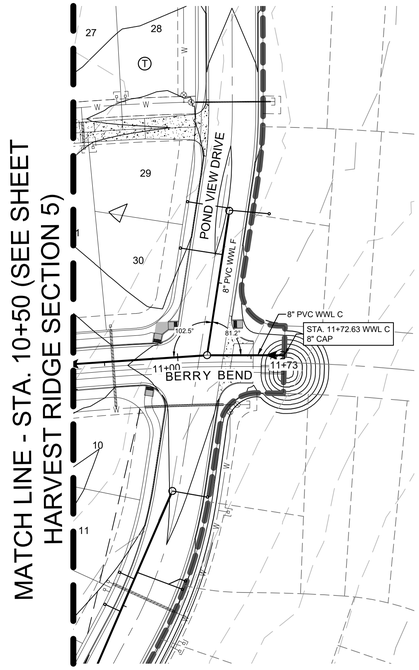
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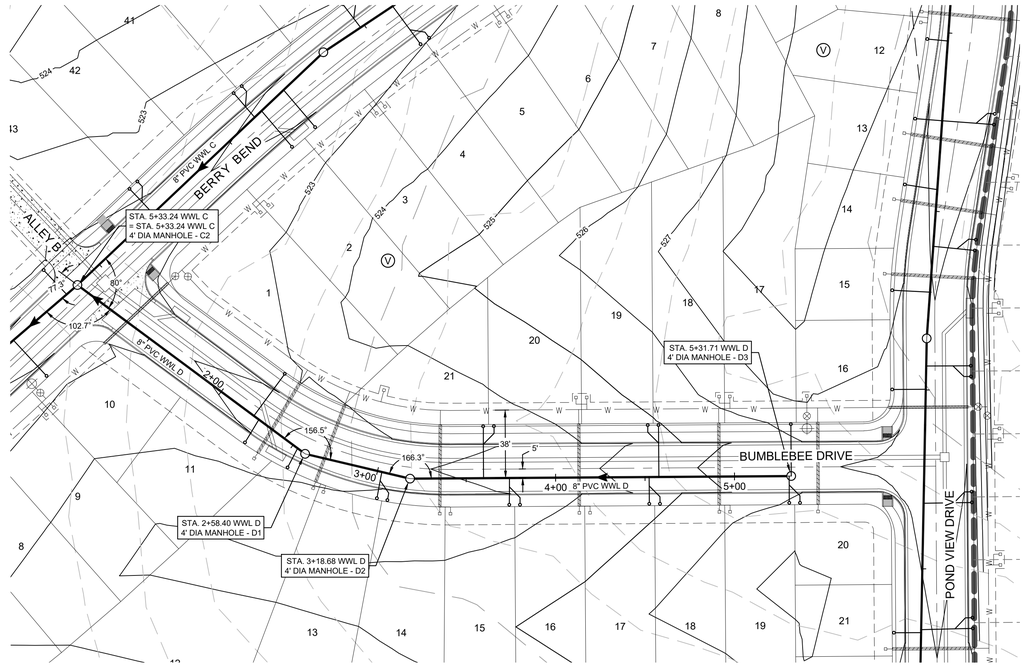
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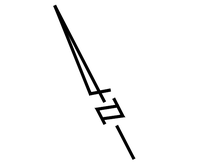
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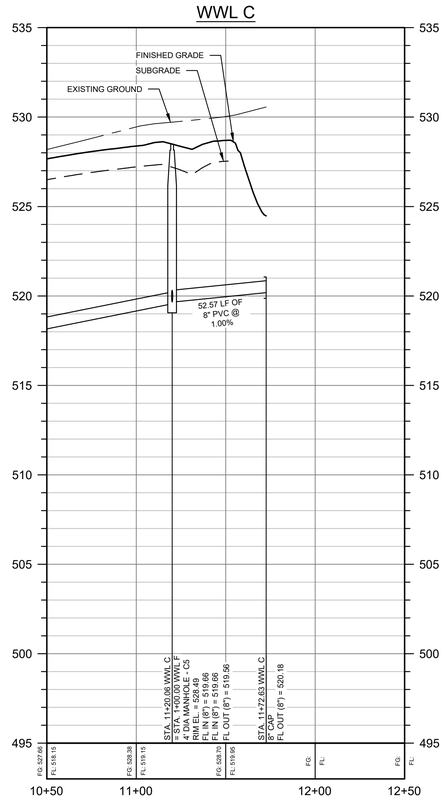
LEGEND

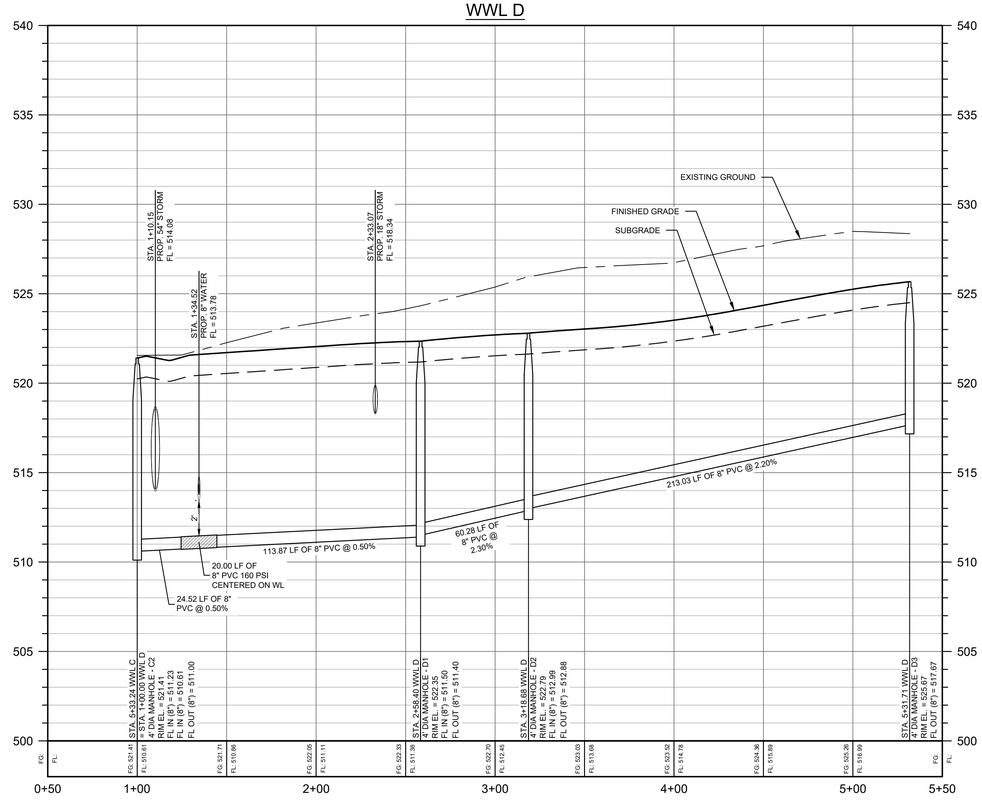
- PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- WASTEWATER LINE
- WASTEWATER MANHOLE
- DIRECTION OF FLOW
- DOUBLE WATER SERVICE
- SINGLE WATER SERVICE
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- SINGLE WASTEWATER SERVICE

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PROFILE LEGEND

- FINISHED GRADE
- PROPOSED SUBGRADE
- EXISTING GROUND
- PROPOSED WASTEWATER LINE
- PROPOSED WASTEWATER MANHOLE

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NO.	BY	DATE	REVISION DESCRIPTION

HARVEST RIDGE
SECTION 5

8" WWL C & D PLAN AND PROFILE
(STA. 10+50 TO END)

PROJECT NO: 1636-11996

DESIGNED BY: MRC

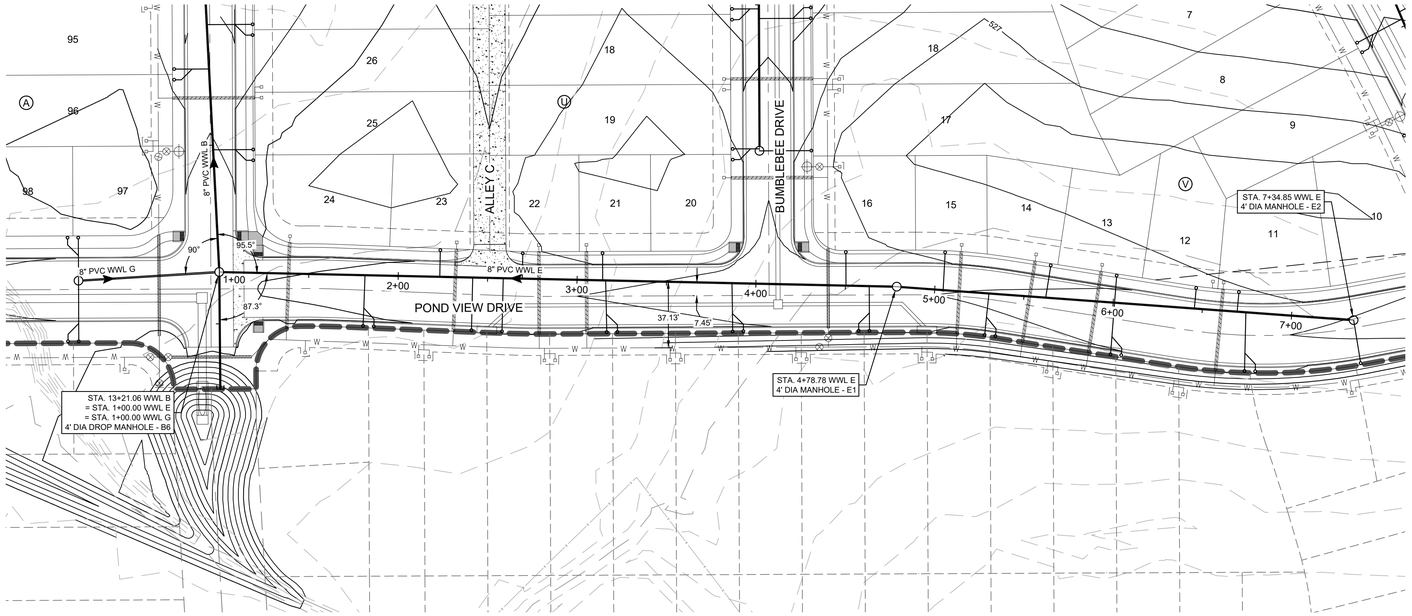
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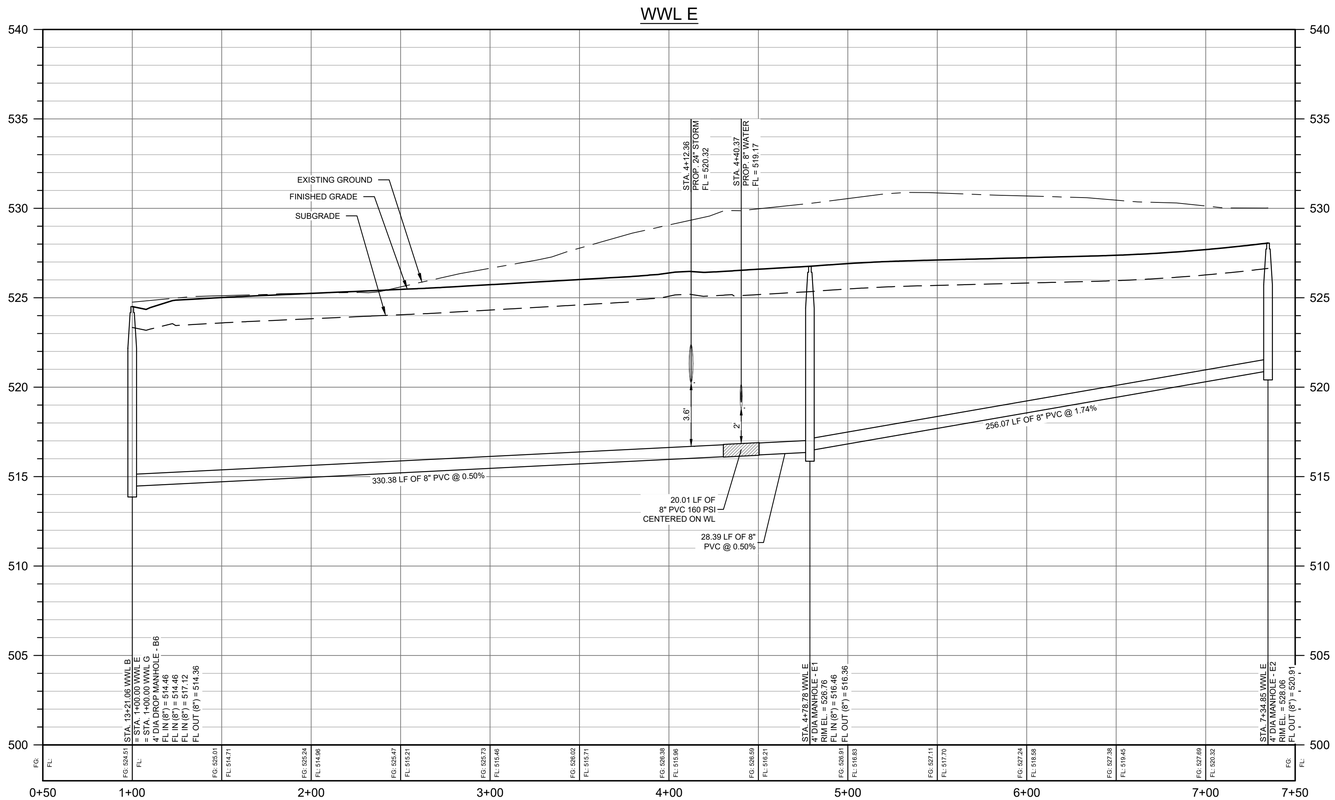
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LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- WASTEWATER LINE
- WASTEWATER MANHOLE
- DIRECTION OF FLOW
- DOUBLE WATER SERVICE
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PROFILE LEGEND

- FINISHED GRADE
- PROPOSED SUBGRADE
- EXISTING GROUND
- PROPOSED WASTEWATER LINE
- PROPOSED WASTEWATER MANHOLE

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NO.	BY	DATE	REVISION DESCRIPTION

HARVEST RIDGE
SECTION 5

8" WWL E PLAN AND PROFILE
(STA. 1+00 TO END)

PROJECT NO: 1636-11996

DESIGNED BY: MRC

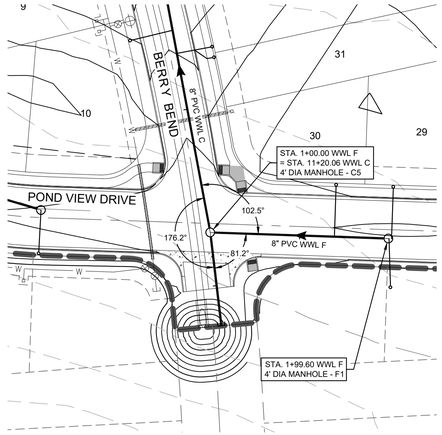
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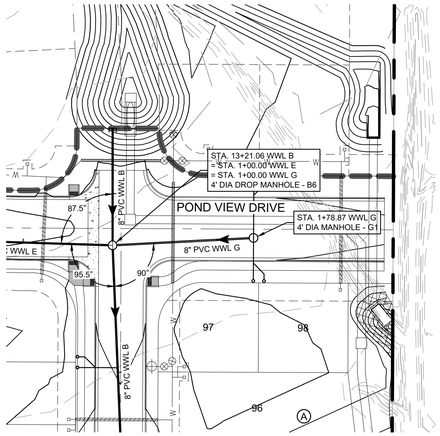
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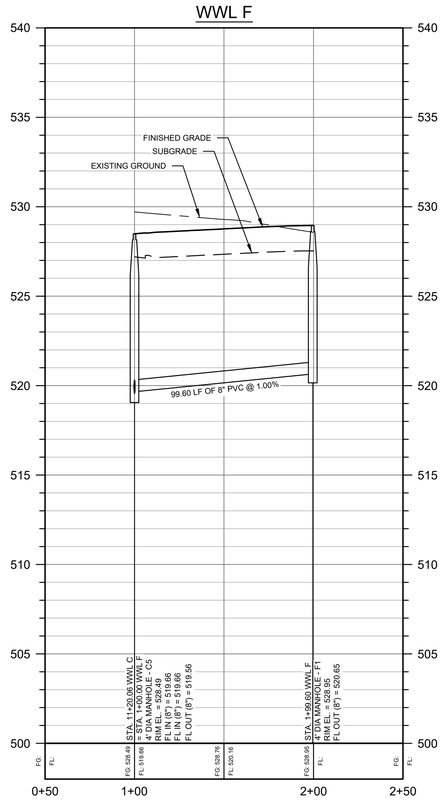
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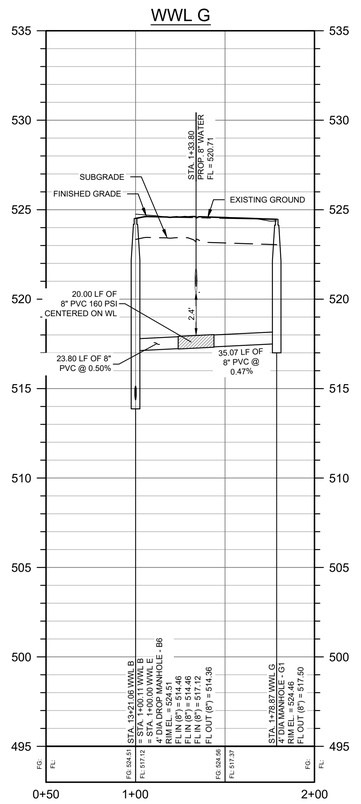
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SCALE: 1" = 40'

GRAPHIC SCALE IN FEET

0 20' 40' 80'

LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- EXISTING MAJOR CONTOUR
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- WASTEWATER MANHOLE
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PROFILE LEGEND

- FINISHED GRADE
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- PROPOSED WASTEWATER LINE
- PROPOSED WASTEWATER MANHOLE

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NO.	BY	DATE	REVISION DESCRIPTION

HARVEST RIDGE
SECTION 5

8" WWL F & G PLAN AND PROFILE
(STA. 1+00 TO END)

PROJECT NO: 1636-11996

DESIGNED BY: MRC

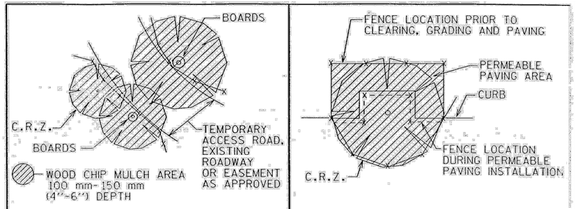
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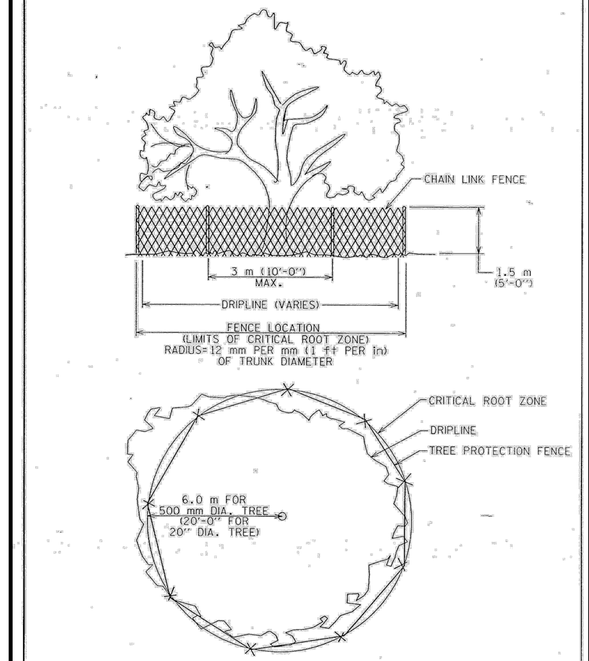
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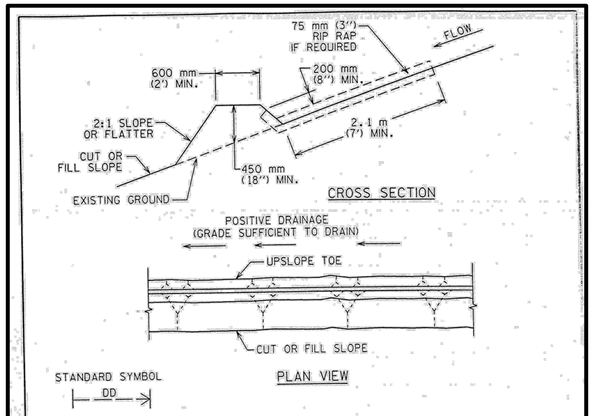
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CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	TREE PROTECTION FENCE LOCATIONS	
11/15/99 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 610S-1

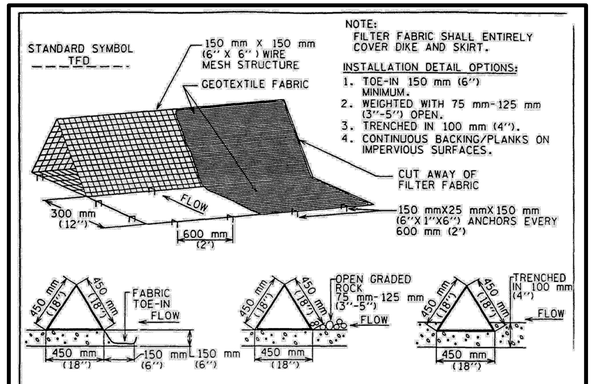


CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	TREE PROPTECTION FENCE TYPE A - CHAIN LINK	
11/15/99 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 610S-2



GENERAL NOTES :
1. ALL DIKES SHALL BE MACHINE COMPACTED.
2. ALL DIVERSION DIKES SHALL HAVE POSITIVE DRAINAGE TO AN OUTLET.
3. a. DIVERTED RUNOFF FROM A PROTECTED OR STABILIZED AREA SHALL HAVE ITS OUTLET FLOW DIRECTED TO AN UNDISTURBED STABILIZED AREA OR INTO A LEVEL SPREADER OR GRADE STABILIZATION STRUCTURE.
   b. DIVERTED RUNOFF FROM A DISTURBED OR EXPOSED AREA SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE, SUCH AS A ROCK BERM, BRUSH BERM, STONE OUTLET STRUCTURE, SEDIMENT TRAP OR SEDIMENT BASIN OR TO AN AREA PROTECTED BY ANY OF THESE PRACTICES.
4. UNLESS OTHERWISE SPECIFIED, EROSION STABILIZATION SHALL BE OPEN GRADED ROCK 75 TO 125 mm (3 TO 5 inches) IN DIAMETER EMBEDDED IN SOIL SURFACE.
5. INSPECTION SHALL BE CONDUCTED WEEKLY OR AFTER EACH RAINFALL EVENT.

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	DIVERSION DIKE	
3-27-00 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 622S-1

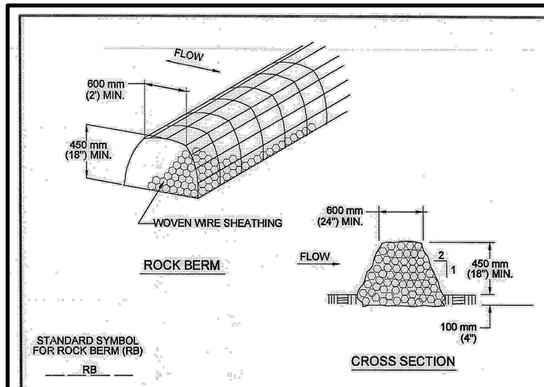


NOTE:
FILTER FABRIC SHALL ENTIRELY COVER DIKE AND SKIRT.

INSTALLATION DETAIL OPTIONS:
1. TOE-IN 150 mm (6") MINIMUM.
2. WEIGHTED WITH 75 mm-125 mm (3"-5") OPEN.
3. TRENCHED IN 100 mm (4").
4. CONTINUOUS BACKING/PLANKS ON IMPERVIOUS SURFACES.

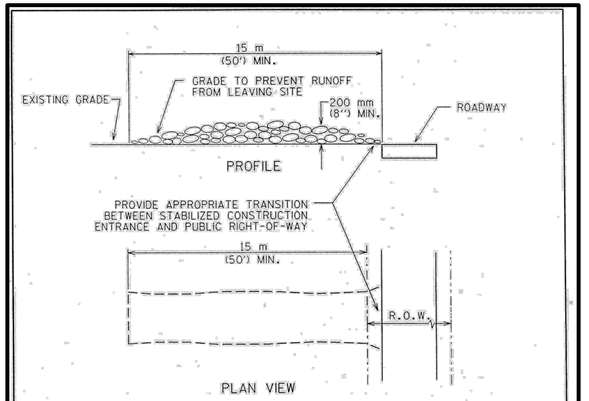
GENERAL NOTES
1. DIKES SHALL BE PLACED IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT DIKE.
2. THE FABRIC COVER AND SKIRT SHALL BE A CONTINUOUS WRAPPING OF GEOTEXTILE. THE SKIRT SHALL BE A CONTINUOUS EXTENSION OF THE FABRIC ON THE UPSTREAM FACE.
3. THE SKIRT SHALL BE WEIGHTED WITH A CONTINUOUS LAYER OF 75-125 mm (3-5") OPEN GRADED ROCK OR TOED-IN 150 mm (6") WITH MECHANICALLY COMPACTED MATERIAL. OTHERWISE, THE ENTIRE STRUCTURE SHALL BE TRENCHED IN 100 mm (4").
4. DIKES AND SKIRT SHALL BE SECURELY ANCHORED IN PLACE USING 150 mm (6") WIRE STAPLES ON 600 mm (2') CENTERS ON BOTH EDGES AND SKIRT, OR STAKE USING 10M (⅜") DIAMETER RE-BAR WITH TEE ENDS.
5. FILTER MATERIAL SHALL BE LAPPED OVER ENDS 150 mm (6") TO COVER DIKE TO DIKE JOINTS. JOINTS SHALL BE FASTENED WITH GALVANIZED SHOAT RINGS.
6. THE DIKE STRUCTURE SHALL BE MW40-150 mmX150 mm (6 GA. 6"X6") WIRE MESH, 450 mm (18") ON A SIDE.
7. INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED BY THE CONTRACTOR.
8. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 150 mm (6") AND DISPOSED OF IN A MANNER WHICH WILL NOT CAUSE ADDITIONAL SILTATION.
9. AFTER THE DEVELOPMENT SITE IS COMPLETLY STABILIZED, THE DIKES AND ANY REMAINING SILT SHALL BE REMOVED. SILT SHALL BE DISPOSED OF AS INDICATED IN GENERAL NOTE 8 ABOVE.

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	TRIANGULAR SEDIMENT FILTER DIKE	
3-27-00 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 628S



NOTES:
1. USE ONLY OPEN GRADED ROCK 75 to 125 mm (3 to 5") DIAMETER FOR ALL CONDITIONS.
2. THE ROCK BERM SHALL BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM 25 mm (1") OPENING AND MINIMUM WIRE DIAMETER OF 12.9 mm (20 GAUGE).
3. THE ROCK BERM SHALL BE INSPECTED DAILY OR AFTER EACH RAIN, AND THE STONE AND/OR FABRIC CORE-WOVEN SHEATHING SHALL BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED, DUE TO SEDIMENT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.
4. IF SEDIMENT REACHES A DEPTH EQUAL TO ONE-THIRD THE HEIGHT OF THE BERM OR 150 mm (6"), WHICHEVER IS LESS, THE SEDIMENT SHALL BE REMOVED AND DISPOSED OF ON AN APPROVED SITE AND IN A MANNER THAT WILL NOT CREATE A SEDIMENTION PROBLEM.
5. WHEN THE SITE IS COMPLETELY STABILIZED,THE BERM AND ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	ROCK BERM	
8/24/2010 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 639S-1



NOTES:
1. STONE SIZE: 75-125 mm (3-5") OPEN GRADED ROCK.
2. LENGTH: AS EFFECTIVE BUT NOT LESS THAN 15 m (50').
3. THICKNESS: NOT LESS THAN 200 mm (8").
4. WIDTH: NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS/EGRESS.
5. WASHING: WHEN NECESSARY, VEHICLE WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC ROADWAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE AND DRAINS INTO AN APPROVED TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.
6. MAINTENANCE: THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND, AS WELL AS REPAIR AND CLEAN OUT OF ANY MEASURE DEVICES USED TO TRAP SEDIMENT. ALL SEDIMENTS THAT IS SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY.
7. DRAINAGE: ENTRANCE MUST BE PROPERLY GRADED OR INCORPORATE A DRAINAGE SWALE TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	STABILIZED CONSTRUCTION ENTRANCE	
5/23/00 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 641S-1

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NO.	BY	DATE	REVISION DESCRIPTION

HARVEST RIDGE
SECTION 5

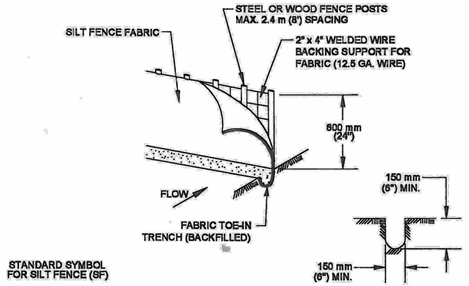
EROSION & SEDIMENTATION CONTROL DETAILS (SHEET 1 OF 2)

PROJECT NO: 1636-11996
DESIGNED BY: MRC
DRAWN BY: DPG/BE
CHECKED BY: JAB

NOTICE:
ALTERATION OF A SEALED DRAWING WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS A VIOLATION OF THE TEXAS ENGINEERING PRACTICE ACT.

THESE PLANS ARE RELEASED UNDER THE AUTHORITY OF J. ADAM BERRY, PE, ON 01/13/2026, FOR THE PURPOSES OF REVIEW AND ARE NOT TO BE USED FOR BIDDING OR CONSTRUCTION

H:\PROJECTS\1636 - BROHN HOMES\11996 - HARVEST RIDGE - SEC 5\CAD\SHEETS\11996-C-DETL.DWG DATE: 1/7/2026 11:23:54 AM BY: DPEREZ-GUERRA



STANDARD SYMBOL
FOR SILT FENCE (SF)

SF
L=

TRENCH CROSS SECTION

1. STEEL OR WOOD POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF 300 mm (12 INCHES). IF WOOD POSTS CANNOT ACHIEVE 300 mm (12 Inches) DEPTH, USE STEEL POSTS.

2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW.

3. THE TRENCH MUST BE A MINIMUM OF 150 mm (6 Inches) DEEP AND 150 mm (6 Inches) WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.

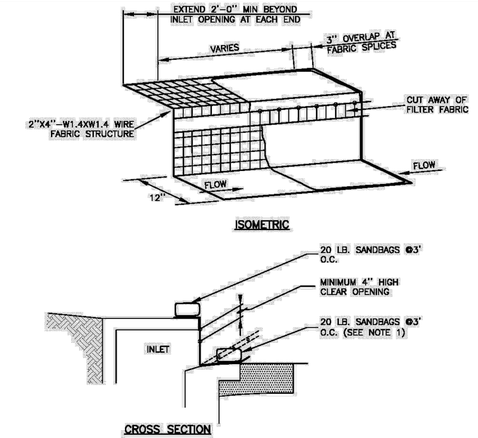
4. SILT FENCE FABRIC SHOULD BE SECURELY FASTENED TO EACH STEEL OR WOOD SUPPORT POST OR TO WOVEN WIRE , WHICH IS IN TURN ATTACHED TO THE STEEL OR WOOD FENCE POST.

5. INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTY AS NEEDED.

6. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 150 mm (6 Inches). THE SILT SHALL BE DISPOSED OF ON AN APPROVED SITE AND IN SUCH A MANNER THAT WILL NOT CONTRIBUTE TO ADDITIONAL SILTATION.

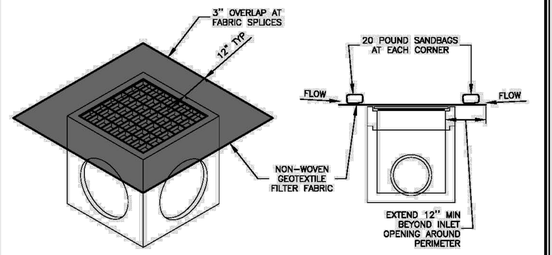
CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	SILT FENCE	
9/1/2011 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 642S-1



NOTES:

1. WHERE MINIMUM CLEARANCES CAUSE TRAFFIC TO DRIVE IN THE GUTTER, THE CONTRACTOR MAY SUBSTITUTE A 1" X 4" BOARD SECURED WITH CONCRETE NAILS 3' O.C. NAILED INTO THE GUTTER IN LIEU OF SANDBAGS TO HOLD THE FILTER DIKE IN PLACE. UPON REMOVAL, CLEAN ANY DIRT/DEBRIS FROM NAILING LOCATIONS, APPLY CHEMICAL SANDING AGENT AND APPLY NON-SHRINK GROUT FLUSH WITH SURFACE OF GUTTER.
2. A SECTION OF FILTER FABRIC SHALL BE REMOVED AS SHOWN ON THIS DETAIL OR AS DIRECTED BY THE ENGINEER OR DESIGNATED REPRESENTATIVE. FABRIC MUST BE SECURED TO WIRE BACKING WITH CLIPS OR HOG RINGS AT THIS LOCATION.
3. DAILY INSPECTION SHALL BE MADE BY THE CONTRACTOR AND SILT ACCUMULATION MUST BE REMOVED WHEN DEPTH REACHES 2".
4. CONTRACTOR SHALL MONITOR THE PERFORMANCE OF INLET PROTECTION DURING EACH RAINFALL EVENT AND IMMEDIATELY REMOVE THE INLET PROTECTIONS IF THE STORM-WATER BEGINS TO OVERTOP THE CURB.
5. INLET PROTECTIONS SHALL BE REMOVED AS SOON AS THE SOURCE OF SEDIMENT IS STABILIZED.

RECORD SIGNED COPY ON FILE AT PUBLIC WORKS APPROVED 03-25-11 DATE THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)	CITY OF ROUND ROCK CURB INLET PROTECTION DETAIL	DRAWING NO: EC-14



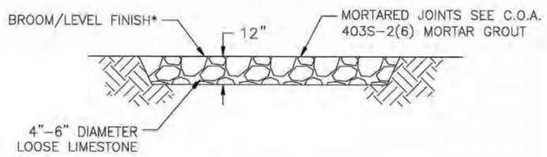
ISOMETRIC

CROSS SECTION

NOTES:

1. DAILY INSPECTION SHALL BE MADE BY THE CONTRACTOR AND SILT ACCUMULATION MUST BE REMOVED WHEN DEPTH REACHES 2".
2. CONTRACTOR SHALL MONITOR THE PERFORMANCE OF INLET PROTECTION DURING EACH RAINFALL EVENT AND IMMEDIATELY CLEAN THE INLET PROTECTION IF EXCESSIVE PONDING OCCURS.
3. INLET PROTECTIONS SHALL BE REMOVED AS SOON AS THE SOURCE OF SEDIMENT IS STABILIZED.

RECORD SIGNED COPY ON FILE AT PUBLIC WORKS APPROVED 03-25-11 DATE THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)	CITY OF ROUND ROCK AREA INLET PROTECTION DETAIL	DRAWING NO: EC-15



* MORTAR SLURRY TO BE WET ENOUGH FOR SMOOTH/FLUSH FINISH. ENTIRE 12-INCH DEPTH TO BE UNIFORMLY WORKED AND FILLED WITH MORTAR.

MORTARED ROCK RIPRAP
N.T.S.

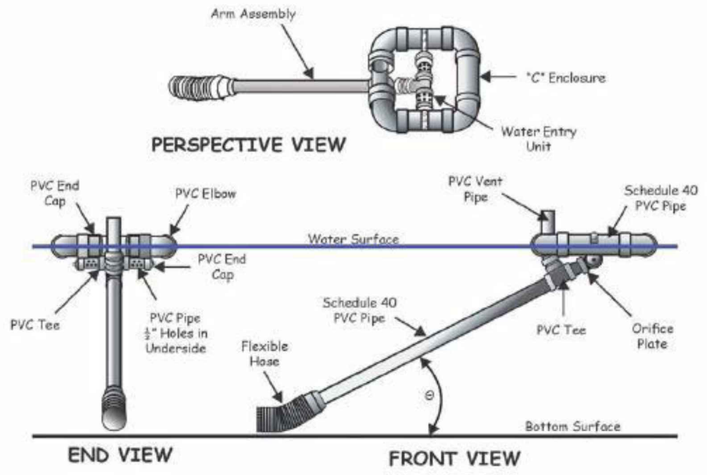


Figure 6.64a Schematic of a skimmer, from Pennsylvania Erosion and Sediment Pollution Control Manual, March, 2000.

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NO.	BY	DATE	REVISION DESCRIPTION

HARVEST RIDGE
SECTION 5

EROSION & SEDIMENTATION
CONTROL DETAILS (SHEET 2 OF 2)

PROJECT NO: 1636-11996

DESIGNED BY: MRC

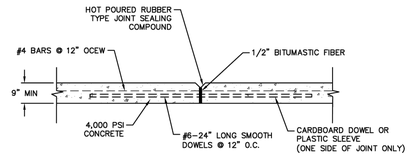
DRAWN BY: DPG/BE

CHECKED BY: JAB

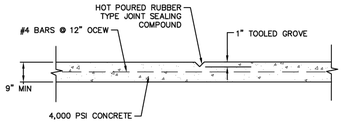
NOTICE:
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THESE PLANS ARE RELEASED UNDER THE AUTHORITY OF J. ADAM BERRY, PE, ON 01/13/2026, FOR THE PURPOSES OF REVIEW AND ARE NOT TO BE USED FOR BIDDING OR CONSTRUCTION

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EXPANSION JOINT



DUMMY JOINT

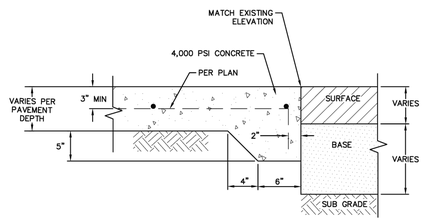
NOTE:
1. PAVEMENT SECTION SHALL BE PER APPROVED GEOTECHNICAL REPORT. THICKNESSES SHOWN ARE MINIMUMS. IN THE EVENT GEOTECHNICAL REPORT RECOMMENDS A LESSER PAVEMENT SECTION, THE SECTION SHOWN HEREIN SHALL BE USED UNLESS APPROVED BY CITY ENGINEER.

THE CITY OF ELGIN

DATE ISSUED:	MAY 2016		
REV	DATE	BY	
1	12/1/19	KBP	
2	9/12/24	KBP	

TITLE: CONCRETE PAVEMENT TYPICAL SECTION OF STREETS WITH EXPANSION & TOOLED DUMMY JOINT

SCALE: N.T.S. DRAWING No. S – 9



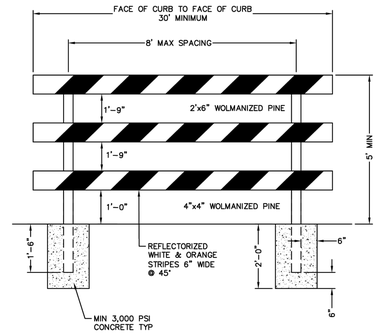
NOTES:
1. SEE STREET CROSS SECTION DETAIL FOR REBAR, BASE PAVEMENT DEPTH, CONCRETE STRENGTH, AND SUBGRADE DETAILS.
2. CONTRACTOR SHALL DOWEL INTO EXISTING CURB/GUTTER WITH #3 DOWELS @ 12" O.C. (12" LONG). FILL HOLE WITH HILTI "HIT" HY 150 INJECTION ADHESIVE OR EQUIVALENT (IF NECESSARY).

THE CITY OF ELGIN

DATE ISSUED:	MAY 2016		
REV	DATE	BY	
1	12/1/19	KBP	
2	9/12/24	KBP	

TITLE: CONCRETE TO ASPHALT STANDARD PAVING HEADER

SCALE: N.T.S. DRAWING No. S – 10

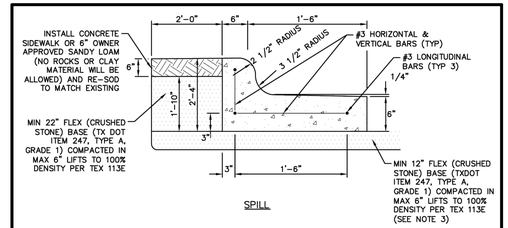


THE CITY OF ELGIN

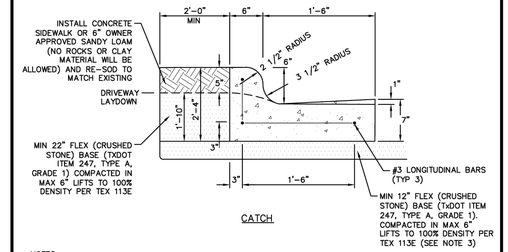
DATE ISSUED:	MAY 2016		
REV	DATE	BY	
1	12/1/19	KBP	
2	9/12/24	KBP	

TITLE: STREET STUB BARRICADE

SCALE: N.T.S. DRAWING No. S – 11



SPILL



CATCH

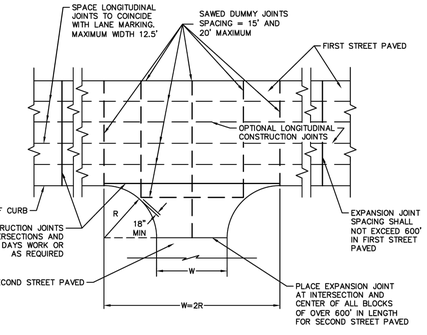
NOTES:
1. SPILL GUTTER TO BE USED ON UPGRADE OF VALLEY GUTTERS.
2. FOR CONCRETE CURB AND GUTTER REMOVAL/REPLACEMENT, INSTALLED SECTION SHALL MATCH EXISTING CURB RADII.
3. CONTRACTOR MAY INSTALL 6" TYPE B HMAC IN LIEU OF 12" FLEX BASE.
4. REINFORCEMENT SHALL BE THREE (3) LONGITUDINAL #3 BARS AS SHOWN WITH HORIZONTAL AND VERTICAL BARS AS SHOWN EVERY 48" O.C.
5. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI.
6. ALL CONCRETE AND REBAR SHALL BE INSTALLED PER ACI CODE.

THE CITY OF ELGIN

DATE ISSUED:	MAY 2016		
REV	DATE	BY	
1	3/5/18	KBP	
2	12/1/19	KBP	
3	9/12/24	KBP	

TITLE: TYPICAL CONCRETE CURB AND GUTTER DETAIL

SCALE: N.T.S. DRAWING No. S – 12

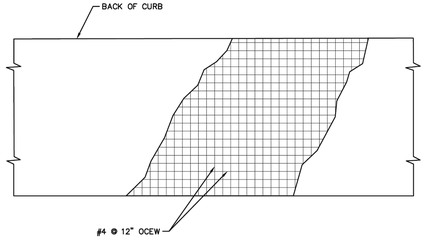


THE CITY OF ELGIN

DATE ISSUED:	MAY 2016		
REV	DATE	BY	
1	12/1/19	KBP	
2	9/12/24	KBP	

TITLE: PLAN – JOINT SPACING

SCALE: N.T.S. DRAWING No. S – 13



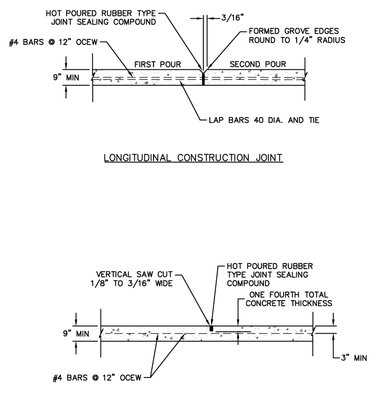
NOTES:
1. REINFORCING STEEL SHALL EXTEND THROUGH BOTH DUMMY AND CONSTRUCTION JOINTS.
2. ALL CONCRETE AND REINFORCING STEEL SHALL BE INSTALLED PER ACI CODE.
3. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI.

THE CITY OF ELGIN

DATE ISSUED:	MAY 2016		
REV	DATE	BY	
1	12/1/19	KBP	
2	9/12/24	KBP	

TITLE: PLAN – STEEL LAYOUT

SCALE: N.T.S. DRAWING No. S – 14



LONGITUDINAL CONSTRUCTION JOINT

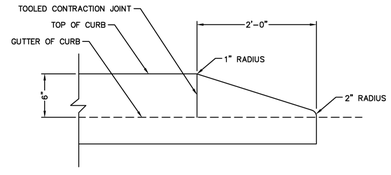
SAWCUT CONTRACTION JOINT

THE CITY OF ELGIN

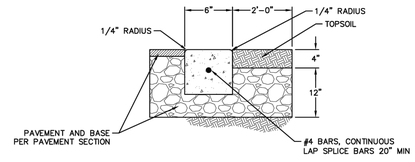
DATE ISSUED:	MAY 2016		
REV	DATE	BY	
1	3/5/18	KBP	
2	12/1/19	KBP	
3	9/12/24	KBP	

TITLE: LONGITUDINAL CONSTRUCTION JOINT & SAWCUT CONTRACTION JOINT

SCALE: N.T.S. DRAWING No. S – 15



CURB TERMINATION ELEVATION



HEADER CURB SECTION

NOTES:
1. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI.
2. ALL CONCRETE AND REBAR SHALL BE INSTALLED PER ACI CODE.
3. CONTRACTOR SHALL BE REQUIRED TO INSTALL A CONCRETE HEADER AT THE END OF ALL DEAD END STREETS OR WHERE ROAD WORK WILL NOT BE CONTINUOUS IN NATURE AS DETERMINED BY CITY ENGINEER.

THE CITY OF ELGIN

DATE ISSUED:	DECEMBER 2019		
REV	DATE	BY	
1	9/12/24	KBP	

TITLE: CONCRETE CURB TERMINATION AND HEADER DETAIL

SCALE: N.T.S. DRAWING No. S – 16

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NO.	BY	DATE	REVISION DESCRIPTION

HARVEST RIDGE
SECTION 5

STREET & DRAINAGE
DETAILS (SHEET 1 OF 4)

PROJECT NO: 1636-11996

DESIGNED BY: MRC

DRAWN BY: DPG/BE

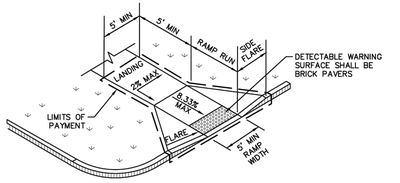
CHECKED BY: JAB

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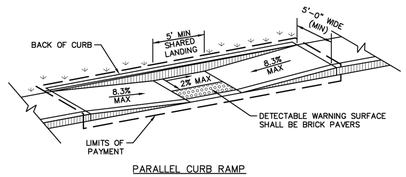
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SHEET 54 OF 61

H:\PROJECTS\1636 - BROHN HOMES\11996 - HARVEST RIDGE - SEC 5\CADSHEETS\11996-C-DETL.DWG DATE: 1/7/2026 11:24:01 AM BY: DPEREZ-GUERRA



PERPENDICULAR CURB RAMP



PARALLEL CURB RAMP

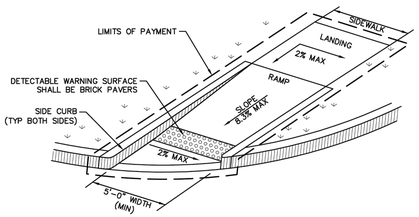
NOTES:
1. SEE CURB RAMP NOTES ON DETAIL M – 3.
2. DESIGN ENGINEER IS RESPONSIBLE FOR ENSURING ULTIMATE DESIGN MEETS TAS AND ADA REQUIREMENTS.

THE CITY OF ELGIN

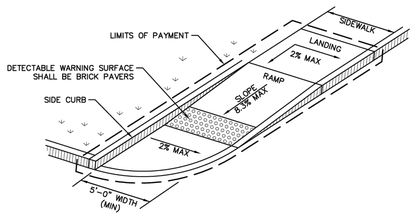
DATE ISSUED:	MAY 2016		
REV	DATE	BY	
1	9/12/24	KBP	

TITLE: PERPENDICULAR & PARALLEL CURB RAMPS

SCALE: N.T.S. DRAWING No. M – 1



SIDEWALK SET BACK FROM CURB



SIDEWALK ADJACENT TO CURB

NOTES:
1. SEE CURB RAMP NOTES ON DETAIL M – 3.
2. DESIGN ENGINEER IS RESPONSIBLE FOR ENSURING ULTIMATE DESIGN MEETS TAS AND ADA REQUIREMENTS.

THE CITY OF ELGIN

DATE ISSUED:	MAY 2016		
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1	9/12/24	KBP	

TITLE: DIRECTIONAL CURB RAMPS

SCALE: N.T.S. DRAWING No. M – 2

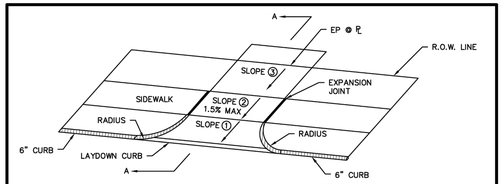
NOTES:
1. ALL CURB RAMPS SHALL COMPLY WITH ALL APPLICABLE TEXAS ACCESSIBILITY STANDARDS (TAS) AND ADA REQUIREMENTS.
2. ALL SLOPES ARE MAXIMUM ALLOWABLE. LESSER SLOPES THAT WILL STILL DRAIN PROPERLY SHOULD BE USED. ADJUST CURB RAMP LENGTH OR GRADE OF APPROACH SIDEWALKS AS REQUIRED.
3. MAXIMUM ALLOWABLE CROSS SLOPE ON ANY PORTION OF CURB RAMPS AND LANDINGS IS 2%
4. MAXIMUM ALLOWABLE RUNNING SLOPE ON CURB RAMPS IS 8.33%
5. MAXIMUM ALLOWABLE SLOPE ON SIDE FLARES IS 10%
6. LANDINGS SHALL BE 5'-0" SQ. MINIMUM WITH A MAXIMUM SLOPE OF 2% IN ANY DIRECTION.
7. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AND SHALL BE PLACED AT A MINIMUM DEPTH OF 6" FOR RAMPS, LANDINGS, AND FLARES, INCLUSIVE OF AREAS UNDER THE DETECTABLE WARNING SURFACE.
8. CONTRACTOR SHALL FURNISH AND INSTALL A DETECTABLE WARNING SURFACE THAT CONSISTS OF RAISED TRUNCATED DOMES ON ALL CURB RAMPS. DETECTABLE WARNING SURFACES SHALL BE DARK RED CONCRETE PAVER BRICKS PER ASTM C-936.
9. DETECTABLE WARNING SURFACES SHALL COVER A MINIMUM OF 24" IN DEPTH IN THE DIRECTION OF TRAVEL AND SPAN THE FULL WIDTH OF THE CURB RAMP OR LANDING.
10. DETECTABLE WARNING SURFACES SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB IS AT THE BACK OF CURB.
11. CONTRACTOR SHALL SAW-CUT BRICK PAVERS AS REQUIRED FOR INSTALLATION.
12. ALL CONCRETE AND STEEL REINFORCEMENT SHALL BE INSTALLED PER ACI CODE.
13. STEEL REINFORCEMENT SHALL BE #3 BARS @ 15" OCEW AND SHALL EXTEND UNDER THE DETECTABLE WARNING SURFACE (BRICK PAVERS). REINFORCEMENT SHALL ALSO BE INSTALLED IN ADJACENT CONCRETE FEATURES WITHIN THE LIMITS OF PAYMENT AS SHOWN IN THE APPLICABLE CITY OF ELGIN STANDARD DETAILS.
14. CURB RAMPS, LANDINGS, AND FLARES SHALL BE TIED IN TO EXISTING CONCRETE FEATURES USING 18" LONG #4 SMOOTH DOWELS @ 12" O.C. DRILLED 6" INTO EXISTING CONCRETE. INSTALL STANDARD EXPANSION JOINTS AT BOUNDARIES BETWEEN EXISTING AND PROPOSED CONCRETE AS INSTRUCTED BY CITY PERSONNEL. NO SEPARATE PAY.
15. CHANGES IN SURFACE ELEVATIONS SHALL NOT EXCEED ONE-FOURTH INCH.
16. CURBS SHOWN WITHIN THE LIMITS OF PAYMENT INCLUDING CONCRETE CURBS, SIDE AND BACK CURBS, GUTTER, AND COMBINED CURB AND GUTTER, ARE CONSIDERED PART OF THE CURB RAMP FOR PAYMENT.
17. ALL RAMPS SHALL BE INSTALLED SO THAT WATER DOES NOT POND IN THE RAMP OR LANDING.

THE CITY OF ELGIN

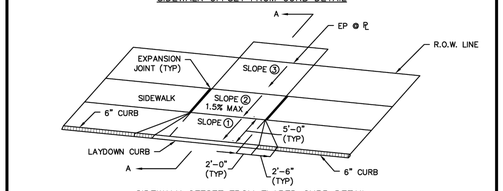
DATE ISSUED:	MAY 2016		
REV	DATE	BY	
1	9/12/24	KBP	

TITLE: CURB RAMP NOTES

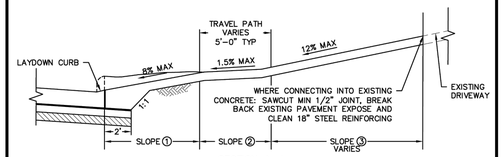
SCALE: N.T.S. DRAWING No. M – 3



SIDEWALK OFFSET FROM CURB DETAIL



SIDEWALK OFFSET FROM FLARED CURB DETAIL



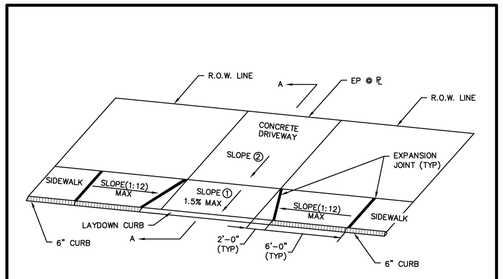
SECTION A–A

THE CITY OF ELGIN

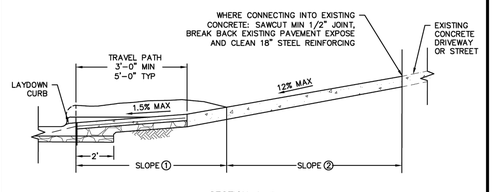
DATE ISSUED:	MAY 2016		
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1	9/12/24	KBP	

TITLE: SIDEWALK ACROSS DRIVEWAY – OFFSET

SCALE: N.T.S. DRAWING No. M – 4



SIDEWALK ADJACENT TO CURB DETAIL



SECTION A–A

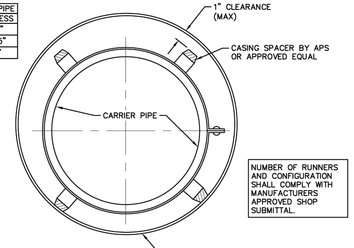
THE CITY OF ELGIN

DATE ISSUED:	MAY 2016		
REV	DATE	BY	
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TITLE: SIDEWALK ACROSS DRIVEWAY – ADJACENT

SCALE: N.T.S. DRAWING No. M – 5

STEEL ENCASEMENT PIPE	
DIAMETER	THICKNESS
> 6", ≤ 16"	0.25"
> 16", ≤ 24"	0.375"
> 24", ≤ 32"	0.5"



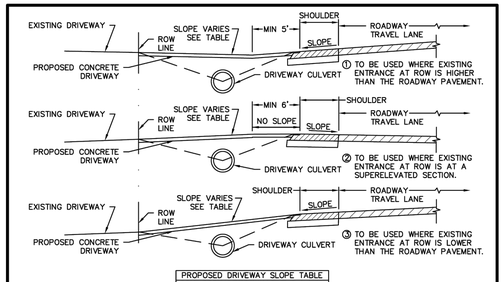
NOTES:
1. CASING SPACERS SHALL BE STAINLESS STEEL CLEAR BELL SPACERS (TYP) APS MODEL SSI OR APPROVED EQUAL.
2. CITY REQUIRES MINIMUM 1/4" THICK SMOOTH STEEL CASING.
3. CASING REQUIREMENTS MAY DIFFER DEPENDANT ON JURISDICTION.

THE CITY OF ELGIN

DATE ISSUED:	MAY 2016		
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2	9/12/24	KBP	

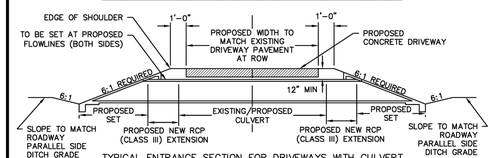
TITLE: PIPE ENCASEMENT DETAIL WITH CASING SPACERS

SCALE: N.T.S. DRAWING No. M – 6



PROPOSED DRIVEWAY SLOPE TABLE
COMMERCIAL DRIVEWAYS @ 2:1 MAX
RESIDENTIAL DRIVEWAYS @ 8:1 MAX

TYPICAL ENTRANCE PROFILE FOR DRIVEWAYS WITH CULVERT



TYPICAL ENTRANCE SECTION FOR DRIVEWAYS WITH CULVERT

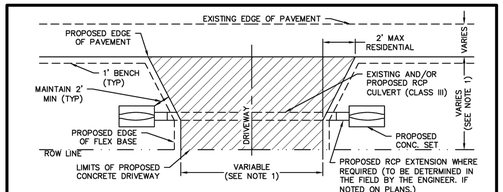
NOTES:
1. DRIVEWAY CULVERT TO BE INSTALLED WHERE ROADWAY DITCH DRAINAGE IS NECESSARY, AS INDICATED ON PLANS AND/OR AS DIRECTED BY THE ENGINEER.
2. DRIVEWAY CULVERT TO BE INSTALLED WITH A MINIMUM OF 12" COVER WITH PROPOSED RESIDENTIAL AND COMMERCIAL DRIVEWAY MATERIAL.
3. SET MAY BE PRECAST OR CAST IN PLACE.
4. ALL CULVERT PIPES SHALL BE RCP CLASS III.
5. EXISTING CULVERT PIPE SHALL BE REPLACED TO MEET RCP CLASS III (IF APPLICABLE).
6. SAFETY END TREATMENTS (SET) DETAILS SHALL BE SUBMITTED IF APPLICABLE.

THE CITY OF ELGIN

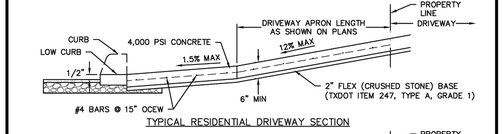
DATE ISSUED:	DECEMBER 2019		
REV	DATE	BY	
1	9/12/24	KBP	

TITLE: DRIVEWAY PROFILE DETAIL LOCAL STREETS SHEET 1 OF 2

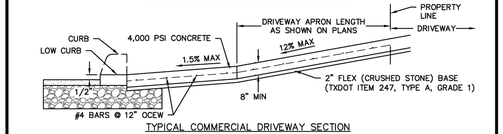
SCALE: N.T.S. DRAWING No. M – 7



TYPICAL DRIVEWAY PLAN VIEW



TYPICAL RESIDENTIAL DRIVEWAY SECTION



TYPICAL COMMERCIAL DRIVEWAY SECTION

NOTES:
1. MATCH EXISTING DRIVEWAY WITH A MINIMUM WIDTH OF 12 FEET AND A MAXIMUM WIDTH OF 24 FEET FOR PRIVATE RESIDENTIAL DRIVES.
2. DUMMY JOINTS PARALLEL TO THE CURB SHALL BE PLACED WHERE THE SIDEWALK MEETS THE DRIVEWAY. DUMMY JOINTS PERPENDICULAR TO THE CURB, AND WITHIN THE BOUNDARIES OF THE PARALLEL DUMMY JOINTS, SHALL BE PLACED AT INTERVALS EQUAL TO THE WIDTH OF THE SIDEWALK.
3. A MINIMUM OF 2 ROUND AND SMOOTH DOWEL BARS WITH SLEEVES 3/8" IN DIAMETER AND 18" IN LENGTH SHALL BE SPACED 18" APART AT EACH EXPANSION JOINT.
4. CONCRETE SURFACE SHALL BE BRUSHED FINISHED.
5. SAFETY END TREATMENTS (SET) DETAILS SHALL BE SUBMITTED IF APPLICABLE.

THE CITY OF ELGIN

DATE ISSUED:	DECEMBER 2019		
REV	DATE	BY	
1	9/12/24	KBP	

TITLE: DRIVEWAY PROFILE DETAIL LOCAL STREETS SHEET 2 OF 2

SCALE: N.T.S. DRAWING No. M – 8

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512-452-0371
gray-civil.com
8834 N. Capital of Texas Highway, Suite 140
5316 W. US Highway 290 Service Road, Suite 220
TBPELS FIRM #2946

GRAY

NO.	BY	DATE	REVISION DESCRIPTION

HARVEST RIDGE
SECTION 5

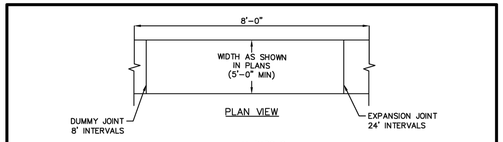
STREET & DRAINAGE DETAILS (SHEET 2 OF 4)

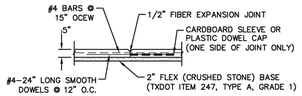
PROJECT NO: 1636-11996
DESIGNED BY: MRC
DRAWN BY: DPG/BE
CHECKED BY: JAB

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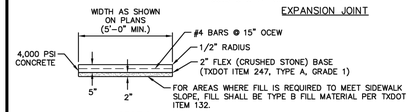
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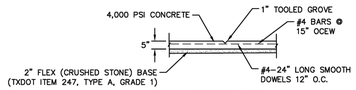




EXPANSION JOINT



X-SECTION



DUMMY JOINT

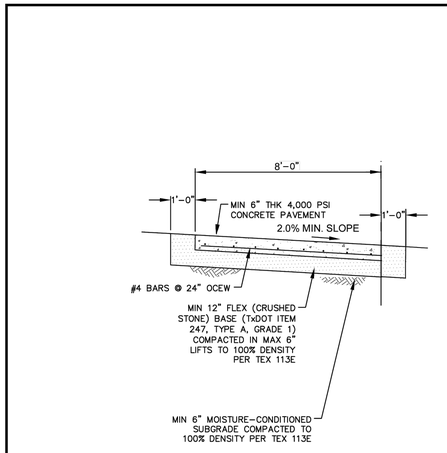
NOTES:
1. EXACT SIDEWALK LOCATION AND DIMENSIONS MAY BE ADJUSTED OR DETERMINED IN THE FIELD BY CITY STAFF IF NOT CLEARLY SHOWN ON PLANS, OR REQUIRED DUE TO EXISTING SITE CONDITIONS.
2. CONTRACTOR SHALL LOCATE TOP OF SIDEWALK SO THAT IT DOES NOT ALTER EXISTING DRAINAGE PATTERNS. ALL DRAINAGE SHALL BE DIRECTED TO THE STREET.
3. LONGITUDINAL DUMMY JOINT REQUIRED AT MIDPOINT OF SIDEWALK 10'-0" OR WIDER.
4. SIDEWALK TO CONFORM TO ALL A.D.A. AND TEXAS ACCESSIBILITY STANDARDS (TAS).
5. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIBLE STRENGTH OF 4,000 PSI.
6. ALL CONCRETE AND REBAR SHALL BE INSTALLED PER ACI CODE.
7. SIDEWALKS INSTALLED ACROSS DRIVEWAYS SHALL BE 6" IN THICKNESS.

THE CITY OF ELGIN

DATE ISSUED:	MAY 2016	
REV	DATE	BY
1	3/5/18	KBP
2	12/1/19	KBP
3	9/12/24	KBP

TITLE: SIDEWALK DETAIL

SCALE: N.T.S. | DRAWING No. M – 9



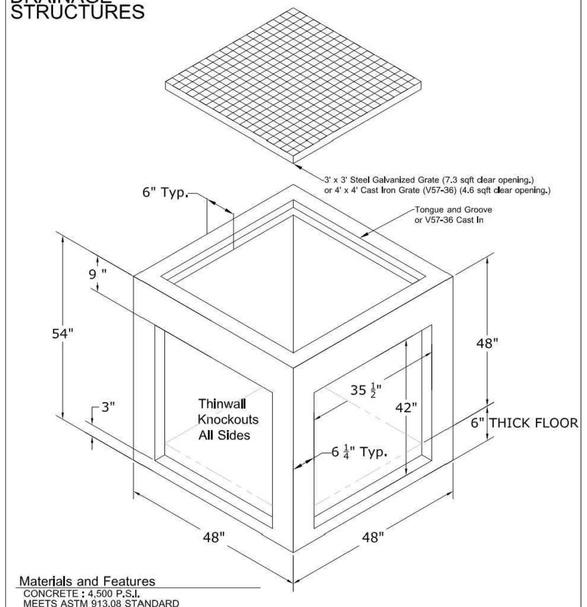
NOTE:
1. PAVEMENT SECTION SHOWN ARE MINIMUMS. GEOTECHNICAL REPORT SHALL GOVERN ACTUAL PAVEMENT SECTION.

DATE ISSUED:		
REV	DATE	BY

TITLE: 8' POND ACCESS DRIVE

SCALE: N.T.S. | DRAWING No.

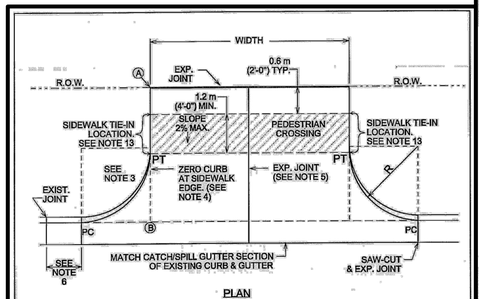
PRECAST DRAINAGE STRUCTURES



Materials and Features
CONCRETE : 4,500 P.S.I.
MEETS ASTM 913.08 STANDARD
REINFORCED TO H20 LOADING
RISER SECTIONS AVAILABLE
FRAME AND GRATE AS REQUIRED
WEIGHT : 3,575 LBS.
MAXIMUM RCP : 27"

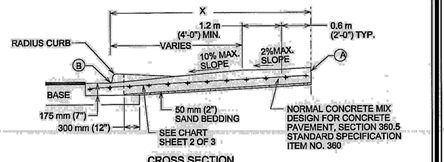
All dimensions subject to shrink specified in laboratory.

TITLE	DATE	
3' x 3' x 48" SURFACE GRATE INLET (CATCH BASIN)	12-16-12	Austin Precast



PLAN

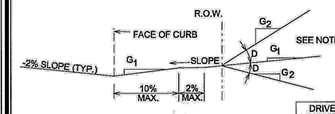
NOTE: ALL DRIVEWAYS SHALL BE SLOPED TOWARDS THE STREET FROM THE R.O.W. LINE. ELEVATION OF POINT (A) ABOVE POINT (B) IS, TYPICALLY A MINIMUM OF 150 mm (6") PLUS 20 mm/m (¼" RISE/FOOT) OVER DISTANCE "X" IN METERS (FEET).



CROSS SECTION

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	TYPE II DRIVEWAY	
2/24/16 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 433S-2 1 OF 2

USE	THICKNESS	REINFORCEMENT
DRIVEWAYS FOR PASSENGER VEHICLE PARKING LOTS	150 mm (6") MIN.	125 mm (5") MIN. CONCRETE WITH ONE LAYER OF 13M (#4) BARS PLACED ON CHAIRS AT MIDDEPTH OF SLAB AT NO MORE THAN 450 mm (18") O.C. BOTH DIRECTIONS
ALL OTHERS	175 mm (7") MIN.	125 mm (5") MIN. CONCRETE WITH ONE LAYER OF 13M (#4) BARS PLACED ON CHAIRS AT MIDDEPTH OF SLAB AT NO MORE THAN 450 mm (18") O.C. BOTH DIRECTIONS



ALLOWABLE GRADES

DRIVEWAY VOLUME (ADT)	D=GRADE CHANGE STD.	MAX
>1500	0%	3%
500-1500	3%	6%
< 500	6%	15%

NOTES:
1. ALL TYPE II DRIVEWAYS SHALL HAVE RADIUS ENDS.
2. DRIVEWAY WIDTHS AND RADII DIMENSIONS, ONE/TWO WAY TRAVEL REQUIREMENTS, AND GEOMETRIC LAY-OUT ARE HIGHLY VARIABLE, SUBJECT TO SITE SPECIFIC CONDITIONS AND REQUIREMENTS. SEE TRANSPORTATION CRITERIA MANUAL, SECTION 5 "DRIVEWAYS".
3. THE DRIVEWAY EDGE SHALL BE SMOOTHLY TRANSITITIONED INTO THE SIDEWALK TIE-IN LOCATION BEGINNING AT THE RADIUS PC LINE.
4. "ZERO" CURB AT PT OR SIDEWALK EDGE, WHICHEVER IS ENCOUNTERED FIRST.
5. PLACE AN EXPANSION JOINT DOWN THE CENTER OF DRIVEWAY ALL DRIVEWAYS.
6. IF DIMENSION IS LESS THAN 1.5 METERS (5 FEET), REMOVE CURB AND GUTTER TO EXISTING JOINT AND POUR MONOLITHICALLY WITH DRIVEWAY.
7. IF THE BASE IS OVER-EXCAVATED WHERE THE CURB AND GUTTER WERE REMOVED, BACKFILL WITH CONCRETE MONOLITHICALLY WITH THE DRIVEWAY.
8. TYPE II DRIVEWAYS ARE TO BE LOCATED NO CLOSER TO THE CORNER OF INTERSECTING RIGHT OF WAY THAN 60% OF PARCEL FRONTAGE AT 30 METERS (100 FEET); WHICHEVER IS LESS.
9. DRIVEWAY SHALL NOT BE CONSTRUCTED WITHIN THE CURB RETURN OF A STREET INTERSECTION.
10. WHILE THE PROPERTY OWNER REMAINS RESPONSIBLE FOR GRADE BREAKS WITHIN PRIVATE PROPERTY, THE FIRE DEPARTMENT SHALL BE CONSULTED WHERE THE DRIVEWAY IS ESSENTIAL TO EMERGENCY VEHICLE ACCESS AND %2 IS GREATER THAN 15%.
11. USE 12 MM (1/2") ASPHALT BOARD OR OTHER APPROVED MATERIAL FOR CURB AND GUTTER EXPANSION JOINTS. SIDEWALK, AT THE R.O.W. LINE AND AT MIDWIDTH, SEE NOTE 5.
12. SEE TRANSPORTATION CRITERIA MANUAL, SECTION 5 FOR OTHER DRIVEWAY REQUIREMENTS.
13. THE SIDEWALK, REGARDLESS OF ITS LOCATION WITH RESPECT TO THE CURB OR PROPERTY LINE, SHALL BE CONNECTED TO THE DRIVEWAY AT THESE LOCATIONS.
14. WATER METER BOXES AND WASTEWATER CLEAN OUTS ARE PROHIBITED FROM BEING LOCATED IN DRIVEWAY AREAS.

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	TYPE II DRIVEWAY	
2/24/16 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 433S-2 2 OF 2

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gray-civil.com
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5316 W. US Highway 290 Service Road, Suite 220
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NO.	BY	DATE	REVISION DESCRIPTION

HARVEST RIDGE
SECTION 5

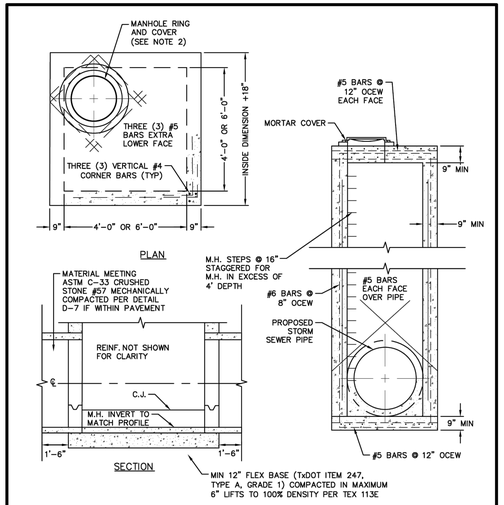
STREET & DRAINAGE
DETAILS (SHEET 3 OF 4)

PROJECT NO: 1636-11996
DESIGNED BY: MRC
DRAWN BY: DPG/BE
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NOTICE:
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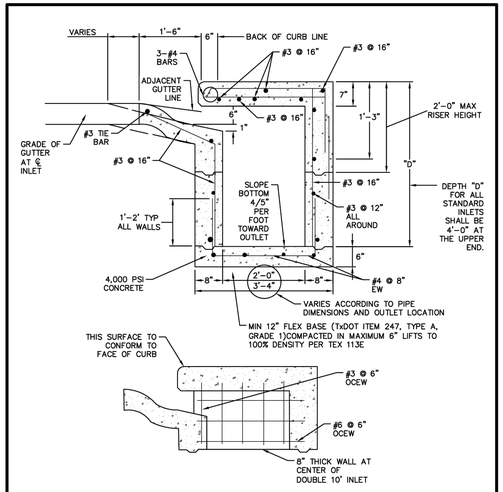
THESE PLANS ARE RELEASED UNDER THE AUTHORITY OF J. ADAM BERRY, PE, ON 01/13/2026, FOR THE PURPOSES OF REVIEW AND ARE NOT TO BE USED FOR BIDDING OR CONSTRUCTION

H:\PROJECTS\1636 - BROHN HOMES\11996 - HARVEST RIDGE - SEC 5\CAD\SHEETS\11996-C-DET1.DWG DATE: 1/7/2026 11:24:08 AM BY: DPEREZ-GUERRA



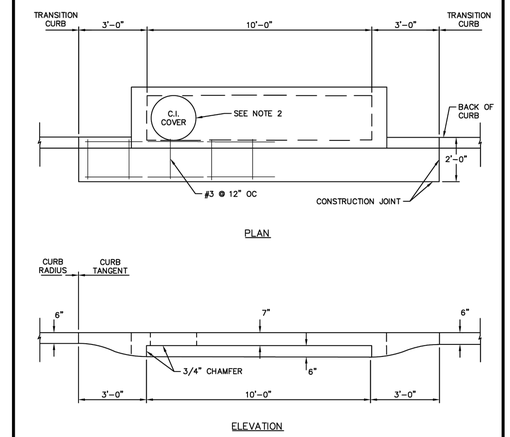
NOTES:
1. TXDOT STANDARD MANHOLES MAY BE USED IN LIEU OF DETAIL.
2. MANHOLE RING AND COVER SHALL BE 32" ERGO XL ASSEMBLY OR APPROVED EQUAL UNLESS OTHERWISE STATED IN PLANS.
3. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI.
4. ALL CONCRETE AND REBAR SHALL BE INSTALLED PER ACI CODE.

THE CITY OF ELGIN	DATE ISSUED:	MAY 2016		TITLE:	4'–0" OR 6'–0" SQ. STORM DRAIN MANHOLE
	REV	DATE	BY		
	1	9/12/24	KBP		
				SCALE: N.T.S.	DRAWING No. D – 1



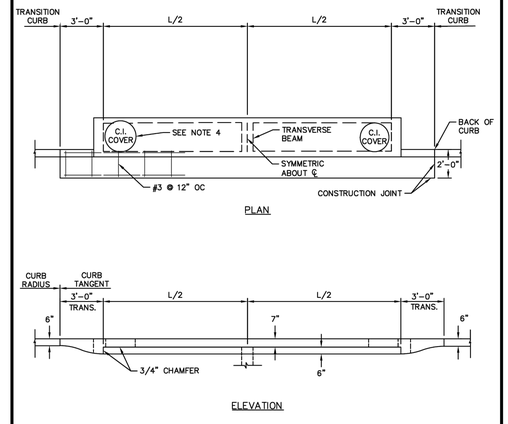
NOTES:
1. TXDOT STANDARD CURB INLETS MAY BE USED IN LIEU OF DETAIL.
2. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI.
3. ALL CONCRETE AND REBAR SHALL BE INSTALLED PER ACI CODE.
4. FLEX BASE UNDERNEATH INLET SHALL EXTEND A MINIMUM OF 2'–0" BEYOND THE OUTER WALLS.

THE CITY OF ELGIN	DATE ISSUED:	MAY 2016		TITLE:	TYPICAL CURB INLET SECTIONS
	REV	DATE	BY		
	1	9/12/24	KBP		
				SCALE: N.T.S.	DRAWING No. D – 2



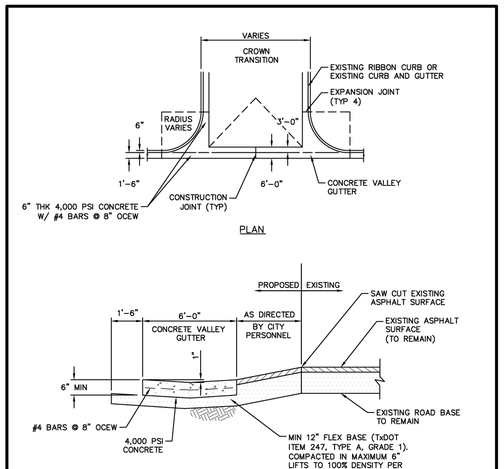
NOTES:
1. TXDOT STANDARD CURB INLETS MAY BE USED IN LIEU OF DETAIL.
2. RING AND COVER SHALL BE MINIMUM OF 24".
3. MANHOLE RING AND COVER SHALL BE CONSTRUCTED OVER OUTLET PIPE.
4. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI.
5. ALL CONCRETE AND REBAR SHALL BE INSTALLED PER ACI CODE.

THE CITY OF ELGIN	DATE ISSUED:	MAY 2016		TITLE:	10' CURB INLET
	REV	DATE	BY		
	1	9/12/24	KBP		
				SCALE: N.T.S.	DRAWING No. D – 3



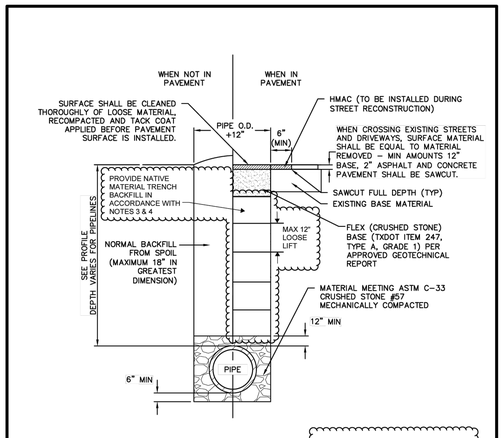
NOTES:
1. PROVIDE TRANSVERSE BEAM AT MIDPOINT (L/2).
2. FOR 15'–0" AND 20'–0" CURB INLETS PROVIDE TWO MANHOLE RINGS AND COVERS.
3. TXDOT STANDARD CURB INLETS MAY BE USED IN LIEU OF DETAIL.
4. RING AND COVER SHALL BE MINIMUM OF 24".
5. MANHOLE RING AND COVER SHALL BE CONSTRUCTED OVER OUTLET PIPE.
6. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI.
7. ALL CONCRETE AND REBAR SHALL BE INSTALLED PER ACI CODE.

THE CITY OF ELGIN	DATE ISSUED:	MAY 2016		TITLE:	15' & 20' CURB INLETS
	REV	DATE	BY		
	1	9/12/24	KBP		
				SCALE: N.T.S.	DRAWING No. D – 4



NOTES:
1. VALLEY GUTTER AND CURB SHALL BE POURED MONOLITHICALLY.
2. CONTRACTOR SHALL INSTALL FLOWLINE AS SHOWN ON PLAN/PROFILE SHEETS.
3. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI.
4. ALL CONCRETE AND REBAR SHALL BE INSTALLED PER ACI CODE.
5. VALLEY GUTTERS ARE REQUIRED ON ASPHALT PAVEMENT SECTIONS WHERE RUNOFF CROSSES THE STREET.
6. CROWN TRANSITION SHALL BE IN ACCORDANCE PER TxDOT MANUAL CHAPTER 8, SECTION 2, TABLES 8–4 AND 8–5.

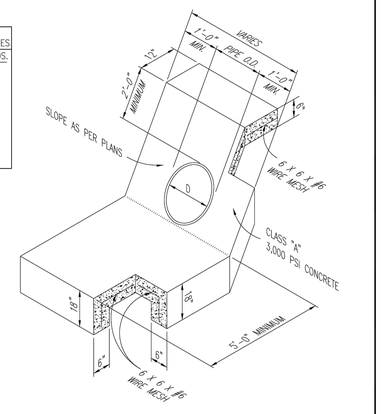
THE CITY OF ELGIN	DATE ISSUED:	MAY 2016		TITLE:	CONCRETE VALLEY GUTTER
	REV	DATE	BY		
	1	3/5/18	KBP		
	2	12/1/19	KBP		
	3	9/12/24	KBP		
				SCALE: N.T.S.	DRAWING No. D – 6



NOTES:
1. UTILITY TRENCHES PLACED WITHIN THE STREET OR WITHIN 5' FROM BACK OF CURBS THAT ARE 3' OR MORE IN DEPTH SHALL COMPLY WITH THE R.O.W. DETAIL (FOR PIPE SIZE 6" AND LARGER).
2. FOR STREETS BEING RECONSTRUCTED ONLY, CONTRACTOR MAY BACKFILL FINAL BASE SECTION DEPTH WITH SPOIL MATERIAL PRIOR TO STREET EXCAVATION TO ALLOW TRAFFIC FLOW. DEPTH VARIES.
3. ALL MATERIAL PLACED WITHIN THE TRENCH PRIOR TO THE PAVEMENT STRUCTURE SHOULD B E COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM 3698 AND MOISTURE CONTENT BETWEEN MINUS 2 (-2) AND PLUS 2 (+2) OF THE OPTIMUM MOISTURE CONTENT.
4. THE LIFTS SHOULD BE PLACED IN MAXIMUM 12 INCH LOOSE LIFTS AND COMPACTION TESTS PERFORMED AT A MINIMUM OF ONE (1) TEST PER 200 LINEAR FEET OF TRENCH PER LIFT.

THE CITY OF ELGIN	DATE ISSUED:	MAY 2016		TITLE:	MODIFIED TRENCH DETAIL
	REV	DATE	BY		
	1	3/5/18	KBP		
	2	12/1/19	KBP		
	3	9/12/24	KBP		
				SCALE: N.T.S.	DRAWING No. D – 7

MINIMUM RIP-RAP QUANTITIES	
PIPE	SQ. YDS.
18"	6.2
24"	6.9
27"	7.8
30"	9.5
36"	10.4
42"	12.0
48"	14.3
54"	16.4

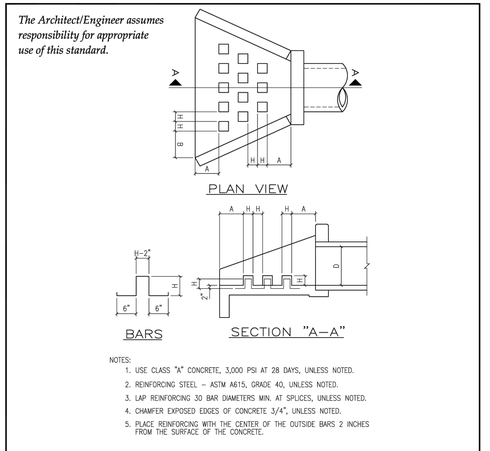


NOTES:
1. WHEN HEADWALLS AND WINGWALLS ARE REQUIRED, THEY SHALL CONFORM TO THE TEXAS DEPARTMENT OF TRANSPORTATION STANDARDS, OR AS DIRECTED BY THE CITY.
2. ENERGY DISSIPATERS SHALL BE REQUIRED IF PIPE VELOCITY IS GREATER THAN 5.0 F.P.S. OR AS DIRECTED BY THE CITY OF GEORGETOWN.
3. SUPPORT REINFORCING WIRE MESH REQUIRED AS SUPPORT FOR APPROACH SLAB AND SHALL BE SUPPORTED BY REBAR CHAIRS OR OTHER APPROVED METHODS.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	REVISION NOTE:	ADOPTED 6/21/2006	
TYPICAL CONCRETE RIP-RAP AT PIPE	DRAWING NAME:	SD19	
	SCALE: NTS	DATE: 1/2003	
	DRAWN BY: MRS	APPROVED BY: TRB	

The Architect/Engineer assumes responsibility for appropriate use of this standard.



NOTES:
1. USE CLASS "A" CONCRETE, 3,000 PSI AT 28 DAYS, UNLESS NOTED.
2. REINFORCING STEEL – ASTM A615, GRADE 40, UNLESS NOTED.
3. LAP REINFORCING 30 BAR DIAMETERS MIN. AT SPLICES, UNLESS NOTED.
4. CHAMFER EXPOSED EDGES OF CONCRETE 3/4", UNLESS NOTED.
5. PLACE REINFORCING WITH THE CENTER OF THE OUTSIDE BARS 2 INCHES FROM THE SURFACE OF THE CONCRETE.

TABLE OF DIMENSIONS FOR ENERGY DISSIPATOR DETAIL

D PIPE DIAMETER (INCHES)	NUMBER OF ROWS OF DISSIPATORS	NUMBER OF DISSIPATORS IN FRONT ROW	H (INCHES)	A (INCHES)	B (INCHES)
12	1	3	4	4	9.1875
18	2	4	4 1/2	9 1/2	15.5625
24	2	5	6	14 3/4	16 1/2
30	3	6	7 1/2	12 1/2	14 3/8
36	3	6	9	16 1/4	18 5/16
42	3	6	10 1/2	20	22 1/4
48	3	6	12	23 3/4	26 1/4
54	3	6	13 1/2	27 1/2	27 3/4
60	3	6	15	31 1/4	31 5/8

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	REVISION NOTE:	ADOPTED 6/21/2006	
ENERGY DISSIPATER DETAIL	DRAWING NAME:	SD20	
	SCALE: NTS	DATE: 1/2003	
	DRAWN BY: MRS	APPROVED BY: TRB	

GRAY CIVIL, INC.
512-452-0371
gray-civil.com
8834 N. Capital of Texas Highway, Suite 140
5316 W. US Highway 290 Service Road, Suite 220
TBPELS FIRM # 2946

GRAY

NO.	BY	DATE	REVISION DESCRIPTION

HARVEST RIDGE
SECTION 5

STREET & DRAINAGE
DETAILS (SHEET 4 OF 4)

PROJECT NO: 1636-11996

DESIGNED BY: MRC

DRAWN BY: DPG/BE

CHECKED BY: JAB

NOTICE:
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SUBDIVISION DEVELOPMENT ON THE AQUA WSC SYSTEM:

1. The developer shall not start construction until the plans have been approved by Aqua's Engineer. All submitted plans shall be by a Professional Engineer registered in the State of Texas. Hydraulic parameters necessary to provide service to the development shall be obtained from Aqua's Engineer.
2. Prior to beginning of any construction, the developer's contractor shall verify horizontal and vertical locations of utilities which will either be connected to or crossed. The locations of existing facilities shown on the plans are based on available records and field survey data. If conflicts are discovered between proposed and existing utilities or if existing utilities are different from that shown on the plans, then it shall be the contractor's responsibility to notify the affected utility before proceeding with any construction. the contractor shall provide a solution for conflicts and shall be responsible for resolving all conflicts at his expense.
3. No services shall be along rear lot lines except for end lots on a street where the rear lot line joins the side street line.
4. Meter boxes shall be set as close to R.O.W. (¢) as possible, with no part of box within R.O.W. Meter boxes shall be level from side to side and no more than 1/4"/ft. slope from front to back (or back to front). Grading in P.U.E. around meter box shall be 3:1 maximum and shall blend to other utility appurtenances without abrupt elevation changes.
5. All water lines shall be in easements and not street R.O.W. on assignment as per the typical utility plan on shown on Sheet 2 of these standard details. All water mains, meters, valves, hydrants, and other appurtenances shall be placed within these easements except for necessary road crossings.
6. Where side-lot P.U.E. are required, they shall be a minimum of 20' wide, with at least 10' on each side of the lot line.
7. All subdivisions shall contain looped water lines when possible and provisions for looping water lines through adjacent subdivisions when developed.
8. Dead-end lines on cul-de-sacs shall be as short as practical. If long streets with cul-de-sacs are used, provisions shall be made for looping the lines by using side-lot P.U.E.s.
9. Unless normal application procedures are followed and the appropriate fees are paid, acceptance of a subdivision's water distribution system for operation and maintenance by Aqua will not guarantee water availability for any particular applicant.
10. The developer shall provide a 12-month warranty on all materials and workmanship and three sets of "as-built" plans at a scale of 1"=200' minimum prior to acceptance of the system by Aqua.
11. Aqua will attempt to provide water to each and all applicants on a non-discriminatory basis.
12. The developer shall obtain a signed and sealed certificate by the developer's engineer that all installation was in accordance with the approved plans and specifications. The same procedure shall be followed for disinfection and pressure testing the installed lines. Without the documents for these three phases, Aqua will not accept the system for maintenance and operation, unless the developer gives a ten-year written workmanship and materials guarantee with suitable bond or deposit in escrow. The suitability of the bond or deposit shall be determined by Aqua.
13. All facilities, equipment, appurtenances, etc., of the water system shall be in accordance with the standards, requirements, and/or specifications of the American Water Works Association (AWWA) and the Texas Commission on Environmental Quality (TCEQ).
14. Minimum fire hydrant spacing shall be 500 feet unless a more stringent separation is required by the Emergency Services District (ESD) serving the development.

TEMPORARY EROSION AND SEDIMENTATION CONTROL:

1. Contractor shall install all temporary erosion and sedimentation controls prior to any other site work (clearing, grubbing, excavation, etc.)
2. Placement of temporary erosion and sedimentation controls shall be in accordance with the erosion and sedimentation control plan.
3. Any major variation in materials or locations of controls or fences from those shown on the plans will require a revision and must be approved by the engineer. Minor changes to be made as field revisions to the temporary erosion and sedimentation control plan may be required by the engineer during construction to correct control inadequacies.
4. Contractor is required to inspect the controls and fences at weekly intervals and after significant rainfall events to ensure that they have not been substantially disturbed and are functioning properly. Contractor is responsible for maintenance of controls and shall immediately make any necessary repairs to damaged areas. Silt accumulation at controls must be removed when the depth reaches six (6) inches.
5. Prior to final acceptance, haul roads and waterway crossings constructed for temporary contractor access must be removed, accumulated sediment removed from the waterway and the area restored to the original grade and revegetated. All land clearing debris shall be disposed of in approved spoil disposal sites in accordance with federal, state and local regulations.
6. All work must stop if a void in the rock substrate is discovered which is one square foot in total area or blows air from within the substrate and/or constantly receives water during any rain event. It shall be the responsibility of the contractor to immediately contact the engineer for further investigation and to determine any necessary course of action.
7. A minimum of four (4) inches of top soil shall be placed in all drainage channels (except rock) and between the curb/edge of pavement and the right-of-way/property line.
8. In erodible areas left bare and unworn for four weeks or longer, a temporary grass or mulch cover shall be provided. If temporary seeding or mulch is impractical, temporary terraces or berms perpendicular to the slope shall be used.
9. Erosion and sedimentation controls to be installed or maintained in a manner which does not result in soil buildup within a tree dripline.
10. Limits of temporary staging, storage and spoil areas shall be located within approved sites. Temporary erosion and sedimentation control measures shall be places at each site. Each site is subject to approval by the engineer.
11. Vehicles used for construction shall be inspected for tracking control. If necessary, wheels shall be manually scraped or washed (if water is available) before driving on any roadway.
12. Contractor shall prevent blowing and movement of dust from exposed soil surfaces.
13. Contractor shall be responsible for the maintenance of each temporary erosion and sedimentation control measure, device and scheme being used on the project and shall provide additional silt fence for any off-site discharges of silted water from any excavation.

VEGETATION:

1. Contractor to install and maintain tree/natural area protective fencing prior to any site preparation work (clearing, grubbing, grading, or excavation).
2. All planting shall be done between May 1 and September 15 except as specifically authorized in writing. If planting is authorized to be done outside the dates specified, the seed shall be planted with the addition of winter fescue (Kentucky 31) at a rate of 100lb/acre. Grass shall be common Bermuda grass, hulled, minimum 82% pure live seed. All grass seed shall be free from noxious weed, grade "a" recent crop, re-cleaned and treated with appropriate fungicide at time of mixing. Seed shall be furnished in sealed, standard containers with dealer's guaranteed analysis.
3. Planted areas are to be irrigated or sprinkled in a manner that will not erode the topsoil but will sufficiently soak the soil to a depth of six (6) inches. Irrigation is to occur at 10-day intervals during the first two months to insure germination and establishment of the grass. Rainfall occurrences of 1/2 inch or greater to postpone the watering schedule one week.
4. Restoration of grass to be acceptable when the grass has grown at least 1-1/2 inches high with 95% coverage, provided no bare spots larger than 25 square feet exist.
6. To avoid soil compaction, contractor shall not allow vehicular traffic, parking, or storage of equipment or materials in tree dripline areas.
7. Where a fence is closer than four (4) feet to a protected tree trunk, protect the trunk with strapped-on planking to a height of eight (8) feet (or to the limits of lower branching) in addition to the fencing.
8. Trees to be removed in a manner which does not impact trees to be preserved.
9. Any root exposed by construction activity to be pruned flush with the soil. Backfill root areas with good quality topsoil as soon as possible. If exposed root areas are not backfilled within two days, cover them with organic material in a manner which reduces soil temperature and minimizes water loss due to evaporation.
10. Contractor to prune vegetation to provide clearance for structures, vehicular traffic, and equipment before damage occurs (ripping of branches, etc.). All finished pruning to be done according to recognized, approved standards of the industry (reference the "national arborist association pruning standards for shade trees").
11. Where there is to be an approved grade change, impermeable paving surface, tree well, or other such site development immediately adjacent to a protected tree, erect the fence approximately two to four feet (2'-4') behind the area in question.

GENERAL CONSTRUCTION:

1. All construction shall be in conformance with the current International Building Code, National Electrical Code, American Concrete Institute 318-05 Building Code Requirements for Structural Concrete, and American Water Works Association standards.
2. Blasting is not allowed on this project.
3. Any pavement, curbs, sidewalks, etc. damaged or removed during construction will be replaced by the contractor at the contractor's expense.
4. The contractor shall give Owner and Engineer a minimum of 72 hours notice before beginning construction.
5. Verify location of existing utilities prior to construction of the facilities proposed in this contract. Take care to avoid damage to existing utilities; repair any utility damaged in the course of construction of any part of this contract to its original operating condition immediately, with repair crews working 24 hours per day until damage is repaired. There shall be no separate pay for repair work.
6. No burning of trees, brush, rubbish vegetation or other objectionable material will be allowed on the project site. All cleared and grubbed material shall be disposed of in a manner satisfactory to the owner and in conformance with all federal, state and local rules and regulations.
7. Before beginning construction, notify the engineer of any discrepancies or conflicts found in drawings and/or field dimensions.
8. Other construction contracts may be ongoing in the project area. Coordinate activities with others to insure minimal conflicts. Afford utility and other contractors reasonable opportunity for access and execution of work.
9. Maintain drainage of the site during all phases of construction. Do not block drainage from adjacent areas nor add flow to adjacent areas.
10. After construction is complete, the ground cover in all disturbed areas shall be re-established (returned to its natural or original state). Reestablishment may include the installation of 4" of top soil and/or sodding with common Bermuda grass seed at the direction of the engineer. Final payment will not be made until ground cover has been re-established.
11. All structures holding a liquid shall be guaranteed to be leakproof.
12. Coordinates shown for structure locations are referenced to the outside edge of concrete or to the centerline of the structure.
13. Contractor shall give 48 hours notice to the following persons prior to commencement of work:
    Rory Mars, Aqua Water Supply Corporation 512-304-5583
    Samuel Davis, Steger Bizzell 512-930-9412
14. Contractor shall notify utilities having facilities in the area at least 48 hours prior to commencing construction. The utility companies may include, but are not limited to, electric, telephone, cable, gas, cable television, water, wastewater and storm sewer.
15. All excavation shall be unclassified regardless of material encountered.
16. Contractor shall make subsurface investigations as deemed necessary. No additional payment will be made for water, sand, gravel or other unstable conditions encountered in excavations.
17. Detour of traffic around work activities, maintenance of traffic control signs, and flag men are the contractor's responsibility. No separate payment will be made.
18. Contractor shall be responsible for restoring all fences (whether shown on the plans or not) in the work area to their original condition prior to completion of this contract.
19. Contractor shall preserve all construction stakes, survey control stakes, marks, etc. Any construction stakes, survey control stakes, marks, etc. disturbed, destroyed or otherwise made unusable by the contractor or his employees or subcontractors shall be replaced at the contractor's expense.
20. Contractor shall implement a trench and excavation system, program, and/or procedure for the proposed project. The implementation of this system, program and/or procedure shall provide for the adequate trench and excavation safety protection that complies with, as a minimum, OSHA standards for trench excavations. Specifically, the contractor and/or contractor's independently retained employee or safety consultant shall implement a trench and excavation safety program in accordance with OSHA standards governing the presence and activities of individuals working in and around trench excavation.
21. Disposal of all surplus materials shall be in conformance with all federal, state and local regulations. No separate payment will be made.
22. No excess excavated material shall be deposited in low areas or along natural drainageways.
23. No above and/or below ground temporary fuel storage facilities to be stored on the project site.
24. Intentional release of vehicle or equipment fluids onto the ground is not allowed. Contaminated soil resulting from accidental spill to be removed and disposed of properly.
25. If contractor places excess material in areas without written permission, the contractor shall be responsible for all damage resulting from such fill and shall remove said material at his own expense.
26. Contractor shall be responsible for cleaning up and properly disposing of all spilled pollutants, including oil, paint, fuels, antifreeze, solvents, etc. Contractor shall keep accurate records (such as receipts, copies of analytical results, etc.) indicating proper disposal of spilled materials. Contractor shall be responsible for insuring that all discharges from the construction area are in compliance with all applicable regulations. No substance shall be dumped or leaked onto the ground or allowed to runoff from the construction site that might cause pollution.
27. Equipment shall be cleaned in a manner that does not create any discharge of cleaning agents, paint, oil or other pollutants to a storm sewer or waterway.
28. Any trash or debris must be contained on site and disposed of in a manner to prevent wind or rain from carrying it off-site into a storm drain or waterway.
29. Before completion of this project, all roadways, slopes, ditches and berms shall be restored to their original condition.
30. Contractor shall provide all required sheeting and shoring to protect existing utilities and structures.
31. Proposed contours shown represent proposed finished grade elevations. Contractor shall maintain smooth and continuous transitions to blend proposed and existing contours.
32. The contractor shall maintain access to driveways at all times except when construction activities actually obstruct the driveways. The contractor shall notify the Owner of the need to close the driveways five (5) days prior to the actual date of closure. All campus roads, drives, and fire lanes as well as all sidewalks and pedestrian routes, other than those specifically indicated to be in the Contractor's area of control, must be kept open at all times. The Contractor shall proactively schedule and obtain security clearance for all significant material deliveries, vehicle traffic, street closures, cranes, concrete trucks, etc., through and around the campus and Site.
33. Dimensions provided for equipment anchorage, controlling clearances and unit piping must be verified by the contractor through the specific equipment manufacturer prior to construction.
34. Compatibility of accommodation and provision for equipment supported on or from structural components shall be verified as to size, dimensions, clearances, accessibility, weights, and reaction with the equipment for which the accommodation has been designed prior to submission of shop drawings and submittal data for each equipment and for structural components. The engineer shall be notified of differences and conflicts for review, revision and approval.
35. The details designated as "typical details" apply in general to the drawings in all areas where conditions are similar to those described in the details.

JOB SITE SAFETY:

1. Contractor shall be responsible for maintaining clearances required by the National Electrical Safety Code, Occupational Safety and Health Administration (OSHA) regulations and Texas State Law (Vernon's Annotated Texas Statutes, Article 1436 (c) pertaining to clearances when working in close proximity to overhead electrical lines and equipment. All cost incurred because of failing to comply with the required clearances will be charged to the contractor.
2. All construction operations shall be accomplished in accordance with all applicable regulations of the United States Occupational Safety and Health Administration (OSHA) and in compliance with Texas House Bills 662 and 665.

WATER LINE CONSTRUCTION:

1. Water mains shall be SDR-21 PVC or better.
2. Ductile iron fittings shall be used on all lines 2" and larger.
3. All above ground piping and appurtenances 3" and larger shall be threaded, flanged or welded. No mechanical joint fittings shall be used above ground.
4. All piping shall be constructed to resist horizontal and vertical thrust. Horizontal blocking shall be placed against undisturbed earth with minimum dimensions shown in the horizontal blocking table. Vertical thrust will require that the contractor weld joints in accordance with and under supervision of pipe manufacturer for concrete steel cylinder pipe.
5. All water lines crossing roads, including service lines, shall be encased.
6. Where new roads cross existing aqua water lines, the existing line(s) shall also be encased.
7. Casing pipe shall be SDR-26 PVC or Steel. Reference the Casing Schedule (on Water Line Appurtenances Standard Details, Sheet 02 of 03) for steel casing thickness.
8. Jointed carrier pipe shall have all joints restrained by integral bell restraint (Certa-Lok Yelomine or approved equal).
9. Unless otherwise noted, all buried iron pipe and fittings shall be polyethylene wrapped (8 mil) cement mortar lined ductile iron pipe with bituminous asphaltic exterior coating.
10. All pipe deflections shall be per manufacturer's recommendation.
11. All water main tees and crosses shall have a gate valve placed so that the centerline of the valve is 36" from the centerline of the tee or cross.
12. There shall be 2 mainline gate valves at every mainline tee and 3 mainline gate valves at every mainline cross.
13. Fire hydrants shall be only on 6" & larger water mains & shall also be installed as flushing valves at the end of all dead-end lines (6" & larger) & at low points of water main (6" & larger). Position fire hydrant on the property side of the water line with pumper nozzle oriented toward street.
14. Unless otherwise noted, service pressure for flanged ductile iron pipe and fittings shall be 250 psi.
15. Provide buried valves with mechanical joint end connections, nut operators, extension stems and valve boxes with cover, unless otherwise noted on the plans.
16. All underground ductile iron fittings to be mechanical joint unless otherwise specified.
17. When necessary, make vertical transitions or furnish and install vertical bends and necessary fittings at no extra cost. Do not deflect pipe joints through angle greater than recommended by pipe manufacturer.
18. Water mains shall have a minimum cover of 30" unless otherwise noted.
19. Provide adequate thrust blocking and harnessing on all piping to withstand test pressures.
20. Underground gas, electrical and telephone lines may exist in the area. The developer's contractor shall contact the respective utility companies 48 hours prior to excavating in the area. The contractor shall take extra caution not to unnecessarily disrupt services of existing utilities. Trench safety and erosion control regulations and requirements shall be enforced in accordance with the applicable specifications.
21. Barricades in accordance with TxDOT standards shall be erected where required during construction to provide safety and convenience for the public.
22. Any existing pavement damaged or removed during construction shall be repaired or replaced by the developer's contractor at his expense to the satisfaction of the affected party.
23. All facilities, equipment, appurtenances, etc., of the water system shall be in accordance with the standards, requirements, and/or specifications of the American Water Works Association (AWWA) and the Texas Commission on Environmental Quality (TCEQ).
24. Pursuant to 30 TAC §290.44(a)(5), the hydrostatic leakage rate shall not exceed the amount allowed or recommended by the most current AWWA formulas for PVC pipe, cast iron and ductile iron pipe.
25. The hydrostatic leakage rate for polyvinyl chloride (PVC) pipe and appurtenances shall not exceed the amount allowed or recommended by formulas in America Water Works Association (AWWA) Standard C-605 as required in 30 TAC §290.44(a)(5). The allowable hydrostatic leakage rate shall be based on the following formula:

$$Q = \frac{LD*sqrt(P)}{148{,}000}$$

Where:
Q = the quantity of makeup water in gallons per hour,
L = the length of the pipe section being tested, in feet,
D = the nominal diameter of the pipe in inches, and
P = the average test pressure during the hydrostatic test in pounds per square inch (psi).

The hydrostatic leakage rate for ductile iron (DI) pipe and appurtenances shall not exceed the amount allowed or recommended by formulas in America Water Works Association (AWWA) Standard C-600 as required in 30 TAC §290.44(a)(5). The allowable hydrostatic leakage rate shall be based on the following formula:

$$L = \frac{SD*sqrt(P)}{148{,}000}$$

Where:
L = the quantity of makeup water in gallons per hour,
S = the length of the pipe section being tested, in feet,
D = the nominal diameter of the pipe in inches, and
P = the average test pressure during the hydrostatic test in pounds per square inch (psi).

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APPROVED BY: DATE

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SERVICES >>ENGINEERS >>PLANNERS >>SURVEYORS

AQUA GENERAL NOTES
for
AQUA WATER SUPPLY CORPORATION
BASTROP, TEXAS

Project No: 14900
SHEET 01 of 03

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HARVEST RIDGE
SECTION 5

AQUA DETAILS
(SHEET 1 OF 3)

PROJECT NO: 1636-11996
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DRAWN BY: DPG/BE
CHECKED BY: JAB

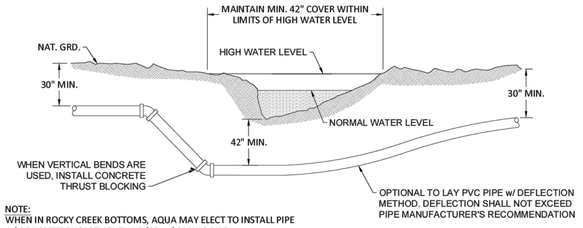
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SHEET 58 OF 61

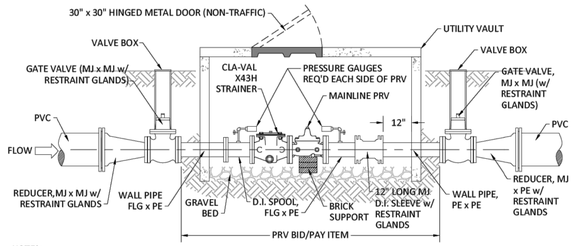
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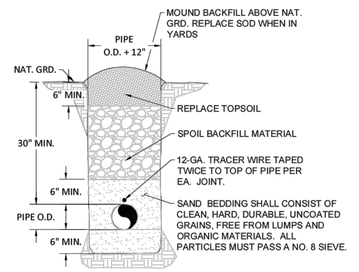
NOTE:
WHEN IN ROCKY CREEK BOTTOMS, AQUA MAY ELECT TO INSTALL PIPE w/ CONCRETE ENCASEMENT AND/OR w/ CASING PIPE.

CREEK CROSSING DETAIL
N.T.S

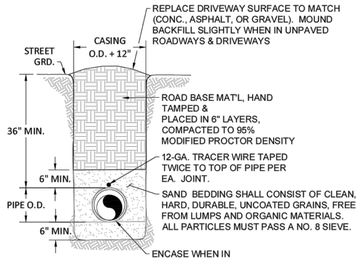


NOTES:
1. PRESSURE REDUCING VALVE & ALL ASSOCIATED FITTINGS & GATE VALVES SHALL BE SIZED BASED ON MAX. FLOW RATE AND MAX. ACCEPTABLE HEAD LOSSES.
2. PRV VAULT SHALL BE PRECAST, PRE-ENGINEERED, 5' x 7' STANDARD UTILITY VAULT (HILL COUNTRY CONCRETE PRODUCTS OR EQUAL) w/NOMINAL 4" THICK WALLS UP TO 6' DEPTH. 6" THICK WALLS REQ'D. FOR DEPTHS OF 6' TO 10'.
3. PRESSURE REDUCING & SUSTAINING CHECK VALVE SHALL BE "CLAYTON # 92G-02 OR EQUAL.
4. ALL PIPING & FITTINGS WITHIN PRV BID/PAY ITEM SHALL BE DUCTILE IRON AS PER SPECS.
5. PRESSURE GAGES SHALL BE 2 1/2" DIA. MARSHALLTOWN PRESSURE GAGE #23 OR EQUAL (0-150 psi) W/ TWO 1/4" NIPPLES , ONE 90° 1/4" ELL & ONE 1/4" GAGE COCK ON EACH SIDE OF PRESSURE REDUCING VALVE.
6. ALL 1/4" TUBING SHALL BE STAINLESS STEEL OR BRASS.

MAIN LINE PRV DETAIL
N.T.S



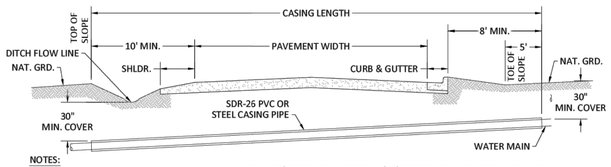
TRENCH AND BACKFILL DETAILS
STANDARD BACKFILL
N.T.S.



NOTE:
CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTING ANY SUBSIDENCE IN BACKFILL FOR A PERIOD OF ONE YEAR AFTER FINAL ACCEPTANCE.

TRENCH AND BACKFILL DETAILS
ROADWAY BACKFILL
N.T.S.

SEE CITY OF ELGIN MODIFIED DETAIL D-7 ON SHEET 57 FOR BACKFILL OF WATER MAINS IN THE STREET ONLY.

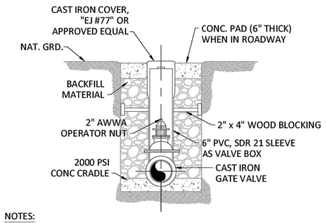


NOTES:
1. CASING SHALL EXTEND TO TOP OF BACK SLOPE OF ROAD'S DITCH IN CUT AREAS & 5' BEYOND TOE OF SLOPE IN FILL AREAS.
2. THE CASING SHALL NOT TERMINATE LESS THAN 8' BEHIND BACK OF THE CURB OR LESS THAN 10' BEYOND EDGE OF PAVEMENT.
3. ALL HIGHWAYS (FED., STATE, F.M., ETC.) SHALL BE BORED & ENCASED W/STEEL CASING (SEE CASING SCHEDULE).
4. ALL PAVED COUNTY ROADS & SUBDIVISION ROADS MAY BE BORED & ENCASED WITH PVC CASING.
5. UNPAVED ROADS MAY BE OPEN CUT & ENCASED UPON APPROVAL BY PROPER AUTHORITIES.
6. PRESSURE GROUT SHALL BE INSTALLED BETWEEN CASING PIPE & BORED HOLE.
7. ALL CASING PIPE SHALL HAVE A MIN. COVER OF 30".
8. ALL ROAD CROSSINGS SHALL BE SUBJECT TO APPROVAL BY TxDOT, COUNTY OR OTHER PROPER AUTHORITIES.
9. ALL ENCASEMENTS, BORED OR OPEN CUT, SHALL HAVE SPACERS ON THE WATER MAIN PIPE.
10. JOINTED CARRIER PIPE SHALL HAVE ALL JOINTS RESTRAINED BY INTEGRAL BELL RESTRAINT (CERTA-LOK YELOMINE OR APPROVED EQUAL).

ROAD CROSSING DETAIL
N.T.S

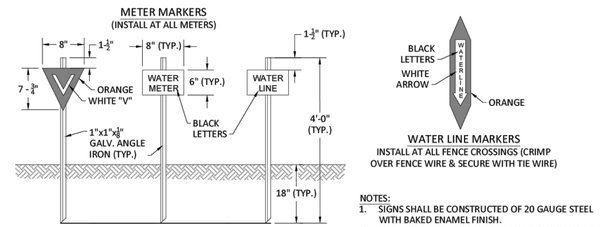
CASING SCHEDULE
SMOOTH STEEL CASING w/ MIN. YIELD STRENGTH OF 35,000 PSI

WATER LINE SIZE	CASING SIZE	CASING WALL THICKNESS
2"	4"	1/4"
3"	6"	1/4"
4"	8"	1/4"
6"	10"	1/4"
8"	12"	1/4"
10"	16"	5/16"
12"	18"	5/16"
14" & 16"	24"	7/16"
18"	30"	1/2"
20"	30"	1/2"
24"	36"	9/16"
27"	36"	9/16"
30"	42"	9/16"
36"	48"	5/8"

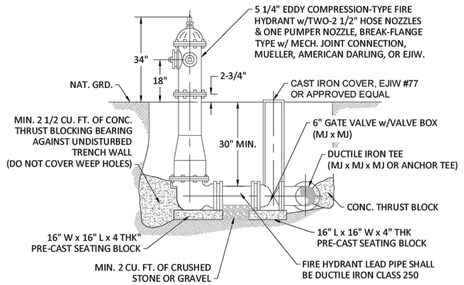


NOTES:
1. GATE VALVES SHALL BE MUELLER OR AMERICAN DARLING, EQUIPPED WITH RESILENT SEAT & HAVE MECH. JOINTS UNLESS SPECIFIED OTHERWISE. MECH. JOINTS SHALL BE EQUIPPED WITH RESTRAINT GLANDS.
2. 2" GATE VALVES SHALL BE MUELLER ONLY.

GATE VALVE DETAIL
N.T.S

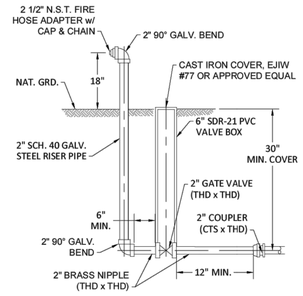


NOTES:
1. SIGNS SHALL BE CONSTRUCTED OF 20 GAUGE STEEL WITH BAKED ENAMEL FINISH.
2. THE BACKGROUND COLOR FOR THE SIGNS SHALL BE "OMAHA" ORANGE.
3. THERE SHALL BE NO SEPARATE BID ITEM FOR MARKERS.
4. ALL MARKERS TO BE INCLUDED IN BID PRICE FOR VALVES, METERS, WATER LINES AND ETC.



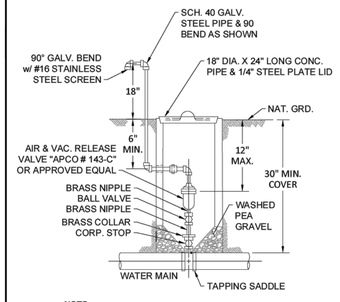
NOTES:
1. FIRE HYDRANT SHALL BE MUELLER, AMERICAN-DARLING OR EJIW.
2. FIRE HYDRANTS SHALL BE INSTALLED ON LINES 6" & LARGER ONLY.
3. FIRE HYDRANT (OR FLUSH VALVE) SHALL BE INSTALLED ON ALL DEAD-END LINES & AT LOW POINTS IN THE WATER MAIN.

FIRE HYDRANT
N.T.S.



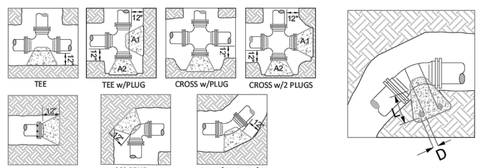
NOTES:
1. FLUSH VALVES SHALL BE INSTALLED ON LINES 4" & SMALLER ONLY.
2. FLUSH VALVE (OR FIRE HYDRANT) SHALL BE INSTALLED AT THE END OF ALL DEAD-END LINES & AT LOW POINTS IN THE WATER MAIN).
3. FLUSH VALVES SHALL BE SET NEXT TO FENCE/PROPERTY LINE OR R.O.W. LINE W/GALV. RISER PIPE IN FENCE LINE WHERE POSSIBLE. POSITION OUTLET TOWARDS STREET FOR DRAINAGE PURPOSES.

FLUSH VALVE
N.T.S.



NOTE:
AIR RELEASE VALVE SHALL BE SET NEXT TO FENCE OR PROPERTY AND/OR R.O.W. LINE W/GALV. RISER PIPE IN FENCE LINE. AIR RELEASE VALVES SHALL BE INSTALLED AT OR NEAR HIGH POINTS IN THE WATER MAIN (SEE PLANS).

AIR RELEASE VALVE DETAIL
N.T.S



CONCRETE THRUST BLOCK SCHEDULE

FITTING SIZE (INCHES)	TEE, CROSS W/ PLUG, OR DEAD END	90° BEND	TEE w/PLUG OR CROSS w/ 2 PLUGS		45° BEND	22-½° BEND	11-¼° BEND	VERTICAL BENDS: BEND ANGLE VOLUME IN CUBIC YARDS			REBAR SIZE		
			A1	A2				45°	22-½°	11-¼°	SIZE	L (IN.)	D (IN.)
4 OR SMALLER	1.6	2.3	1.6	1.6	1.2	0.6	0.3	0.7	0.4	0.2	#4	15	4
6	3.4	4.8	3.4	3.4	2.6	1.3	0.7	1.5	0.8	0.4	#5	18	5
8	5.8	8.2	5.8	5.8	4.4	2.3	1.1	2.5	1.4	0.7	#5	18	5
10	8.7	12.3	8.7	8.7	6.7	3.4	1.7	3.8	2.1	1.0	#5	18	5
12	12.3	17.4	12.3	12.3	9.4	4.8	2.4	5.4	2.9	1.5	#5	18	5
14	16.5	23.4	16.5	16.5	12.7	6.5	3.2	7.2	3.9	2.0	#5	18	5
16	21.4	30.3	21.4	21.4	16.4	8.4	4.2	9.3	5.1	2.6	#5	18	5
18	26.9	38.0	26.9	26.9	20.6	10.5	5.3	FOR VERTICAL BENDS GREATER THAN 16", USE RESTRAINT JOINTS.					
20	33.0	46.6	33.0	33.0	25.2	12.9	6.5						
24	47.1	66.5	47.1	47.1	36.0	18.4	9.2						

NOTES:
1. ALL CONCRETE THRUST BLOCKS SHALL BEAR AGAINST UNDISTURBED TRENCH WALLS. DISTANCE FROM PIPE FITTINGS TO TRENCH WALL SHALL BE A MIN. OF 12" AT THRUST BLOCK.
2. KEEP CONCRETE CLEAR OF ALL JOINTS & ACCESSORIES. INSTALL 12-MIL POLYETHYLENE SHEETING AROUND FITTINGS. SECURE SHEETING ENDS TO PREVENT INFILTRATION OF DIRT BETWEEN SHEETING AND PIPE FITTINGS PRIOR TO POURING THRUST BLOCK. PROTECT MECHANICAL JOINTS, FOLLOWERS, AND BOLTS FROM CONCRETE WITH TEMPORARY FORMS AND THE POLYETHYLENE SHEETING.
3. ALL CONCRETE THRUST BLOCKS SHALL CONSIST OF A MIXTURE OF 1:2:6 OF CEMENT TO WASHED SAND TO GRAVEL AND SHALL BE CURED FOR A MIN. OF 24 HOURS.
4. CONCRETE SHALL HAVE 2500 PSI MIN. STRENGTH AT 28 DAYS.
5. ALL JOINTS SHALL BE TEMPORARILY JACKED WHEN POURING THRUST BLOCKS.
6. CONCRETE THRUST BLOCKS SHALL APPLY TO ALL PIPE FITTINGS.
7. APPLY TWO COATS OF BITUMASTIC PAINT TO REBAR BEFORE ASSEMBLY.
8. CALCULATIONS BASED ON TEST PRESSURE OF 150 PSI, WEIGHT OF CONCRETE OF 150 LBS PER CU. FT., SAFETY FACTOR OF 1.5, AND SOIL STRENGTH OF 2000 PSF. FOR OTHER PRESSURES AND SOIL STRENGTHS, AREAS AND VOLUMES MUST BE SIZED ACCORDINGLY.

THRUST BLOCKING DETAILS
N.T.S.

AQUA
WATER SUPPLY CORPORATION

NO.	REVISION	BY	DATE

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AQUA STANDARD DETAILS (1 OF 2)
for
AQUA WATER SUPPLY CORPORATION
BASTROP, TEXAS

Project No: 14900

SHEET 02 of 03

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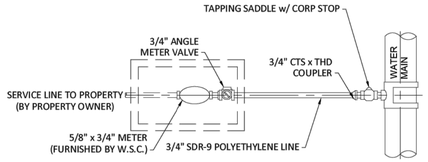
HARVEST RIDGE SECTION 5

AQUA DETAILS (SHEET 2 OF 3)

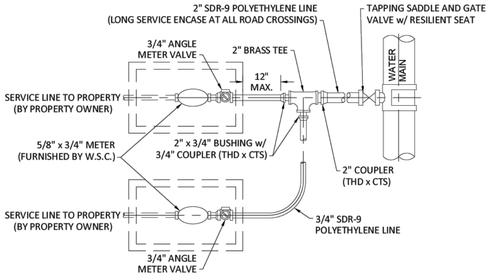
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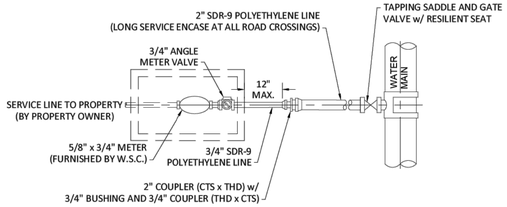
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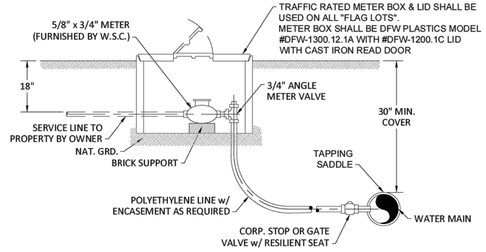
SINGLE SHORT SERVICE DETAIL - PLAN VIEW



DUAL SHORT AND LONG SERVICE DETAIL - PLAN VIEW



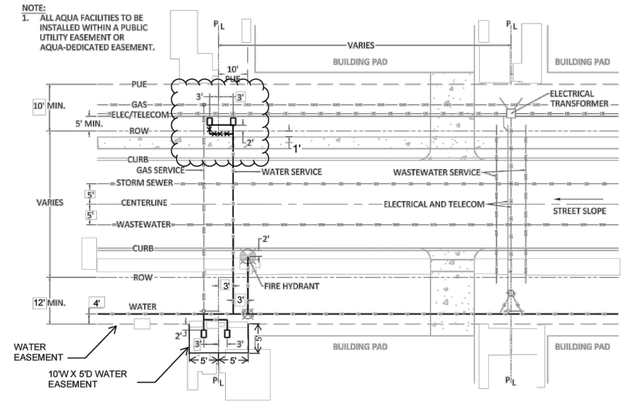
SINGLE LONG SERVICE DETAIL - PLAN VIEW



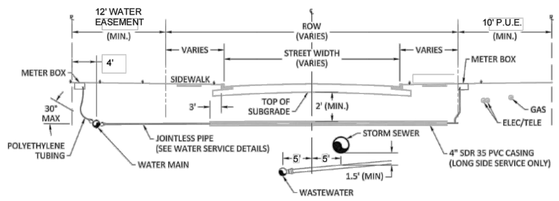
RESIDENTIAL WATER METER SECTION

NOTES:
1. ALL SERVICES CROSSING ROAD (LONG SERVICE) SHALL BE 2" SDR-9 POLYETHYLENE TUBING WITH 4" SDR-26 PVC ENCASEMENT.
2. ENCASEMENT PIPE SHALL BE FULLY RESTRAINED.
3. SERVICE BRASS SHALL BE MUELLER OR FORD METER BOX COMPANY WITH 300 PSI WORKING PRESSURE.
4. TRAFFIC RATED METER BOX & LID SHALL BE USED ON ALL "FLAG LOTS".
5. METER BOX SHALL BE DFW PLASTICS MODEL #DFW1300-1 BODY WITH #DFW1200-1C LID (CAST IRON READER DOOR).

RESIDENTIAL METER DETAILS
N.T.S.



MODIFIED
TYPICAL UTILITY PLAN
N.T.S.



MODIFIED
TYPICAL UTILITY PROFILE
N.T.S.

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AQUA STANDARD DETAILS (2 OF 2)
for
AQUA WATER SUPPLY CORPORATION
BASTROP, TEXAS

Project No: 14900

SHEET 03 of 03

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HARVEST RIDGE
SECTION 5

AQUA DETAILS
(SHEET 3 OF 3)

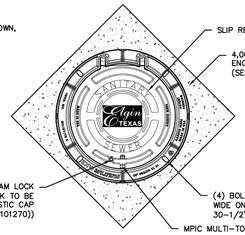
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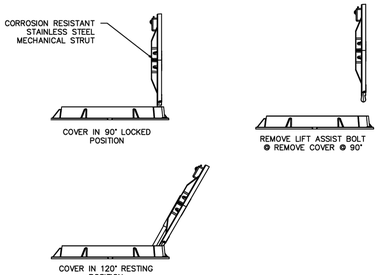
H:\PROJECTS\1636 - BROHN HOMES\11996 - HARVEST RIDGE - SEC 5\CAD\SHEETS\11996-C-DETL.DWG DATE: 1/7/2026 11:24:17 AM BY: DPEREZ-GUERRA

NOTE:
1. CAST IRON LIDS MAY BE SUBMITTED IN LIEU OF SHOWN, UPON CITY APPROVAL.



SLIP RESISTANT SURFACE
4,000 PSI CONCRETE ENCASEMENT (SEE SS-3)
STAINLESS STEEL CAM LOCK (NOTE: CAM LOCK TO BE COVERED WITH PLASTIC CAP (LH00101270))
(4) BOLT SLOTS 1" WIDE ON 36" TO 30-1/2" B.C.
MPIC MULTI-TOOL PICKBAR

MANHOLE DETAIL

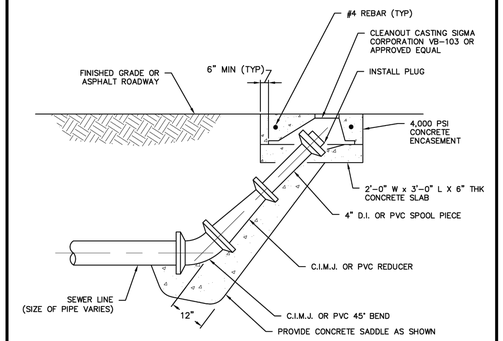


DATE ISSUED:	MAY 2016		
REV	DATE	BY	
1	3/5/18	KBP	
2	9/12/24	KBP	

THE CITY OF ELGIN

TITLE: 32" ERGO XL ASSEMBLY CITY OF ELGIN MOLD

SCALE: N.T.S. DRAWING No. SS – 1

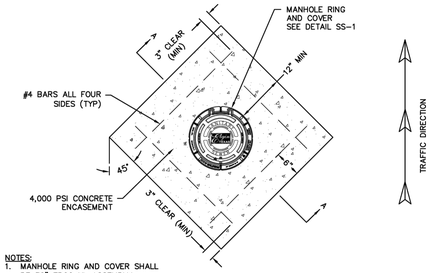


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THE CITY OF ELGIN

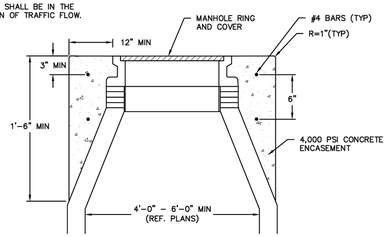
TITLE: CLEANOUT DETAIL

SCALE: N.T.S. DRAWING No. SS – 2



PLAN VIEW

NOTES:
1. MANHOLE RING AND COVER SHALL BE 32" ERGO XL ASSEMBLY UNLESS OTHERWISE STATED IN PLANS.
2. DIAMOND SHALL BE IN THE DIRECTION OF TRAFFIC FLOW.



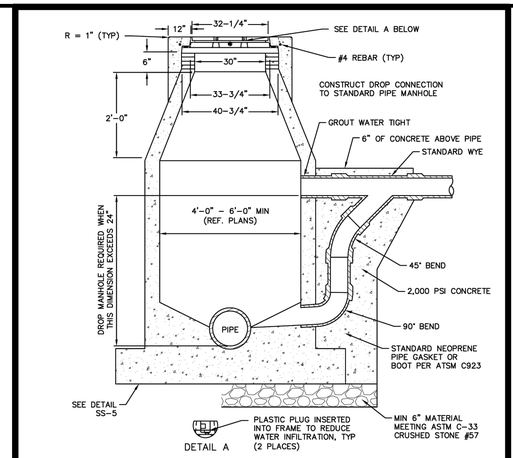
SECTION A–A

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1	3/5/18	KBP	
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THE CITY OF ELGIN

TITLE: MANHOLE ENCASEMENT DETAIL

SCALE: N.T.S. DRAWING No. SS – 3



DETAIL A

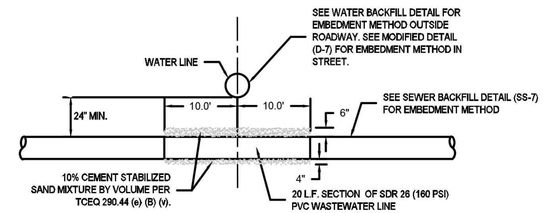
NOTES:
1. CONTRACTOR SHALL GROUT THE INTERNAL AND EXTERNAL JOINTS FOR EACH RING SECTION AND PIPE PENETRATION.
2. DROP SECTION OF PIPE SHALL BE SAME DIAMETER AS SEWER MAIN.
3. PER TCEQ, CHAPTER 217, SECTION 55.L.2.H., "A WASTEWATER COLLECTION SYSTEM PIPE ENTERING A MANHOLE MORE THAN 24 INCHES ABOVE AN INVERT MUST HAVE A DROP PIPE."
4. MANHOLE RING AND COVER SHALL BE 32" ERGO XL ASSEMBLY UNLESS OTHERWISE STATED IN PLANS.
5. ALL TESTING SHALL BE IN ACCORDANCE WITH TCEQ, CHAPTER 217.
6. INTERIOR SURFACE SHALL BE COATED WITH PROTECTIVE LINER (RAVEN 405 OR APPROVED EQUAL).
7. INTERIOR SURFACE OF EXISTING MANHOLES CONNECTED TO SHALL BE COATED WITH PROTECTIVE LINER (RAVEN 405 OR APPROVED EQUAL) IF APPLICABLE.

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THE CITY OF ELGIN

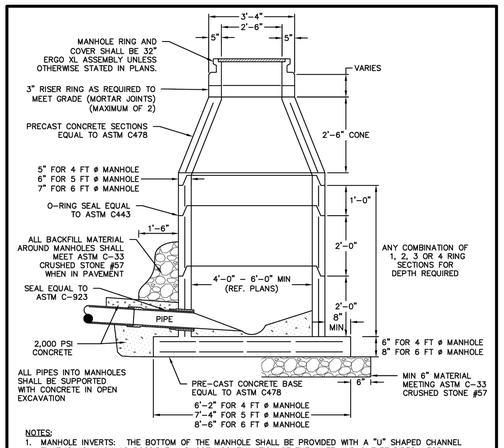
TITLE: SANITARY SEWER DROP MANHOLE

SCALE: N.T.S. DRAWING No. SS – 4



WATER LINE/ WASTEWATER LINE CROSSING DETAIL

N.T.S.



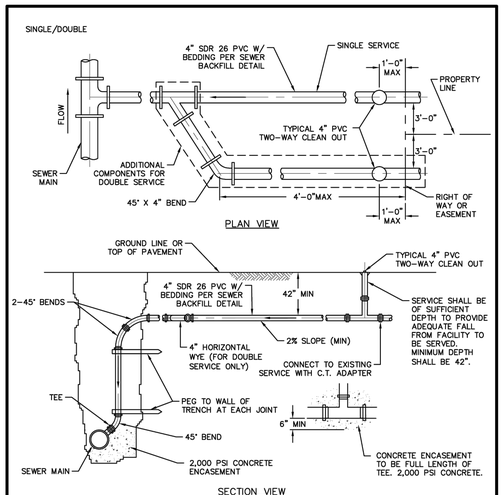
NOTES:
1. MANHOLE INVERTS: THE BOTTOM OF THE MANHOLE SHALL BE PROVIDED WITH A "U" SHAPED CHANNEL THAT IS AS MUCH AS POSSIBLE A SMOOTH CONTINUATION OF THE INLET AND OUTLET PIPES. FOR MANHOLES CONNECTED TO PIPES LESS THAN 15 INCHES IN DIAMETER THE CHANNEL DEPTH SHALL BE AT LEAST HALF THE LARGEST PIPE DIAMETER. FOR MANHOLES CONNECTED TO PIPES 15 TO 24 INCHES IN DIAMETER THE CHANNEL DEPTH SHALL BE AT LEAST THREE FOURTHS THE LARGEST PIPE DIAMETER. IN MANHOLES WITH PIPES OF DIFFERENT SIZES, THE TOES OF THE PIPES SHALL BE PLACED AT THE SAME ELEVATION AND FLOW CHANNELS IN THE INVERT SLOPED ON AN EVEN SLOPE FROM PIPE TO PIPE. THE BENCH PROVIDED ABOVE THE CHANNEL SHALL BE SLOPED AT A MINIMUM OF 0.5 INCH PER FOOT.
2. CONTRACTOR SHALL GROUT THE INTERNAL AND EXTERNAL JOINTS FOR EACH RING SECTION AND PIPE PENETRATION.
3. ALL TESTING SHALL BE IN ACCORDANCE WITH TCEQ, CHAPTER 217.
4. INTERIOR SURFACE SHALL BE COATED WITH PROTECTIVE LINER (RAVEN 405 OR APPROVED EQUAL).
5. INTERIOR SURFACE OF EXISTING MANHOLES CONNECTED TO SHALL BE COATED WITH PROTECTIVE LINER (RAVEN 405 OR APPROVED EQUAL) IF APPLICABLE.

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THE CITY OF ELGIN

TITLE: SANITARY SEWER PRECAST CONCRETE MANHOLE

SCALE: N.T.S. DRAWING No. SS – 5



PLAN VIEW

SECTION VIEW

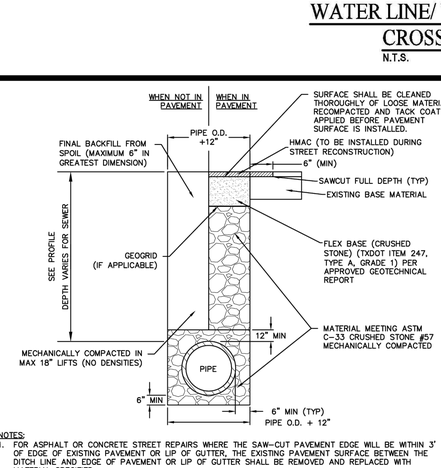
NOTES:
1. SEWER SERVICE SHALL BE REPLACED FROM MAIN TO EXISTING CLEANOUT.
2. SERVICE LINE BACKFILL SHALL BE IDENTICAL TO SEWER MAIN.
3. VERTICAL RISE SECTION SHALL OCCUR OUTSIDE THE LIMITS OF PAVEMENT.
4. 6" SERVICE CONNECTIONS SHALL MATCH THIS DETAIL.
5. NEW CLEANOUTS REQUIRED ON EXISTING SERVICE LINES IF NOT PRESENT WHEN RECONNECTING.
6. CONNECTION TO THE RISER PIPE OF THE CLEANOUT IS STRICTLY FORBIDDEN.

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THE CITY OF ELGIN

TITLE: SANITARY SEWER RESIDENTIAL SERVICE CONNECTION

SCALE: N.T.S. DRAWING No. SS – 6



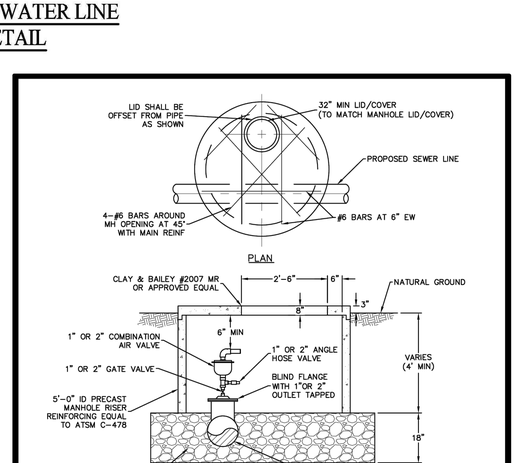
NOTES:
1. FOR ASPHALT OR CONCRETE STREET REPAIRS WHERE THE SAW-CUT PAVEMENT EDGE WILL BE WITHIN 3' OF EDGE OF EXISTING PAVEMENT OR LIP OF GUTTER, THE EXISTING PAVEMENT SURFACE BETWEEN THE DITCH LINE AND EDGE OF PAVEMENT OR LIP OF GUTTER SHALL BE REMOVED AND REPLACED WITH MATERIAL SPECIFIED.
2. FOR STREETS NOT BEING RECONSTRUCTED, SURFACE MATERIALS SHALL BE EQUAL TO MATERIAL REMOVED. THE MINIMUM AMOUNT OF SURFACE MATERIALS SHALL CONFORM TO THE CITY OF ELGIN CONSTRUCTION STANDARDS. EXISTING ASPHALT TO BE SAW CUT.
3. SEWER LINE BACKFILL TYPE SHALL BE DETERMINED BY LIMITS OF PROPOSED STREETS, NOT EXISTING.
4. FOR STREETS BEING RECONSTRUCTED ONLY, CONTRACTOR MAY BACKFILL FINAL 12" WITH COMPACTED SPOIL MATERIAL PRIOR TO STREET EXCAVATION TO ALLOW FOR TRAFFIC FLOW. MATERIAL MUST BE PASSABLE FOR ALL VEHICULAR TRAFFIC.
5. CONTRACTOR SHALL PROVIDE MATERIAL MEETING C-33 CRUSHED STONE #57 FOR BACKFILL OF ALL MATERIALS REMOVED WITHIN THE LIMITS OF THE PROPOSED PAVEMENT, THIS SHALL INCLUDE BUT NOT BE LIMITED TO PIPE TRENCH WIDTH, BENCHING OPERATIONS, ETC. SPOIL MATERIAL WILL NOT BE ACCEPTABLE FOR ANY BACKFILL OPERATIONS UNDER PROPOSED PAVEMENT SECTIONS WITHOUT APPROVAL BY THE ENGINEER AND OWNER.
6. NEW GEOGRID SHALL BE PLACED AND OVERLAPPED 12" BEYOND TRENCH WIDTH IF IT IS PRESENT IN EXISTING SECTION.
7. UTILITY TRENCHES PLACED WITHIN THE STREET OR WITHIN 5' FROM BACK OF CURBS THAT ARE 3' OR MORE IN DEPTH SHALL COMPLY WITH THE R.O.W. DETAIL (FOR PIPE 6" AND LARGER).
8. FLEX BASE THICKNESS VARIES BASED ON STREET CLASSIFICATION. THE MINIMUM THICKNESS OF FLEX BASE SHALL CONFORM TO THE CITY OF ELGIN CONSTRUCTION STANDARDS UNLESS GEOTECHNICAL REPORT REQUIRES MORE.

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THE CITY OF ELGIN

TITLE: SEWER BACKFILL DETAIL

SCALE: N.T.S. DRAWING No. SS – 7



PLAN

SECTION

NOTES:
1. CONTRACTOR SHALL INSTALL COMBINATION AIR VALVE ASSEMBLY AS NEAR AS PRACTICAL TO RIGHT OF WAY OR INSIDE EXISTING UTILITY EASEMENT.
2. CONTRACTOR SHALL DEEPEN WATER MAIN AS NEEDED TO ENSURE TOP OF MANHOLE IS INSTALLED PER THIS DETAIL.
3. FINISHED ASSEMBLY SHALL ACHIEVE A MINIMUM CLEARANCE OF 6" BELOW MANHOLE LID.
4. MAXIMUM DISTANCE FROM THE LID TO TOP OF VALVE SHALL BE 18".
5. EXTERIOR SURFACES OF EXPOSED AIR VENT PIPE AND DI SUPPORT PIPE SHALL BE PAINTED WITH RUST-OLEUM 5200 SYSTEM ACRYLIC, OR EQUAL, PER COATING MANUFACTURER INTRUCTIONS PRIOR TO INSTALLATION.
6. VALVE BODY AND COVER SHALL BE CAST-IRON WITH STAINLESS STEEL AND BRONZE INTERNAL PARTS.
7. END CONNECTIONS SHALL BE NPT.
8. CONTRACTOR SHALL SUPPLY A 6" NIPPLE ON THE EXHAUST PORT.
9. VALVE SHALL BE DIRECT ACTION FLOAT TYPE.
10. NO PORTION OF THE MANHOLE SHALL BE SUPPORTED BY THE PIPE OR FITTINGS.

DATE ISSUED:	NOVEMBER 2019		
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1	9/12/24	KBP	

THE CITY OF ELGIN

TITLE: 1"–2" COMBINATION AIR VALVE ASSEMBLY

SCALE: N.T.S. DRAWING No. SS – 8

GRAY CIVIL, INC.
512-452-0371
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8834 N. Capital of Texas Highway, Capital 140
5316 W. US Highway 290 Service Road, Suite 220
TBPELS FIRM # 2946

GRAY

NO.	BY	DATE	REVISION DESCRIPTION

HARVEST RIDGE
SECTION 5

WASTEWATER DETAILS

PROJECT NO: 1636-11996

DESIGNED BY: MRC

DRAWN BY: DPG/BE

CHECKED BY: JAB

NOTICE:
ALTERATION OF A SEALED DRAWING WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS A VIOLATION OF THE TEXAS ENGINEERING PRACTICE ACT.

THESE PLANS ARE RELEASED UNDER THE AUTHORITY OF J. ADAM BERRY, PE, ON 01/13/2026, FOR THE PURPOSES OF REVIEW AND ARE NOT TO BE USED FOR BIDDING OR CONSTRUCTION

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