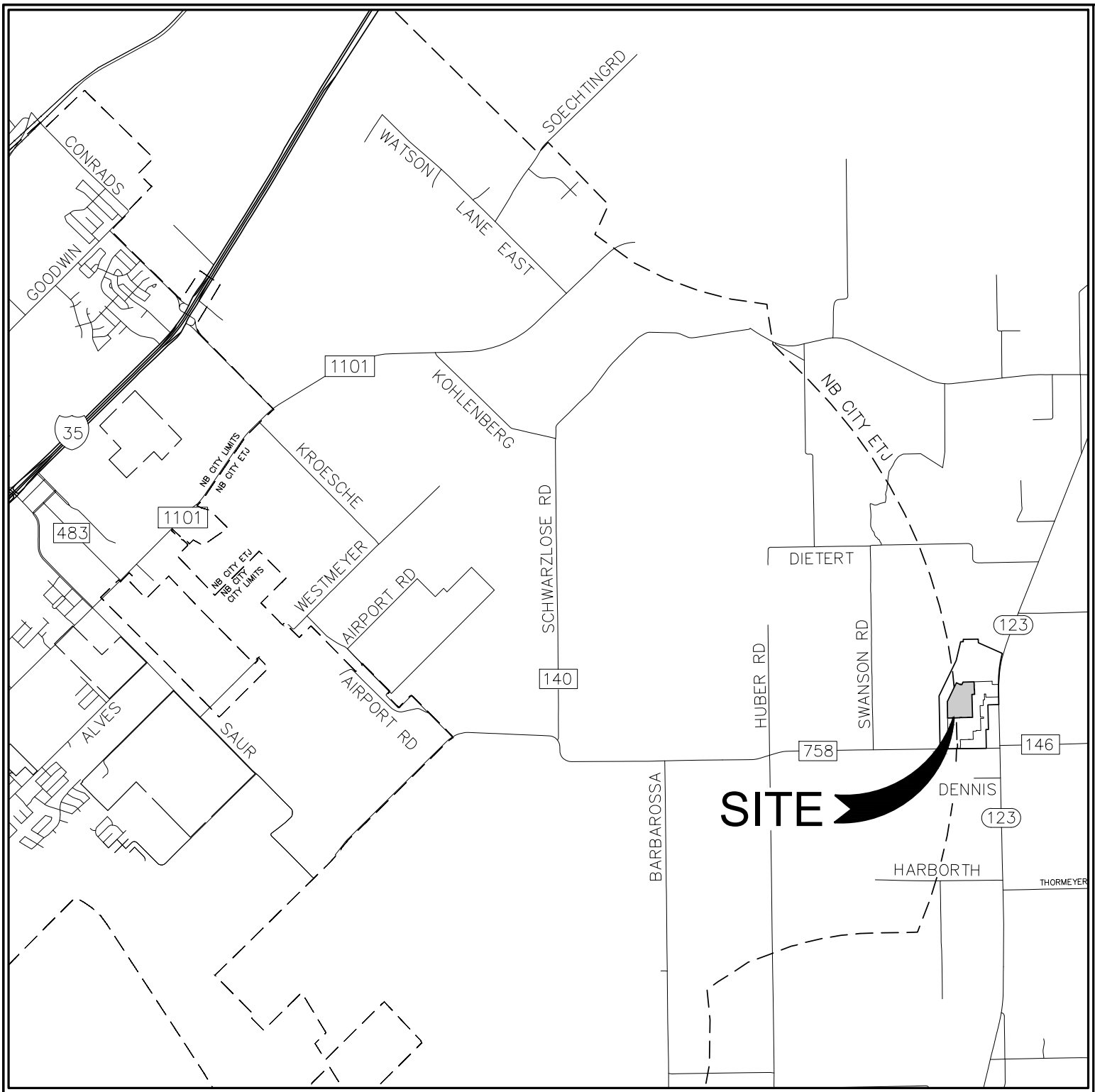


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PROJECT LOCATION MAP

SCALE: N.T.S.

PROJECT BENCHMARK

TBM #50	TBM #53	TBM #54	TBM #55	TBM #56
MAG SPIKE "HMT"	MAG "HMT"	1/2" IRON PIN	1/2" IRON PIN	1/2" IRON PIN
N: 13804456.295	N: 13806228.366	"HMT CONTROL"	"HMT CONTROL"	"HMT CONTROL"
E: 2295458.372	E: 2297181.418	N: 13806185.289	N: 13808217.593	N: 13807596.146
ELEV: 628.12:	ELEV: 637.68	E: 2294956.991	E: 2295845.639	E: 2296905.896
		ELEV: 665.30	ELEV: 685.34	ELEV: 661.96

LEGAL DESCRIPTION

24.965 TOTAL ACRES OF LAND LOCATED IN THE A.M. ESNAURIZAR SURVEY, ABSTRACT NO. 20, AND THE W.J. RAGSDALE SURVEY, ABSTRACT NO. 268, GUADALUPE COUNTY, TEXAS, CONSISTING OF A CALLED 55.967 ACRE TRACT RECORDED IN DOCUMENT NO. 202299029989, AND A CALLED 84.585 ACRE TRACT RECORDED IN DOCUMENT NO. 202299019628, OFFICIAL PUBLIC RECORDS, GUADALUPE COUNTY, TEXAS.

PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF 156 PROPOSED RESIDENTIAL LOTS WITH ASSOCIATED GRADING, DRAINAGE, STREETS, AND UTILITY IMPROVEMENTS.

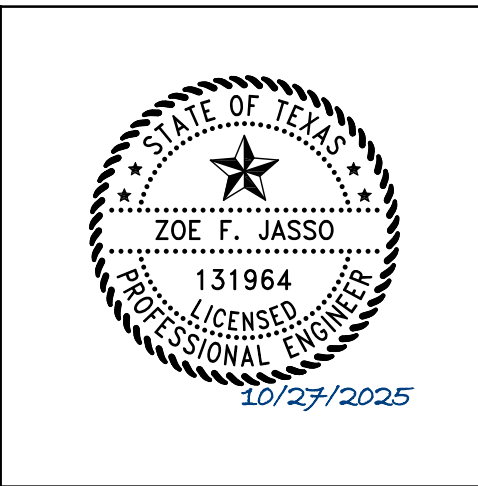
DISTRICT ENGINEER: \_\_\_\_\_ DATE: \_\_\_\_\_

DISCLAIMER:

THE DISTRICT'S REVIEW OF THE PLANS IS LIMITED TO ASPECTS CONCERNING WATER, WASTEWATER, DRAINAGE, AND ROADS. THIS REVIEW DOES NOT ENCOMPASS AN ASSESSMENT OF THE OVERALL ADEQUACY OF THE DESIGN FOR THE FACILITIES. IN APPROVING THESE PLANS, THE DISTRICT RELIES SOLELY ON THE ADEQUACY OF THE WORK PERFORMED BY THE DESIGNER.

GENERAL NOTES:

- IF CONSTRUCTION HAS NOT COMMENCED WITHIN ONE-YEAR OF CITY APPROVAL FOR CONSTRUCTION INSPECTION, THAT APPROVAL IS NO LONGER VALID.
- THE MOST CURRENT EDITIONS OF THE CITY OF SAN ANTONIO STANDARD SPECIFICATIONS AND THE TEXAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND BRIDGES SHALL BE FOLLOWED FOR ALL CONSTRUCTION EXCEPT AS AMENDED BY THE CITY OF NEW BRAUNFELS STANDARD DETAILS.
- ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER OF RECORD. IN ACCEPTING THESE PLANS, THE CITY OF NEW BRAUNFELS MUST RELY UPON THE ADEQUACY OF THE WORK OF THE ENGINEER IN RECORD.
- PRIOR TO THE START OF CONSTRUCTION THE CONTRACTOR SHALL CONTACT THE CITY OF NEW BRAUNFELS TO SET A PRE-CONSTRUCTION MEETING. A 48-HOUR ADVANCED NOTIFICATION IS REQUIRED FOR ALL INSPECTION AND MEETING REQUESTS.
  - ALL INSPECTIONS ARE TO BE CALLED IN AT 830-372-1031 OR,
  - FAXED IN AT 830-372-0067 OR,
  - E-MAILED AT VEPOLL.COM.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO SEE THAT ALL TEMPORARY AND PERMANENT TRAFFIC CONTROL DEVICES ARE PROPERLY INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE PLANS AND LATEST EDITION OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. IF THE NEED ARISES, ADDITIONAL TEMPORARY TRAFFIC CONTROL DEVICES MAY BE ORDERED BY THE ENGINEERING REPRESENTATIVE AT THE CONTRACTOR'S EXPENSE.
- DRAINAGE IMPROVEMENTS SUFFICIENT TO MITIGATE OFFSITE IMPACT OF CONSTRUCTION MUST BE COMPLETED AND IN PLACE PRIOR TO ADDING IMPERVIOUS COVER TO THE SITE.
- THIS DEVELOPMENT IS A TYPE 3 DEVELOPMENT.
- NO PORTION OF THE SUBDIVISION IS LOCATED WITHIN ANY SPECIAL FLOOD HAZARD AREA (100 YR. FLOOD), AS DEFINED BY THE GUADALUPE COUNTY, TEXAS, FIRM PANEL NUMBER 48187C0130F EFFECTIVE DATE NOVEMBER, 02, 2007, AS PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY.
- THIS PROJECT IS NOT LOCATED WITHIN THE EDWARDS AQUIFER RECHARGE, TRANSITION OR CONTRIBUTING ZONE.
- GAS UTILITIES ARE NOT INCLUDED IN THE CIVIL CONSTRUCTION PLANS. FINAL GAS UTILITY DESIGN SHALL BE APPROVED BY THE CITY FOR ANY WORK WITHIN PUBLIC RIGHT-OF-WAY, IF APPLICABLE.
- THE ENGINEER OF RECORD ACKNOWLEDGES THAT ALL PROPOSED WATER AND WASTEWATER IMPROVEMENTS MUST COMPLY WITH TCEQ, CITY OF SEGUIN WASTEWATER, CRYSTAL CLEAR SUD WATER CONNECTION POLICY, SOUND ENGINEERING JUDGEMENT AND ANY OTHER GOVERNING ENTITY ORDINANCES OR CODES.



ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER OF RECORD. IN ACCEPTING THESE PLANS, THE CITY OF NEW BRAUNFELS MUST RELY UPON THE ADEQUACY OF THE WORK OF THE ENGINEER OF RECORD.

*Zoe F. Jasso*  
Zoe F. Jasso  
P.E. Registration No. 131964

PREPARED BY:



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# LONE OAK MUD JARO NORTH UNIT 3 NEW BRAUNFELS, TX CIVIL SITE CONSTRUCTION PLANS

LENNAR HOMES  
100 NE LOOP 410, SUITE 1155  
SAN ANTONIO, TX 78216

Sheet List Table

Sheet Number	Sheet Title
C0.0	COVER SHEET
C0.1	GENERAL NOTES
C0.2	PLAT (1 OF 2)
C0.3	PLAT (2 OF 2)
C1.0	OVERALL EXISTING DRAINAGE MAP – INK CIVIL
C1.1	OVERALL PROPOSED DRAINAGE MAP
C1.2	OVERALL ULTIMATE DRAINAGE MAP
C2.0	EROSION CONTROL PLAN
C2.1	EROSION CONTROL DETAILS
C3.0	GRADING PLAN (1 OF 2)
C3.1	GRADING PLAN (2 OF 2)
C3.2	GRADING DETAILS
C4.0	TYLER PATH PLAN & PROFILE
C4.1	WOODLAND CHASE PLAN & PROFILE (1 OF 2)
C4.2	WOODLAND CHASE PLAN & PROFILE (2 OF 2)
C4.3	WOODLAND CHASE BULBOUT DETAILS
C4.4	LEOPARD GATE PLAN & PROFILE
C4.5	MOSLEY PASS PLAN & PROFILE
C4.6	CUB WAY PLAN & PROFILE
C4.7	KNUCKLE SAC PLAN & PROFILE
C4.8	SIGNAGE PLAN
C4.9	STREET DETAILS (1 OF 3)
C4.10	STREET DETAILS (2 OF 3)
C4.11	STREET DETAILS (3 OF 3)
C5.0	OVERALL STORM
C5.1	CHANNEL A1 PLAN & PROFILE (1 OF 4)
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C5.5	STORM B2 PLAN & PROFILE (1 OF 2)
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C5.8	INTERCEPTOR DRAIN B2 PLAN & PROFILE (1 OF 2)
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C6.0	OVERALL WATER (1 OF 2)
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C7.2	WWTR LINE D PLAN & PROFILE
C7.3	WWTR LINE E PLAN & PROFILE
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C7.5	WWTR LINE I PLAN & PROFILE
C7.6	WWTR LINE J PLAN & PROFILE
C7.7	WWTR LINE L PLAN & PROFILE
C7.8	WASTEWATER DETAILS

NOTE TO CONTRACTOR:

BY THE ACT OF SUBMITTING A BID FOR THIS PROPOSED CONTRACT, THE BIDDER WARRANTS THAT THE BIDDER, AND ALL SUBCONTRACTORS AND MATERIAL SUPPLIERS HE INTENDS TO USE HAVE CAREFULLY AND THOROUGHLY REVIEWED THE DRAWINGS, SPECIFICATIONS AND ALL OTHER CONTRACT DOCUMENTS AND HAVE FOUND THEM COMPLETE AND FREE FROM ANY AMBIGUITIES AND SUFFICIENT FOR THE PURPOSE INTENDED. THE BIDDER FURTHER WARRANTS THAT TO THE BEST OF HIS OR HIS SUBCONTRACTORS' AND MATERIAL SUPPLIERS' KNOWLEDGE, ALL MATERIALS AND PRODUCTS SPECIFIED OR INDICATED HEREIN ARE ACCEPTABLE FOR ALL APPLICABLE CODES AND AUTHORITIES.

THE LOCATION OF ALL EXISTING UTILITIES SHOWN ON THESE PLANS HAS BEEN BASED UPON RECORD INFORMATION ONLY AND MAY NOT MATCH LOCATIONS AND/OR DEPTHS AS CONSTRUCTED. THE CONTRACTOR SHALL CONTACT EACH OF THE INDIVIDUAL UTILITIES FOR ASSISTANCE IN DETERMINING EXISTING UTILITY LOCATIONS AND DEPTHS PRIOR TO BEGINNING ANY CONSTRUCTION. CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF ALL UTILITY CROSSINGS PRIOR TO BEGINNING ANY CONSTRUCTION.

ADDITIONAL NOTE TO CONTRACTOR:

- ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER OF RECORD. IN ACCEPTING THESE PLANS, NEW BRAUNFELS UTILITIES MUST RELY UPON THE ADEQUACY OF THE WORK OF THE ENGINEER OF RECORD.
- THE ENGINEER OF RECORD ACKNOWLEDGES THAT ALL PROPOSED WATER OR WASTEWATER IMPROVEMENTS MUST COMPLY WITH CRITERIA FROM THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY, THE CITY OF NEW BRAUNFELS, CITY OF SEGUIN W&WW DESIGN CRITERIA, ANY OTHER GOVERNING ENTITY ORDINANCES OR CODES, AND SOUND ENGINEERING JUDGEMENT.
- THE ENGINEER OF RECORD ACKNOWLEDGES THAT THE POINT OF DELIVERY FOR THE CCSUD WATER SYSTEM IS THE MAIN SIDE OF THE SERVICE/LATERAL/LEAD FROM THE CUSTOMER'S METER, BACKFLOW PREVENTER, OR EASEMENT EDGE. THE CUSTOMER IS RESPONSIBLE FRO THE DESIGN, PERMITTING, CONSTRUCTION, OPERATION AND MAINTENANCE BEYOND THE POINT OF DELIVERY AND HAS SOLE CONTROL AND SUPERVISION OVER THE INSTALLATION.
- THE ENGINEER OF RECORD ACKNOWLEDGES THAT THE POINT OF DELIVERY FOR A CITY OF SEGUIN WASTEWATER SYSTEM IS THE MAIN SIDE OF THE SERVICE LATERAL FROM THE CUSTOMER'S CLEAN OUT OR PROPERTY LINE, WHICHEVER IS NEARER. THE CUSTOMER IS RESPONSIBLE FOR THE DESIGN, CONSTRUCTION, OPERATION AND MAINTENANCE BEYOND THE POINT OF DELIVERY AND HAS SOLE CONTROL AND SUPERVISION OVER ITS INSTALLATION.
- WATER IS A PRECIOUS COMMODITY IN THE STATE OF TEXAS AND THE CITY OF SEGUIN IS PASSIONATE ABOUT PROTECTING THE LOCAL RESOURCE. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ACQUIRING A FIRE HYDRANT METER SO THAT ALL WATER USED FOR CONSTRUCTION OR TESTING PURPOSES IS PROPERLY ACCOUNTED FOR. NBU WILL NOT TOLERATE ANY WATER THEFT, REGARDLESS OF THE AMOUNT. IF WATER THEFT IS DISCOVERED, THE CONTRACTOR SHALL BE SUBJECT TO MONETARY PENALTIES, CRIMINAL CHARGES, AND STOPPAGE OF ALL CONSTRUCTION ACTIVITIES RELATED TO THE PROJECT. COSTS ASSOCIATED WITH ANY WORK STOPPAGE RESULTING FROM WATER THEFT SHALL BE AT THE FULL EXPENSE OF THE CONTRACTOR.

JARO NORTH UNIT 3  
CIVIL SITE CONSTRUCTION PLANS

HMT # 337.102



GENERAL NOTES	
ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT SHALL COMPLY WITH:	
A. CURRENT CITY OF SEGUIN CONSTRUCTION SPECIFICATIONS AND STANDARDS AS OF THE DATE OF THIS CONTRACT	
B. THE MOST CURRENT EDITION OF TEXAS DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS, AND BRIDGES".	
ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE MOST CURRENT TEXAS DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS, AND BRIDGES." ALONG WITH CURRENT CITY OF SEGUIN AND GUADALUPE COUNTY SPECIFICATIONS. ANY DISCREPANCIES BETWEEN SPECIFICATIONS SHALL BE RESOLVED BY THE ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION.	
CONTRACTOR SHALL PROCURE ALL PERMITS AND LICENSES, PAY ALL CHARGES, FEES, AND TAXES AREA AND GIVE ALL NOTICES NECESSARY AND INODENTAL TO THE DUE AND LAWFUL PROSECUTION OF THE WORK.	
ANY EXISTING OFF-SITE IMPROVEMENTS THAT ARE DAMAGED OR UNDERCUT BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED AS DIRECTED BY THE ENGINEER AND APPROVED BY THE OWNER OF THE EXISTING IMPROVEMENT AT THE CONTRACTOR'S EXPENSE. (NO SEPARATE PAY ITEM)	
WORK COMPLETED BY THE CONTRACTOR WHICH HAS NOT RECEIVED A WORK ORDER OR CONSENT OF THE OWNER OR ENGINEER WILL BE SUBJECT TO REMOVAL AND REPLACEMENT BY AND AT THE EXPENSE OF THE CONTRACTOR.	
CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL WASTE MATERIALS UPON PROJECT COMPLETION. THE CONTRACTOR SHALL NOT PLACE ANY WASTE MATERIAL IN THE 100YR FLOOD PLAIN WITHOUT FIRST OBTAINING AN APPROVED FLOOD PLAIN DEVELOPMENT PERMIT.	
BARRICADES AND WARNING SIGNS SHALL CONFORM TO THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND SHALL BE LOCATED TO PROVIDE MAXIMUM PROTECTION TO THE PUBLIC AS WELL AS CONSTRUCTION PERSONNEL AND EQUIPMENT WHILE PROVIDING CONTINUOUS TRAFFIC FLOW AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL DEVICES DURING CONSTRUCTION.	
CONTRACTOR IS REQUIRED TO VERIFY PROJECT ELEVATIONS. THE TERM "MATCH EXISTING" SHALL BE UNDERSTOOD TO SIGNIFY BOTH HORIZONTAL AND VERTICAL ALIGNMENT.	
WHEN MATCHING EXISTING PAVEMENTS, CURBS, DRIVES, AND WALKS, THEY SHALL BE SAW CUT FULL DEPTH AND REMOVED TO ALLOW FOR PROPOSED CONSTRUCTION. IF ANY EXISTING JOINT IS ENCOUNTERED, PRECAUTION SHALL BE TAKEN DURING REMOVAL OF CONCRETE SO AS NOT TO DAMAGE EXISTING DOWELS. ALL EXISTING DOWELS SHALL BE EXPOSED AND CLEARED.	
ITEM OF WORK DESIGNATED "BY OTHERS" SHALL NOT BE CONSIDERED PART OF THIS CONTRACT.	
ALL "COMPACTED SUBGRADE" SHALL CONSIST OF NATIVE MATERIAL SCARIFIED TO A MINIMUM DEPTH OF SIX INCHES AND COMPACTED TO 95% DENSITY ACCORDING TO DENSITY TEST METHOD TEX-115E OR ACCORDING TO ASTM D-698 AND TESTED BY ASTM D-2922.	
ALL "FLEXIBLE BASE" SHALL BE TYPE "A", GRADE 4, ACCORDING TO TxDOT ITEM 247, COMPACTED TO 95% MODIFIED DENSITY AT A MOISTURE CONTENT BETWEEN -2 AND +3 OF OPTIMUM PERCENT MOISTURE ACCORDING TO ASTM D-1557 (MODIFIED PROCTOR) AND TESTED BY ASTM D-2922.	
ASPHALT PAVEMENT SHALL BE THE TYPE SPECIFIED ON THE PLANS AND ACCORDING TO TxDOT ITEM 340 "HOT MIX ASPHALT CONCRETE PAVEMENT".	
PRIME COAT USING MC-30 AT A RATE OF 0.2 GALLONS PER SQUARE YARD SHALL BE PLACED OVER PREPARED BASE AT LEAST ONE DAY PRIOR TO LAYING ASPHALTIC CONCRETE PAVEMENT. ANY NECESSARY TACK COAT SHALL BE MC-30 AT 0.05 GALLONS PER SQUARE YARD. IT IS REQUIRED THAT BOTH THE PRIME COAT AND THE TACK COAT BE APPLIED AT THE TEMPERATURE SPECIFIED UNDER TxDOT ITEM 300.3.	
CONCRETE SHALL BE CLASS "A" ACCORDING TO TxDOT ITEM 421 UNLESS OTHERWISE ON PLANS.	
REINFORCING STEEL SHALL BE FROM NEW BILLET AND SHALL CONFORM TO TxDOT ITEM 440. ALL DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTER OF BARS EXCEPT WHEN REFERRING TO CLEARANCE.	
ALL SAWED JOINTS SHALL BE SAWED WITHIN 24 HOURS OF POURING.	
ABSOLUTELY NO WELDING OF REINFORCING BARS OR TORCHING TO BEND REINFORCING BARS SHALL BE ALLOWED WITHOUT THE SPECIFIC APPROVAL OF THE ENGINEER.	
ORDINARY COMPACTION CONTROL IS REQUIRED ON THIS PROJECT.	
ALL ROLLING FOR COMPACTION OF ASPHALTIC CONCRETE PAVEMENT SHALL BE COMPLETED BEFORE THE MIXTURE TEMPERATURE DROPS BELOW 175 DEG. (F).	
ALL FILL MATERIAL SHALL BE SUBJECT TO THE ENGINEER'S APPROVAL.	
CONTRACTOR AGREES TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND SHALL NOT BE LIMITED TO THE NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNERS AND THE ENGINEER AND HIS EMPLOYEES, PARTNERS, OFFICES, DIRECTORS, OR CONSULTANTS, HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF THE WORK ON THIS PROJECT, EXCEPTING FROM LIABILITY ARISING FROM SOLE NEGLIGENCE OF THE OWNER OR ENGINEER, ENGINEER'S DIRECTORS, OFFICERS, EMPLOYEES, OR CONSULTANTS.	
ALL CMP (CORRUGATED METAL PIPE) USED ON THIS PROJECT SHALL HAVE A MANNING'S "N" VALUE OF 0.024, UNLESS OTHERWISE SHOWN ON PLANS.	
CONTRACTOR WILL BE RESPONSIBLE FOR ALL CONSTRUCTION TESTING PER CURRENT CITY OF SEGUIN REQUIREMENTS. ALL TEST RESULTS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL. ENGINEER AND OWNER RESERVE THE RIGHT TO HAVE THE CONTRACTOR REMOVE AND REPLACE ANY MATERIAL THAT WAS NOT TESTED OR FAILED TESTING, ALL COST ASSOCIATED WITH THE REMOVAL, REPLACEMENT AND TESTING SHALL BE PAID BY THE CONTRACTOR.	
ALL PVC SLEEVES SHALL BE INSTALLED 3 FEET BELOW FINISHED GRADE AND ENDS SHALL BE MARKED SO THAT LOCATIONS OF SLEEVES CAN BE EASILY IDENTIFIED.	
PRE-CONSTRUCTION CONFERENCE IS REQUIRED, ENGINEER WILL ARRANGE SUCH CONFERENCE IN COORDINATION WITH CITY OF SEGUIN PROJECT MANAGER AND INSPECTOR. NO CONSTRUCTION MAY BEGIN PRIOR TO THE PRE-CONSTRUCTION CONFERENCE.	
CONTRACTOR SHALL COORDINATE WITH DRY UTILITY INSTALLERS AND SHARED TRENCHING SHALL BE UTILIZED. CUTTING THE STREETS AFTER COMPLETION BY DRY UTILITIES SHALL NOT BE ACCEPTABLE.	
WHEN ALL IMPROVEMENTS ARE FOUND TO BE CONSTRUCTED AND COMPLETED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS AND WITH THE CITY'S STANDARDS, AND UPON RECEIPT OF ONE SET OF "RECORD DRAWINGS" PLANS, AND A DIGITAL COPY OF ALL PLANS (AUTOCAD 2000 MINIMUM) THE CITY ENGINEER SHALL ACCEPT SUCH IMPROVEMENTS FOR THE CITY OF SEGUIN, SUBJECT TO THE GUARANTY OF MATERIAL AND WORKMANSHIP PROVISIONS IN THIS SECTION.	
EROSION / SEDIMENTATION CONTROL	
AT A MINIMUM, THESE CONTROLS SHALL CONSIST OF ROCK BERMS AND/OR SILT FENCES CONSTRUCTED PARALLEL TO AND DOWN GRADIENT FROM THE TRENCHES. THE ROCK BERM OR SILT FENCES SHALL BE INSTALLED IN A MANNER SUCH THAT ANY RAINFALL RUNOFF SHALL BE FILTERED. HAY BALES SHALL NOT BE USED FOR TEMPORARY EROSION AND SEDIMENTATION CONTROLS.	
ALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS MUST BE INSTALLED PRIOR TO CONSTRUCTION AND SHALL BE MAINTAINED DURING CONSTRUCTION BY THE CONTRACTOR. THE CONTRACTOR SHALL REMOVE THE CONTROLS WHEN VEGETATION IS ESTABLISHED AND THE CONSTRUCTION AREA IS STABILIZED {31 TAC 313.5 (C){12}}. ADDITIONAL PROTECTION MAY BE REQUIRED IF EXCESSIVE SOLIDS ARE BEING DISCHARGED FROM THE SITE.	
ALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS SHALL BE REMOVED BY THE CONTRACTOR AT FINAL ACCEPTANCE OF THE PROJECT BY THE OWNER/ENGINEER.	
PLACEMENT OF TEMPORARY EROSION AND SEDIMENTATION CONTROLS SHALL BE IN ACCORDANCE WITH THE CONSTRUCTION PLANS. ACTUAL LOCATIONS MAY VARY SLIGHTLY FROM THE PLANS, BUT WILL BE VERIFIED BY THE ENGINEER/INSPECTOR IN THE FIELD PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL INSPECT THE CONTROLS AT WEEKLY INTERVALS AND AFTER EVERY SIGNIFICANT RAINFALL TO INSURE DISTURBANCE OF THE STRUCTURES HAS NOT OCCURRED. SEDIMENT DEPOSITED AFTER A RAINFALL SHALL BE REMOVED FROM THE SITE OR PLACED IN AN ENGINEER APPROVED DESIGNATED DISPOSAL AREA.	
CONTRACTOR SHALL BE RESPONSIBLE TO INSURE THAT NO EROSION CONTROL MEASURES BLOCK THE DRAINAGE SYSTEM FROM WORKING AS DESIGNED.	

UTILITIES	
LOCATION AND DEPTH OF EXISTING UTILITIES SHOWN HERE ARE APPROXIMATE ONLY. ACTUAL LOCATIONS AND DEPTHS MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF ALL EXISTING UTILITIES ENCOUNTERED DURING CONSTRUCTION, INCLUDING THOSE NOT SHOWN ON THE DRAWINGS. IF THE CONTRACTOR DISCOVERS ANY UTILITIES NOT SHOWN ON THE DRAWINGS, HE SHALL STOP WORK IMMEDIATELY AND NOTIFY THE ENGINEER. ANY EXISTING UTILITIES, ON OR OFF THE SITE, THAT ARE DAMAGED OR UNDERCUT BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED AS DIRECTED BY THE ENGINEER AND APPROVED BY THE RESPECTIVE UTILITY COMPANY AT THE CONTRACTOR'S EXPENSE. CONTRACTOR SHALL NOTIFY APPROPRIATE UTILITY COMPANIES AND GOVERNMENTAL AGENCIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION AT:	
THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES 48 HOURS PRIOR TO EXCAVATION	
CRYSTAL CLEAR SUD (WATER)	(830) 372-1031
CITY OF SEGUIN (SEWER)	(830) 401-2222
GUADALUPE VALLEY ELECTRIC COMPANY (ELECTRIC)	(830) 857-1200
TIME WARNER CABLE SPECTRUM	(830) 625-3408
AT&T	(830) 303-1333
TEXAS ONE CALL SYSTEM	(800) 245-4545
DUE TO FEDERAL REGULATIONS TITLE 49, PART 192(B), GAS COMPANIES MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT THE WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.	
CONTRACTOR SHALL REFERENCE GVEC UTILITIES PLANS FOR FINAL ELECTRICAL LINE DESIGNS AND LAYOUT.	
WASTEWATER NOTES	
3/31/11	
1. THE CONTRACTOR SHALL MAINTAIN SERVICE TO EXISTING WASTEWATER SYSTEM AT ALL TIMES DURING CONSTRUCTION.	
2. A MINIMUM OF 8" WASTEWATER PIPE AND FITTING (P.V.C. SDR-26, ASTM, D-3034, D-3212, F-477) ARE REQUIRED ON NEW INSTALLATION.	
3. ALL RESIDENTIAL WASTEWATER SERVICE LATERALS SHALL BE EXTENDED TO THE PROPERTY LINE AND A CLEANOUT SHALL BE INSTALLED AT THE PROPERTY LINE. SERVICES TO LOTS WILL EXTEND FOUR (4) FEET PAST THE UNDERGROUND ELECTRIC CONDUIT IF ELECTRIC IS INSTALLED IN THE FRONT EASEMENT.	
4. PIPE BEDDING OF WASTEWATER LINES SHALL BE MANUFACTURED No. 67 CRUSHED STONE.	
5. SECONDARY BACKFILL OF WASTEWATER LINES SHALL GENERALLY CONSIST OF MATERIALS REMOVED FROM THE TRENCH AND SHALL BE FREE FROM BRUSH, DEBRIS AND TRASH, NO ROCKS OR STONES HAVING ANY DIMENSION LARGER THAN 6 INCHES AT THE LARGEST DIMENSION.	
6. ALL WASTEWATER PIPES SHALL HAVE COMPRESSION OR MECHANICAL JOINTS AS PER 30 TAC §217.53 (C) (2).	
7. FOR WASTEWATER LINES LESS THAN 24" IN DIAMETER, SELECT INITIAL BACKFILL MATERIAL SHALL BE PLACED IN TWO LIFTS.	
7.1. THE FIRST LIFT SHALL BE SPREAD UNIFORMLY AND SIMULTANEOUSLY ON EACH SIDE AND UNDER THE SHOULDERS OF THE PIPE TO THE MID POINT OR SPRING LINE OF THE PIPE.	
7.2. THE SECOND LIFT SHALL BE PLACED TO A DEPTH AS SHOWN ON THE PIPE BACKFILL DETAIL. FOR PIPES LARGER THAN 24", 12" MAXIMUM LIFTS SHALL BE USED.	
8. ALL MANHOLES MUST BE WATER TIGHT, EITHER MONOLITHIC, CAST-IN-PLACE CONCRETE STRUCTURES OR PREFABRICATED MANHOLES SPECIFICALLY APPROVED BY CITY OF SEGUIN. THE MANHOLES SHALL HAVE WATER-TIGHT RINGS AND COVERS. WHEREVER THEY ARE WITHIN THE 100 YEAR FLOODPLAIN, THE MANHOLE COVERS SHALL BE BOLTED. EVERY THIRD MANHOLE IN SEQUENCE SHALL HAVE AN ALTERNATE MEANS OF VENTING. 30 TAC §213.5 (C)(3)(A) AND 30 TAC §217.55 (O).	
9. ALL MANHOLES SHALL BE CONSTRUCTED SO THAT THE TOP OF THE RING IS TWO INCHES (2") ABOVE SURROUNDING GROUND EXCEPT WHEN LOCATED IN PAVED AREA. IN PAVED AREAS, THE MANHOLE RING SHALL BE FLUSH WITH PAVEMENT.	
10. ALL NEW MANHOLES, UNLESS APPROVED BY CITY ENGINEERING, ARE TO HAVE COVERS WITH 32" OPENINGS.	
11. WASTEWATER PIPE CONNECTIONS TO PRE-CAST MANHOLES WILL BE COMPRESSION JOINTS OR MECHANICAL "BOOT TYPE" JOINT AS APPROVED BY CITY OF SEGUIN.	
12. WASTEWATER LINES SHALL BE TESTED FROM MANHOLE TO MANHOLE.	
13. IN AREAS WHERE A NEW WASTEWATER MANHOLE IS TO BE CONSTRUCTED OVER AN EXISTING WASTEWATER SYSTEM, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO TEST THE EXISTING MANHOLES BEFORE CONSTRUCTION. AFTER THE PROPOSED MANHOLE(S) HAS BEEN BUILT, THE CONTRACTOR SHALL RE-TEST THE EXISTING SYSTEM TO THE SATISFACTION OF THE CONSTRUCTION INSPECTOR. (NO SEPARATE PAY ITEM).	
14. WHERE THE MINIMUM 9 FOOT SEPARATION DISTANCE BETWEEN WASTEWATER LINES AND WATER LINES / MAINS CANNOT BE MAINTAINED, THE INSTALLATION OF WASTEWATER LINES SHALL BE IN STRICT ACCORDANCE WITH TCEQ. THE WASTEWATER LINE SHALL BE CONSTRUCTED OF CAST IRON, DUCTILE IRON OR PVC MEETING THE ASTM SPECIFICATION FOR BOTH PIPES AND JOINTS OF 150 PSI AND SHALL BE IN ACCORDANCE WITH 30 TAC §217.53 (D) (3) (A) (I).	
15. NO TESTING WILL BE PERFORMED PRIOR TO 30 DAYS FROM COMPLETE INSTALLATION OF THE WASTEWATER LINES. THE FOLLOWING SEQUENCE WILL BE STRICTLY ADHERED TO:	
15.1. PULL MANDREL	
15.2. PERFORM AIR TEST	
15.3. CLEANING OF ANY DEBRIS	
15.4. FLUSHING OF SYSTEM	
15.5. TV INSPECTION (WITHIN 72 HOURS OF FLUSHING)	
16. A MINIMUM OF 5 FEET OF COVER IS TO BE MAINTAINED OVER THE WASTEWATER MAIN AND LATERALS AT SUBGRADE.	
17. WASTEWATER MAIN CONNECTIONS MADE DIRECTLY TO EXISTING MANHOLES WILL REQUIRE SUCCESSFUL TESTING OF THE MANHOLE IN ACCORDANCE WITH CITY OF SEGUIN CONSTRUCTION POLICY MANUAL.	
18. TCEQ AND EPA REQUIRE EROSION AND SEDIMENTATION CONTROL FOR CONSTRUCTION OF WASTEWATER COLLECTION SYSTEMS. DEVELOPER OR AUTHORIZED REPRESENTATIVE SHALL PROVIDE EROSION AND SEDIMENTATION CONTROL AS NOTES ON THE PROJECT'S PLAN AND PROFILE SHEETS. ALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS SHALL BE REMOVED BY THE CONTRACTOR AT FINAL ACCEPTANCE OF THE PROJECT BY CITY OF SEGUIN.	
CRYSTAL CLEAR SPECIAL UTILITY DISTRICT (CCSUD) WATER MAIN NOTES	
01-2025	
1. CONSTRUCTION OF ALL CCSUD WATER UTILITY INFRASTRUCTURE MUST ADHERE TO CCSUD'S TECHNICAL SPECIFICATIONS, DETAILS AND APPROVED EQUIPMENT LIST.	
2. REMOVE ONLY VEGETATION, TREES, STUMPS, RUBBISH, AND OTHER MATERIAL NECESSARY FOR CONSTRUCTION AND DISPOSE OF OFF SITE.	
3. THE CONNECTION LOCATIONS LISTED IN THE PLANS ARE BASED ON BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL FIELD LOCATE EXISTING WATER MAIN LOCATIONS AT ALL TIE-IN LOCATIONS TO VERIFY SIZE, ELEVATION, AND MATERIAL PRIOR TO ORDERING MATERIALS FOR CONNECTION.	
4. THE CONTRACTOR SHALL MAINTAIN MINIMUM SEPARATION BETWEEN UTILITIES PER TCEQ STANDARDS.	
5. UNLESS OTHERWISE SPECIFIED, ALL PVC WATER MAINS SHALL BE C900 DR 18, COLORED BLUE IN ACCORDANCE WITH SPECIFICATION SECTION 02650 - PVC PIPE FOR WATER MAINS.	
6. ALL DUCTILE IRON WATER MAINS SHALL BE PRESSURE CLASS CONFORMING TO AWWA C151 AND CEMENT LINED.	
7. WATER MAINS SHALL BE RESTRAINED WITH RESTRAINT LENGTHS OF FITTINGS SHOWN IN PLANS. THRUST BLOCKING IS REQUIRED AT ALL FITTINGS AND BENDS IN ACCORDANCE WITH THE THRUST BLOCKING DETAIL PROVIDED AND SPECIFICATION SECTION 02680 - JOINT RESTRAINTS AND THRUST BLOCKING.	
8. LOCATIONS OF COMBINATION AIR VALVES SHOWN ARE APPROXIMATE. INSTALL AIR RELEASE VALVES AT THE HIGH POINT IN THE WATER MAIN FOR THE LOCATIONS GIVEN.	
9. THE CONTRACTOR SHALL COORDINATE PRESSURE TESTING OF NEW WATER MAINS WITH OWNER AND ENGINEER AT LEAST TWO BUSINESS DAYS PRIOR. PRESSURE TESTING REQUIREMENTS ARE INCLUDED IN THE SPECIFICATIONS.	
10. ALL WATER MAINS SHALL BE DISINFECTED PER AWWA AND TCEQ STANDARDS.	
11. THE OWNER SHALL SUPPLY ALL WATER NEEDED FOR CONSTRUCTION TESTING AND DISINFECTION. THE CONTRACTOR SHALL NOT BE REQUIRED TO PAY FOR THIS WATER.	
12. UNLESS NOTED OTHERWISE, ALL WATER MAIN P.I.'S SHALL BE ACHIEVED USING THE WATER MAIN MANUFACTURER'S ALLOWABLE JOINT DEFLECTION.	
13. WATER MAINS, FIRE HYDRANTS, APPURTENANCES, AND VALVES THAT ARE ABANDONED SHALL BE CUT AND PLUGGED PER SPECIFICATION SECTION 02500 - ABANDONMENT OF WATER INFRASTRUCTURE.	
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING 98% COMPACTION ON ALL TRENCH BACKFILL AND PAYING FOR THE TESTING TO BE PERFORMED BY A THIRD PARTY. COMPACTION TESTS WILL BE DONE AT ONE LOCATION POINT RANDOMLY SELECTED OR AS INDICATED BY CCSUD INSPECTOR/TEST ADMINISTRATOR, PER EACH 12-INCH LOOSE LIFT 400 LINEAR FEET AT A MINIMUM. PERMITS WILL NOT BE ACCEPTED AND FINALIZED BY CCSUD WITHOUT THIS REQUIREMENT BEING MET AND VERIFIED BY PROVIDING ALL NECESSARY DOCUMENTED TEST RESULTS.	

CITY OF NEW BRAUNFELS CONSTRUCTION NOTES		REVISED 03/2020
IF CONSTRUCTION HAS NOT COMMENCED WITHIN ONE-YEAR OF CITY APPROVAL FOR CONSTRUCTION INSPECTION, THAT APPROVAL IS NO LONGER VALID.		
THE MOST CURRENT EDITIONS OF THE CITY OF SAN ANTONIO STANDARD SPECIFICATIONS AND THE TEXAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND BRIDGES SHALL BE FOLLOWED FOR ALL CONSTRUCTION EXCEPT AS AMENDED BY THE CITY OF NEW BRAUNFELS STANDARD DETAILS.		
ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER OF RECORD. IN ACCEPTING THESE PLANS, THE CITY OF NEW BRAUNFELS MUST RELY UPON THE ADEQUACY OF THE WORK OF THE ENGINEER OF RECORD.		
PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL CONTACT THE CITY OF NEW BRAUNFELS TO SCHEDULE A PRECONSTRUCTION MEETING.		
FOR PUBLIC INFRASTRUCTURE PERMIT OR GRADING PERMIT PROJECTS:		
<input type="checkbox"/> FOR INSPECTIONS, YOU MUST CALL BEFORE 12:00 P.M., 48 HOURS PRIOR TO YOUR INSPECTION REQUEST.		
<input type="checkbox"/> EACH INSPECTION WILL BE ALLOTTED 1 HOUR UNLESS YOU REQUEST FOR MORE TIME.		
<input type="checkbox"/> ONCE YOUR REQUEST HAS BEEN ACCEPTED, YOU WILL RECEIVE A CALL FROM THE CITY OF NEW BRAUNFELS INSPECTOR.		
FOR COMMERCIAL PERMIT (CP) PROJECTS:		
<input type="checkbox"/> ALL INSPECTIONS ARE TO BE CALLED IN AT 830-221-4068 OR,		
<input type="checkbox"/> FAXED IN AT 830-608-2117 OR,		
<input type="checkbox"/> E-MAILED AT INSPECTIONS@NBTEXAS.ORG.		
<input type="checkbox"/>		
IT IS THE CONTRACTOR'S RESPONSIBILITY TO SEE THAT ALL TEMPORARY AND PERMANENT TRAFFIC CONTROL DEVICES ARE PROPERLY INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE PLANS AND LATEST EDITION OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. IF, IN THE OPINION OF THE ENGINEERING REPRESENTATIVE AND THE CONSTRUCTION INSPECTOR, THE BARRICADES AND SIGNS DO NOT CONFORM TO ESTABLISHED STANDARDS OR ARE INCORRECTLY PLACED OR ARE INSUFFICIENT IN QUANTITY TO PROTECT THE GENERAL PUBLIC, THE CONSTRUCTION INSPECTOR SHALL HAVE THE OPTION TO STOP OPERATIONS UNTIL SUCH TIME AS THE CONDITIONS ARE CORRECTED. IF THE NEED ARISES, ADDITIONAL TEMPORARY TRAFFIC CONTROL DEVICES MAY BE ORDERED BY THE ENGINEERING REPRESENTATIVE AT THE CONTRACTOR'S EXPENSE.		
A TxDOT TYPE II B-B BLUE REFLECTIVE RAISED PAVEMENT MARKER SHALL BE INSTALLED IN THE CENTER OF THE ROADWAY ADJACENT TO ALL FIRE HYDRANTS. IN LOCATIONS WHERE HYDRANTS ARE SITUATED ON CORNERS, BLUE REFLECTIVE RAISED PAVEMENT MARKERS SHALL BE INSTALLED ON BOTH APPROACHES WHICH FRONT THE HYDRANT. THE RAISED PAVEMENT MARKER SHALL MEET TxDOT MATERIAL, EPOXY AND ADHESIVE SPECIFICATIONS.		
<u>GROUNDWATER</u>		
IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER, CONTRACTOR, SUBCONTRACTORS, BUILDERS, GEO-TECHNICAL ENGINEER, AND PROJECT ENGINEER TO IMMEDIATELY NOTIFY THE OFFICE OF THE CITY ENGINEER AND PROJECT ENGINEER IF THE PRESENCE OF GROUNDWATER WITHIN THE SITE IS EVIDENT. UPON NOTIFICATION THE PROJECT ENGINEER SHALL RESPOND WITH PLAN REVISIONS FOR THE MITIGATION OF THE GROUNDWATER ISSUE. THE CITY ENGINEER SHALL RESPOND WITHIN TWO (2) BUSINESS DAYS UPON RECEIPT OF THE MITIGATION PLAN. ALL CONSTRUCTION ACTIVITY, IMPACTED BY THE DISCOVERY OF GROUNDWATER, SHALL BE SUSPENDED UNTIL THE CITY ENGINEER GRANTS A WRITTEN APPROVAL OF THE GROUNDWATER MITIGATION PLAN.		
<u>RECORD DRAWINGS</u>		
AS PER PLATTING ORDINANCE SECTION 118-38M.: WHEN ALL OF THE IMPROVEMENTS ARE FOUND TO BE CONSTRUCTED AND COMPLETED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS AND WITH THE CITY'S STANDARDS, AND UPON RECEIPT OF ONE SET OF "RECORD DRAWING" PLANS, AND A DIGITAL COPY OF ALL PLANS (PDF COPY) THE CITY ENGINEER SHALL ACCEPT SUCH IMPROVEMENTS FOR THE CITY OF NEW BRAUNFELS, SUBJECT TO THE GUARANTY OF MATERIAL AND WORKMANSHIP PROVISIONS IN THIS SECTION.		
<u>CONSTRUCTION NOTE</u>		
ENGINEER OF RECORD IS RESPONSIBLE TO ENSURE THAT EROSION CONTROL MEASURES AND STORMWATER CONTROL SUFFICIENT TO MITIGATE OFF SITE IMPACTS ARE IN PLACE AT ALL STAGES OF CONSTRUCTION.		
<u>DRAINAGE NOTE</u>		
DRAINAGE IMPROVEMENTS SUFFICIENT TO MITIGATE THE IMPACT OF CONSTRUCTION SHALL BE INSTALLED PRIOR TO ADDING IMPERVIOUS COVER.		
<u>FINISHED FLOOR ELEVATIONS</u>		
THE ELEVATION OF THE LOWEST FLOOR SHALL BE AT LEAST 10 INCHES ABOVE THE FINISHED GRADE OF THE SURROUNDING GROUND, WHICH SHALL BE SLOPED IN A FASHION SO AS TO DIRECT STORMWATER AWAY FROM THE STRUCTURE. PROPERTIES ADJACENT TO STORMWATER CONVEYANCE STRUCTURES MUST HAVE FLOOR SLAB ELEVATION OR BOTTOM OF FLOOR JOISTS A MINIMUM OF ONE FOOT ABOVE THE 100-YEAR WATER FLOW ELEVATION IN THE STRUCTURE. DRIVEWAYS SERVING HOUSES ON THE DOWNHILL SIDE OF THE STREET SHALL HAVE A PROPERLY SIZED CROSS SWALE PREVENTING RUNOFF FROM ENTERING THE GARAGE.		
<u>SOILS TESTING</u>		
PROCTORS SHALL BE SAMPLED FROM ON-SITE MATERIAL (ON-SITE IS DEFINED AS LIMITS OF CONSTRUCTION FOR THIS SITE)		
-PLAN SET) AND A COPY OF THE PROCTOR RESULTS SHALL BE DELIVERED TO THE CITY OF NEW BRAUNFELS STREET INSPECTOR PRIOR TO ANY DENSITY TESTS.		
<u>ROADWAY</u>		
ALL ROADWAY COMPACTION TESTS SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEOTECHNICAL ENGINEER. FLEXIBLE BASE OR FILL/EMBANKMENT MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED EIGHT INCHES (8") LOOSE. THE REQUIRED DENSITY FOR THE FILL/EMBANKMENT MATERIAL SHALL MEET THE REQUIREMENTS OF TxDOT'S SPECIFICATION ITEM 132. THE REQUIRED DENSITY FOR THE FLEXIBLE BASE MATERIAL SHALL MEET THE REQUIREMENTS OF TxDOT'S SPECIFICATION ITEM 247. EACH LAYER OF MATERIAL, INCLUSIVE OF SUBGRADE, SHALL BE COMPACTED AS SPECIFIED AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEST METHODS TEX-113-E, TEX-114-E, TEX-115-E. THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINED BY THE GEOTECHNICAL ENGINEER AND APPROVED BY THE CITY OF NEW BRAUNFELS STREET INSPECTOR. AT A MINIMUM, TESTS SHALL BE TAKEN EVERY 200 LF FOR EACH LIFT. UPON COMPLETION OF TESTING, THE GEOTECHNICAL ENGINEER WILL PROVIDE THE CITY OF NEW BRAUNFELS STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FLEXIBLE BASE, AND FILL MATERIAL, AND SUBGRADE, HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS. ADDITIONAL DENSITY TESTS MAY BE REQUESTED BY THE CITY OF NEW BRAUNFELS INSPECTOR.		
ITEM 340		
ASPHALTIC CONCRETE PAVEMENT SHALL BE THE TYPE OF HOT MIX ASPHALT AS DEFINED IN TxDOT'S STANDARD SPECIFICATIONS FOR CURRENT TxDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREET AND BRIDGES.		
THE CITY OF NEW BRAUNFELS WILL NOT ACCEPT THE USE OF RECYCLED ASPHALT PAVEMENT (RAP) OR RECYCLED ASPHALT SHINGLES (RAS) IN ASPHALT MIXTURES FOR NEW ROADWAYS. ANY DEBRIS INCLUSIONS WITHIN NEW ASPHALT PAVEMENTS WILL RESULT IN ASPHALT REMOVAL AND REPLACEMENT FROM CURB TO CURB FOR LIMITS TO BE DETERMINED BY THE CITY OF NEW BRAUNFELS.		
THE ASPHALTIC CONCRETE PAVEMENT SURFACE COURSE SHALL BE PLANT MIXED, HOT LAID TYPE "D" MEETING THE SPECIFICATION REQUIREMENTS OF TxDOT ITEM 340. THE ASPHALTIC CONCRETE PAVEMENT SUB-SURFACE COURSES SHALL BE PLANT MIXED, HOT LAID TYPE "B" MEETING THE SPECIFICATION REQUIREMENTS OF TxDOT ITEM 340. THE MIXTURE SHALL BE DESIGNED PER THE DESIGN REQUIREMENTS SPECIFIED IN TxDOT ITEM 340 AND SHALL BE COMPACTED TO BETWEEN 91 AND 95 PERCENT OF THE MAXIMUM THEORETICAL DENSITY AS DETERMINED BY TxDOT TEST METHOD TEX-227-F. PLACE THE MIXTURE WHEN THE ROADWAY SURFACE TEMPERATURE IS AT OR ABOVE 60°. COMPLETE ALL COMPACTION OPERATIONS BEFORE THE PAVEMENT TEMPERATURE DROPS BELOW 160°. THE ASPHALT CEMENT CONTENT BY PERCENT OF TOTAL MIXTURE WEIGHT SHALL FALL WITHIN A TOLERANCE OF +0.5 PERCENT FROM A SPECIFIC MIX DESIGN.		

UTILITY TRENCH COMPACTION (ADDED TO THE CONSTRUCTION PLANS ON ALL UTILITY PLAN SHEETS).

ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET PAVEMENT SECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEO-TECHNICAL ENGINEER. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE INCHES (12") LOOSE. EACH LAYER OF MATERIAL SHALL BE COMPACTED TO A MINIMUM 95% DENSITY AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEST METHODS TEX-113-E, TEX-114-E, TEX-115-E. THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINED BY THE GEOTECHNICAL ENGINEER AND APPROVED BY THE CITY OF SEGUIN STREET INSPECTOR. AT A MINIMUM, TESTS SHALL BE TAKEN EVERY 100LF FOR EACH LIFT. UPON COMPLETION OF TESTING THE GEO-TECHNICAL ENGINEER SHALL PROVIDE THE CITY OF SEGUIN STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FILL MATERIAL HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS.

CURB CUT DUE TO CONSTRUCTION OF NEW RIGHT-OF-WAY CONSTRUCTION

(INDICATE THE 2 OPTIONS ON THE CONSTRUCTION PLANS).

1. SAWCUT EXISTING STREET AND MATCH TO NEW CONSTRUCTION.
2. SAWCUT EXISTING CURB TO TIE INTO EXISTING CONSTRUCTION.

CONSTRUCTION STABILIZED ENTRANCE

SAWCUT CURB FOR CONSTRUCTION ENTRANCE.

STABILIZED CONSTRUCTION AREA SHALL BE CONSTRUCTED OF 3'X5" ROCK TO BE PLACED A MINIMUM LENGTH OF 25-FT. AND MAINTAINED SO THAT CONSTRUCTION DEBRIS DOES NOT FALL WITHIN THE CITY RIGHT-OF-WAY. RIGHT-OF-WAY MUST BE CLEARED FROM MUD, ROCKS, ETC. AT ALL TIMES.

NOTES TO BE PLACED ON ALL WW PLAN & DETAIL SHEETS)

ENSURE ALL DRIVEWAY APPROACHES ARE BUILT IN GENERAL ACCORDANCE WITH A.D.A. SPECIFICATIONS.

NO VALVES, HYDRANTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS, OR DRIVEWAYS.

SIGNING AND PAVEMENT MARKING PLAN NOTES

THE CONTRACTOR SHALL FURNISH AND INSTALL ALL REGULATORY AND WARNING SIGNS, STREETS NAME SIGNS AND SIGN MOUNTS IN ACCORDANCE WITH APPROVED ENGINEERING PLANS. THE CITY WILL INSPECT ALL SIGNS AT FINAL INSPECTION.

THE CONTRACTOR SHALL INSTALL ALL PAVEMENT MARKINGS IN ACCORDANCE WITH APPROVED ENGINEERING PLANS. THE CONTRACTOR SHALL NOTIFY THE CITY AT LEAST TWENTY-FOUR (24) HOURS PRIOR TO THE INSTALLATION OF ALL SEALER AND FINAL MARKINGS. THE CITY WILL INSPECT ALL MARKINGS AT FINAL APPLICATION.

SIGNAGE NOTES

INSTALLATION

THE CONTRACTOR SHALL FURNISH AND INSTALL ALL REGULATORY, WARNING AND STREET NAME SIGNS AND SIGN MOUNTS IN ACCORDANCE WITH APPROVED ENGINEERING PLANS.

MOUNTING

THE WEDGE ANCHOR STEEL SYSTEM AND THIN-WALLED TUBING POST SHALL BE USED FOR SIGNS WITH UP TO 10 SQUARE FEET OF SIGN AREA. MATERIALS AND INSTALLATION SHOULD FOLLOW THE TEXAS DEPARTMENT OF TRANSPORTATION (TxDOT) TRAFFIC STANDARDS SMD (GEN) - 08 AND SMD (TWT) - 08. THE TRIANGULAR SLIP BASE SYSTEM AND 10 BWG TUBING POST SHALL BE USED FOR SIGNS THAT HAVE 10 TO 16 SQUARE FEET OF SIGN AREA. MATERIALS AND INSTALLATION SHOULD FOLLOW THE TxDOT TRAFFIC STANDARDS SMD (GEN) - 08 AND SMD (SLIP-1-3) - 08.

OBJECT MARKERS MATERIALS AND INSTALLATION SHOULD FOLLOW THE TxDOT TRAFFIC STANDARDS D & OM (1 - 5) - 10.

MATERIALS

SIGN MATERIALS INCLUDING ALUMINUM SIGN BLANKS AND SIGN FACE MATERIALS SHOULD FOLLOW THE TxDOT TRAFFIC STANDARDS TSR (1 - 5) - 08 AND DEPARTMENTAL MATERIAL SPECIFICATIONS DMS-7110 AND DMS-8300.

THE CITY OF SEGUIN WILL INSPECT ALL SIGNS AT FINAL INSPECTION.

SEQUENCE OF CONSTRUCTION

1. INSTALL EROSION CONTROLS PER APPROVED PLAN.
2. TEMPORARY CONTROLS TO BE INSPECTED AND MAINTAINED WEEKLY AND PRIOR TO ANTICIPATED RAINFALL EVENTS, AND AFTER RAINFALL EVENTS, AS NEEDED. CONTRACTOR/OWNER SHALL PROVIDE A CONTACT NAME AND NUMBER FOR EROSION CONTROL ISSUES.
3. CONDUCT DEMOLITION ACTIVITIES, IF APPLICABLE.
4. CONSTRUCT DRAINAGE IMPROVEMENTS, IF APPLICABLE.
5. CONSTRUCT CURB INLET PROTECTION AT THE TIME OF CURB INLET INSTALLATION.
6. CONSTRUCT DEVELOPMENT PER APPROVED PLANS.
7. INSTALL STREETScape AND/OR LANDSCAPING IMPROVEMENTS.
8. CONTRACTOR TO VEGETATE ANY DISTURBED AREAS ONCE FINAL GRADING IS COMPLETE, AND ESTABLISH A MIN OF 70% VEGETATION PRIOR TO COMPLETION
9. REMOVE ALL TEMPORARY EROSION CONTROL MEASURES.
10. TPDES REQUIREMENTS - DISTURBED AREAS ON WHICH CONSTRUCTION ACTIVITIES HAVE CEASED (TEMPORARY OR PERMANENTLY) SHALL BE STABILIZED WITHIN 14 DAYS UNLESS ACTIVITY WILL BEGIN AGAIN WITHIN 21 DAYS

MUNICIPAL UTILITY DISTRICT (MUD) NOTES:

1. THE DISTRICT ENGINEER, JONES-HEROY & ASSOCIATES, INC. (KEN HEROY, PH:512-989-2200) SHALL BE CONTACTED 48 HOURS PRIOR TO:
  - A. PRE-CONSTRUCTION MEETINGS;
  - B. BEGINNING EACH PHASE OF CONSTRUCTION;
  - C. TESTING OF WATER AND /OR WASTEWATER LINES; AND,
  - D. FINAL WALK-THROUGH OF FACILITIES.
2. THE DISTRICT OPERATOR SHALL BE CONTACTED 48 HOURS PRIOR TO:
  - A. PRE-CONSTRUCTION MEETINGS;
  - B. BEGINNING EACH PHASE OF CONSTRUCTION;
  - C. TESTING OF WATER AND/OR WASTEWATER LINES; AND,
  - D. FINAL WALK-THROUGH OF FACILITIES.



PLAT NOTES:

1. ALL LOTS WITHIN THE SUBDIVISION WILL BE PROVIDED WATER BY CRYSTAL CLEAR, SEWER BY CITY OF SEGUIN, AND ELECTRIC SERVICE BY GVEC, TELEPHONE AND CABLE SERVICES FOR THE SUBDIVISION WILL BE PROVIDED BY AT&T COMMUNICATIONS AND/OR SPECTRUM.

2. ALL BEARINGS AND COORDINATES SHOWN HEREON ARE BASED UPON THE TEXAS COORDINATE SYSTEM, SOUTH CENTRAL ZONE (4204), NORTH AMERICAN DATUM 1983, GRID. DISTANCES SHOWN HEREON ARE BASED UPON SURFACE MEASUREMENTS, TO CONVERT SURFACE DISTANCES TO GRID, APPLY A COMBINED SCALE FACTOR OF 1.00015.

3. MONUMENTS WERE FOUND OR SET AT EACH CORNER OF THE SURVEY BOUNDARY OF THE SUBDIVISION, MONUMENTS AND LOT MARKERS WILL BE SET WITH 1/2" IRON PINS WITH PLASTIC CAP STAMPED "HMT" IMMEDIATELY AFTER COMPLETION OF UTILITY INSTALLATION AND STREET CONSTRUCTION UNLESS NOTED OTHERWISE.

4. THIS SUBDIVISION IS NOT WITHIN THE EDWARDS AQUIFER RECHARGE ZONE.

5. THIS SUBDIVISION IS NOT WITHIN THE CITY LIMITS OF NEW BRAUNFELS, TEXAS.

6. THIS SUBDIVISION IS WITHIN THE NAVARRO INDEPENDENT SCHOOL DISTRICT.

7. A PORTION OF THE SUBDIVISION IS LOCATED WITHIN AN INDICATED SPECIAL FLOOD HAZARD ZONE ACCORDING TO THE ADOPTED FLOOD MAPS OF THE CITY OF NEW BRAUNFELS, AS DEFINED BY THE GUADALUPE COUNTY, TEXAS, FLOOD INSURANCE RATE MAP NUMBER 481870J30F, EFFECTIVE DATE NOVEMBER 2, 2007, AS PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY.

8. NO STRUCTURES, WALLS OR OTHER OBSTRUCTIONS OF ANY KIND SHALL BE PLACED WITHIN THE LIMITS OF THE DRAINAGE EASEMENTS SHOWN ON THIS PLAT. NO LANDSCAPING, FENCES, OR OTHER TYPE OF MODIFICATIONS WHICH ALTER THE CROSS SECTIONS OF THE DRAINAGE EASEMENTS OR DECREASE THE HYDRAULIC CAPACITY OF THE EASEMENT, AS APPROVED, SHALL BE ALLOWED WITHOUT THE APPROVAL OF THE CITY ENGINEER. THE CITY OF NEW BRAUNFELS SHALL HAVE THE RIGHT OF INGRESS AND EGRESS OVER GRANTOR'S ADJACENT PROPERTY TO REMOVE ANY OBSTRUCTIONS PLACED WITHIN THE LIMITS OF SAID DRAINAGE EASEMENTS AND TO MAKE ANY MODIFICATIONS OR IMPROVEMENTS WITHIN SAID DRAINAGE EASEMENTS.

9. FUTURE DEVELOPMENT IS SUBJECT TO CHAPTER 114 (STREETS, SIDEWALKS AND OTHER PUBLIC SPACES) OF THE NEW BRAUNFELS CODE OF ORDINANCES.

10. FOUR (4) FOOT WIDE SIDEWALKS WILL BE CONSTRUCTED PER CITY STANDARDS ADJACENT TO THE CURB BY THE DEVELOPER AT THE TIME OF STREET CONSTRUCTION ALONG:

A. MOSLEY PASS LOT 905, BLOCK 17,  
B. WOODLAND CHASE LOT 905, BLOCK 17.

11. FOUR (4) FOOT WIDE SIDEWALKS WILL BE CONSTRUCTED PER CITY STANDARDS ADJACENT TO THE CURB BY THE HOME BUILDER AT THE TIME OF BUILDING CONSTRUCTION ALONG: WOODLAND CHASE, TYLER PATH, MOSLEY PASS, CUB WAY, AND LIONS CROSSING.

12. THE ELEVATION OF THE LOWEST FLOOR OF A STRUCTURE SHALL BE AT LEAST 10 INCHES ABOVE THE FINISHED GRADE OF THE SURROUNDING GROUND, WHICH SHALL BE SLOPED IN A FASHION SO AS TO DIRECT STORMWATER AWAY FROM THE STRUCTURE. PROPERTIES ADJACENT TO STORMWATER CONVEYANCE STRUCTURES MUST HAVE A FLOOR SLAB ELEVATION OR BOTTOM OF FLOOR JOISTS A MINIMUM OF ONE FOOT ABOVE THE 100-YEAR WATER FLOW ELEVATION IN THE STRUCTURE. DRIVEWAYS SERVING HOUSES ON THE DOWNHILL SIDE OF THE STREET SHALL HAVE A PROPERLY SIZED CROSS SWALE PREVENTING RUNOFF FROM ENTERING THE GARAGE AND SHALL PREVENT WATER FROM LEAVING THE STREET.

13. THIS SUBDIVISION IS SUBJECT TO THE 2018 CITY OF NEW BRAUNFELS PARK LAND DEDICATION AND DEVELOPMENT ORDINANCE. THIS PLAT IS APPROVED FOR ONE DWELLING UNIT(S) PER BUILDABLE LOT WITH A MAXIMUM OF 156 BUILDABLE LOTS. AT SUCH TIME THAT ADDITIONAL DWELLING UNITS ARE CONSTRUCTED, THE OWNER OF THE LOT(S) SHALL NOTIFY THE CITY AND COMPLY WITH THE ORDINANCE FOR EACH DWELLING UNIT.

14. NON-RESIDENTIAL USE SUBDIVISIONS ARE NOT SUBJECT TO THE PARK LAND DEDICATION AND DEVELOPMENT REQUIREMENTS, HOWEVER, AT SUCH TIME ANY DWELLING UNITS ARE CONSTRUCTED, THE OWNER OF THE LOT SHALL CONTACT THE CITY AND COMPLY WITH THE ORDINANCE FOR EACH DWELLING UNIT.

15. THIS UNIT CONTAINS 156 BUILDABLE RESIDENTIAL LOTS, ALL LOTS MEET THE MINIMUM SQUARE FOOTAGE REQUIREMENT ACCORDING TO THE ZONING ORDINANCE.

16. ALL DRAINAGE EASEMENTS WITHIN THE LOTS WILL BE OWNED AND MAINTAINED BY PROPERTY OWNER.

17. PERMANENT WATER QUALITY CONTROLS ARE REQUIRED FOR THIS SUBDIVISION PLAT IN ACCORDANCE WITH THE CITY OF NEW BRAUNFELS DRAINAGE AND EROSION CONTROL DESIGN MANUAL.

18. LOT 905, BLOCK 17 (DRAINAGE) WILL BE OWNED AND MAINTAINED BY THE JARO NORTH HOME OWNER ASSOCIATION, ITS SUCCESSORS AND/OR ASSIGNS.

KNOW ALL MEN BY THESE PRESENTS:

I, THE UNDERSIGNED DOROTHY J. TAYLOR, A REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE OF TEXAS, HEREBY CERTIFY THAT THIS PLAT IS TRUE AND CORRECTLY MADE UNDER MY SUPERVISION AND IN COMPLIANCE WITH CITY AND STATE SURVEY REGULATIONS AND LAWS AND MADE ON THE GROUND AND THAT THE CORNER MONUMENTS WERE PROPERLY PLACED UNDER MY SUPERVISION.

PRELIMINARY, THIS DOCUMENT SHALL NOT BE RECORDED FOR ANY PURPOSE.

DOROTHY J. TAYLOR  
REGISTERED PROFESSIONAL LAND SURVEYOR NO. 6295  
290 S. CASTELL AVE., SUITE 100, NEW BRAUNFELS, TEXAS 78130

PLAT PREPARED OCTOBER 14, 2025

HMT

ENGINEERING & SURVEYING

290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPELS FIRM F-10961  
TBPELS FIRM 10153600

FINAL PLAT ESTABLISHING  
JARO NORTH, UNIT 3

24,962 TOTAL ACRES OF LAND LOCATED IN THE A.M. ESNAURIZAR SURVEY, ABSTRACT NO. 20, AND THE W.J. RAGSDALE SURVEY, ABSTRACT NO. 268, GUADALUPE COUNTY, TEXAS, CONSISTING OF A CALLED 55.967 ACRE TRACT RECORDED IN DOCUMENT NO. 202299023989, AND A CALLED 84.585 ACRE TRACT RECORDED IN DOCUMENT NO. 202299019628, OFFICIAL PUBLIC RECORDS, GUADALUPE COUNTY, TEXAS

CCSUD WATER PLAT NOTES: REV. 12/2022

1. WATER IS TO BE SUPPLIED BY CRYSTAL CLEAR SPECIAL UTILITY DISTRICT (CCSUD).
2. CCSUD SHALL HAVE ACCESS TO ALL METERS. METERS SHALL BE LOCATED IN THE FRONT YARD, WITHIN EASEMENT AND NOT WITHIN A FENCED AREA.
3. ANY EASEMENT DESIGNATED FOR PLACEMENT OF A CCSUD UTILITY SHALL REMAIN OPEN AND ACCESSIBLE AT ALL TIMES. ONLY SIDE LOT EASEMENTS MAY BE WITHIN A FENCED AREA. NO UTILITIES MAY BE INSTALLED WITHIN REAR LOT EASEMENTS.
4. ALL CCSUD EASEMENTS ARE FOR CONSTRUCTION, MAINTENANCE (INCLUDING BUT NOT LIMITED TO REMOVAL OF TREES AND OTHER OBSTRUCTIONS), READING OF METERS, AND REPAIR OF ANY CCSUD INFRASTRUCTURE LOCATED WITHIN THE UTILITY EASEMENT.
5. NO CONCRETE OR PAVEMENT MAY BE PLACED OVER CCSUD WATER INFRASTRUCTURE EXCEPT AT PERPENDICULAR CROSSINGS. IN AREAS WHERE A WATER MAIN CROSSES A ROADWAY, THE WATER MAIN MUST BE ENCASED OR CONSTRUCTED OF DUCTILE IRON PIPE. SERVICE LINES MUST BE ENCASED PER CCSUD STANDARD CONSTRUCTION DETAILS.

THE SUBDIVISION PLAT OF JARO NORTH SUBDIVISION UNIT 2 HAS BEEN SUBMITTED TO AND APPROVED BY THE CRYSTAL CLEAR SPECIAL UTILITIES DISTRICT FOR EASEMENTS

DATE AUTHORIZED AGENT, CRYSTAL CLEAR SPECIAL UTILITIES DISTRICT

APPROVED THIS THE DAY OF 20 BY THE PLANNING COMMISSION OF THE CITY OF NEW BRAUNFELS, TEXAS.

CHAIRMAN

APPROVED FOR ACCEPTANCE

DATE PLANNING DIRECTOR  
DATE CITY ENGINEER  
DATE NEW BRAUNFELS UTILITIES

STATE OF TEXAS  
COUNTY OF GUADALUPE

COUNTY CLERK, GUADALUPE COUNTY, TEXAS

DEPUTY

STATE OF TEXAS  
COUNTY OF GUADALUPE

I (WE) THE UNDERSIGNED OWNER(S) OF THE LAND SHOWN ON THIS PLAT, AND DESIGNATED HEREIN AS THE LANDING A SUBDIVISION TO THE CITY OF NEW BRAUNFELS, COUNTY OF COMAL/GUADALUPE, TEXAS, AND WHOSE NAME IS SUBSCRIBED HERETO, DO HEREBY SUBDIVIDE SUCH PROPERTY AND DEDICATE TO THE USE OF THE PUBLIC ALL STREETS, ALLEYS, PARKS, DRAINS, EASEMENTS, AND PUBLIC PLACES THEREON SHOWN FOR THE PURPOSES AND CONSIDERATION THEREIN EXPRESSED.

LENNAR HOMES OF TEXAS LAND AND CONSTRUCTION, LTD., A TEXAS LIMITED PARTNERSHIP

BY: U.S. HOME LLC, A DELAWARE LIMITED LIABILITY COMPANY (AS SUCCESSOR-IN-INTEREST BY CONVERSION TO U.S. HOME CORPORATION, A DELAWARE CORPORATION), ITS GENERAL PARTNER

BY: LENNAR HOMES OF TEXAS LAND AND CONSTRUCTION, LTD  
100 NE LOOP 410, SUITE 1155  
SAN ANTONIO, TX 78216  
NAME: RICHARD MOTT  
TITLE: VICE PRESIDENT OF LAND DEVELOPMENT

STATE OF TEXAS  
COUNTY OF

THIS INSTRUMENT WAS ACKNOWLEDGED BEFORE ME ON THIS DAY OF 20 BY

NOTARY PUBLIC, STATE OF TEXAS  
MY COMMISSION EXPIRES:

SHEET 1 OF 2

FOR REFERENCE ONLY  
This plat will be submitted to the Planning Division following approval of the construction plans.

290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPELS FIRM F-10961  
TBPELS FIRM 1053600

PLAT (1 OF 2)

JARO NORTH UNIT 3

NO.	REVISION	DESCRIPTION	REVISION DATE

DATE: October 25

DRAWN BY: RR

DESIGNED BY: JK

REVIEWED BY: ZJ

HMT PROJECT NO.:  
337.102

SHEET  
C0.2

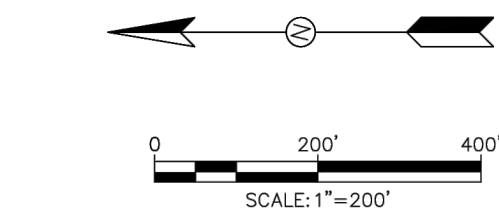




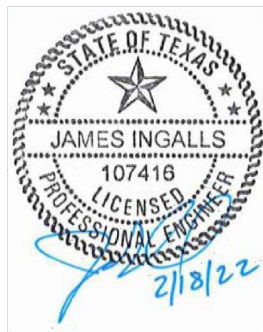
This plat will be submitted to the Planning Division following approval of the construction plans.



Drawing Name: M:\Projects\102 - Jaro North Unit 3\03a\Reports\Drainage\DA Maps\337.102 OVERALL DA MAPS.dwg User: jashuk Oct 24, 2025 - 9:50am



- LEGEND**
- LIMITS OF DRAINAGE AREA
  - - - LIMITS OF SUB-DRAINAGE AREA
  - TC — TC — TIME OF CONCENTRATION
  - 900 — EXISTING CONTOURS
  - 900 — PROPOSED CONTOURS
  - FLOW ARROWS
  - (A) 9.0 DRAINAGE BASIN LABEL
  - (A1) 2.0 BASIN AREA (AC)
  - (A1) SUB-DRAINAGE AREA LABEL
  - (A1) SUB-DRAINAGE AREA (AC)
  - (A1) INLET LABEL
  - (A1) ANALYSIS POINT LABEL



**NB DEAN, LLC**  
1286 RIVER RD  
NEW BRAUNFELS, TX 78130

**JARO NORTH SUBDIVISION  
UNIT 1**

**DRAINAGE AREA MAP -  
EXISTING**

SHEET **20** OF **49**

NO	DATE	ISSUES AND REVISIONS
1		
2		
3		
4		

2021 W SH46, STE 105  
NEW BRAUNFELS, TX. 78132  
PH: 830-358-7127 ink-civil.com  
TBPE FIRM F-13351

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APPROVED JARO NORTH UNIT 1 EXISTING DRAINAGE MAP  
FOR REFERENCE ONLY

OVERALL EXISTING  
DRAINAGE MAP - INK CIVIL

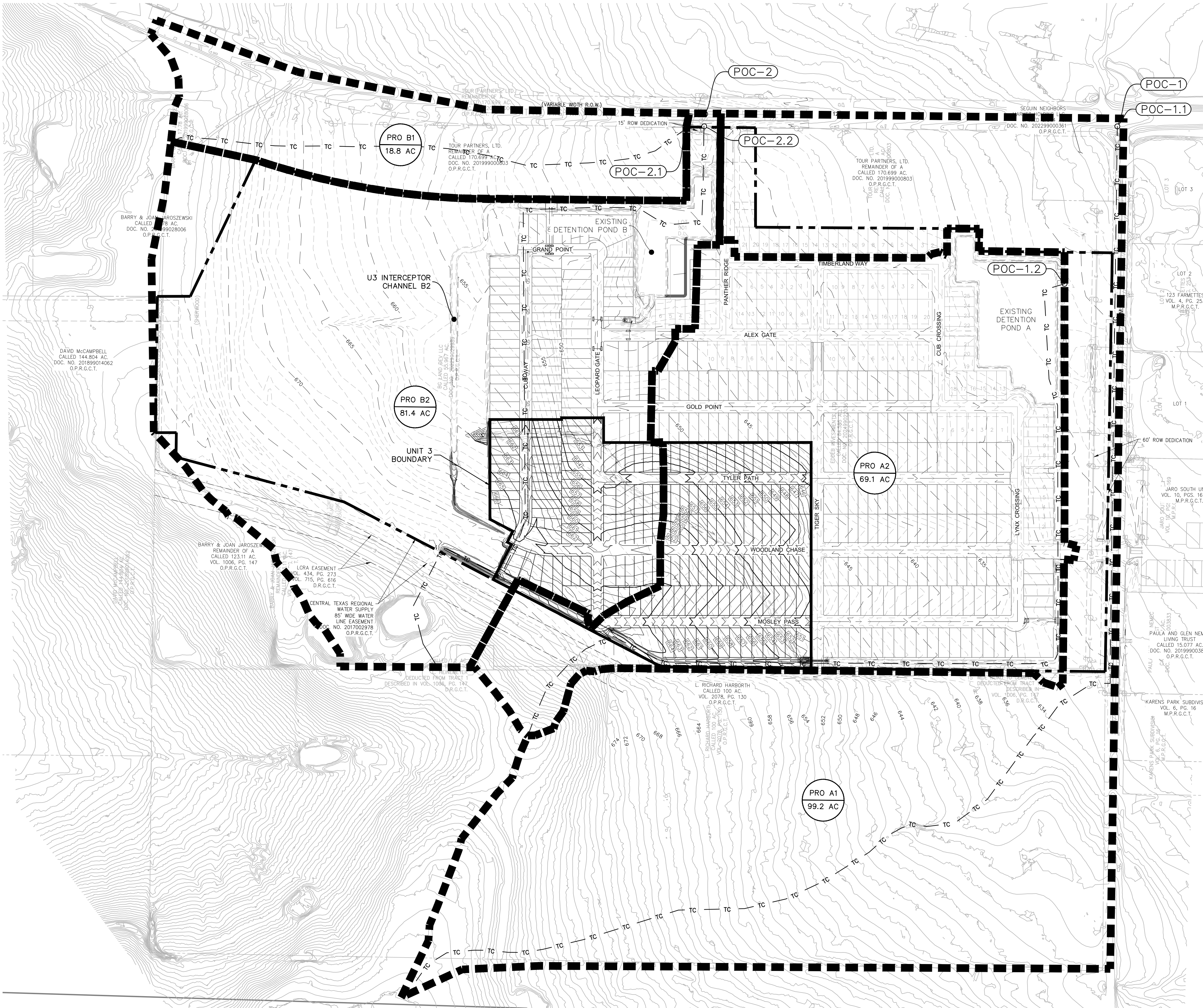
REVISION DATE	REVISION DESCRIPTION	NO.

DATE: **October 25**  
DRAWN BY: **RR**  
DESIGNED BY: **JK**  
REVIEWED BY: **ZJ**  
HMT PROJECT NO.: **337.102**

**SHEET  
C1.0**

290 S. CASTELL AVE. STE. 100  
NEW BRAUNFELS, TX 78130  
TBPELS FIRM F-10961  
TBPELS FIRM 1053600





**LEGEND**

- PROPERTY LINE
- EXISTING CONTOURS
- PROPOSED CONTOURS
- B.L. BUILDING SETBACK LINE
- U.E. UTILITY EASEMENT
- D.E. DRAINAGE EASEMENT
- DRAINAGE AREA
- TC TIME OF CONCENTRATION
- A-1 POINT OF CONCENTRATION
- ← DRAINAGE FLOW DIRECTION
- DA ACRES DRAINAGE AREA LABEL

**Table 2 - Proposed Conditions(Pre-Detention) Hydrology Calculations (SCS)**

Area ID	Point of Concentration	Area (ac)	T <sub>c</sub> (min)	CN	Q <sub>2</sub> (cfs)	Q <sub>10</sub> (cfs)	Q <sub>50</sub> (cfs)	Q <sub>100</sub> (cfs)	Q <sub>200</sub> (cfs)
PRO A1	POC-1.1	99.20	41.5	84	140.85	284.89	355.64	484.37	607.38
PRO A2	POC-1.2	69.10	18.8	87	152.93	294.37	401.85	497.43	606.76
PRO B1	POC-2.1	18.80	23.8	84	33.30	67.00	93.02	116.21	142.74
PRO B2	POC-2.2	81.40	26.5	85	149.12	295.49	407.97	508.11	622.67

**Table 3 - Proposed Conditions(Post-Detention) Hydrology Calculations (SCS)**

Area ID	Point of Concentration	Area (ac)	T <sub>c</sub> (min)	CN	Q <sub>2</sub> (cfs)	Q <sub>10</sub> (cfs)	Q <sub>50</sub> (cfs)	Q <sub>100</sub> (cfs)	Q <sub>200</sub> (cfs)
PRO A1	POC-1.1	99.2	41.5	84	140.85	284.89	355.64	484.37	607.38
PRO A2 (Pond A)	POC-1.2	107.88	201.33	275.05	355.23	453.14			
PRO B1	POC-2.1	18.8	23.8	84	33.30	67.00	93.02	116.21	142.74
PRO B2 (Pond B)	POC-2.2	128.87	257.51	360.80	454.60	563.19			
PRO A(POND A)+PRO A1)	POC-1	247.85	484.35	668.46	844.73	1050.86			
PRO B(POND B)+PRO B1)	POC-2	158.49	317.45	445.00	559.91	694.32			

**Table 4 - Proposed POC-1 Comparison Table**

Point of Concentration	Description	Q <sub>2</sub> (cfs)	Q <sub>10</sub> (cfs)	Q <sub>50</sub> (cfs)	Q <sub>100</sub> (cfs)	Q <sub>200</sub> (cfs)
POC-1	Pre-Development Flowrates	250.17	506.03	702.74	878.11	1078.80
A	Post-Development Flowrates	247.65	484.35	668.46	844.73	1050.86
Δ		(-2.52)	(-21.68)	(-34.28)	(-33.38)	(-27.94)
Δ (%)		-1.01%	-4.28%	-4.88%	-3.80%	-2.59%

**Table 5 - Proposed POC-2 Comparison Table**

Point of Concentration	Description	Q <sub>2</sub> (cfs)	Q <sub>10</sub> (cfs)	Q <sub>50</sub> (cfs)	Q <sub>100</sub> (cfs)	Q <sub>200</sub> (cfs)
POC-2	Pre-Development Flowrates	175.80	353.96	491.44	613.94	754.08
A	Post-Development Flowrates	158.49	317.45	445.00	559.91	694.32
Δ		(-17.41)	(-36.51)	(-46.44)	(-54.03)	(-59.76)
Δ (%)		-9.90%	-10.31%	-9.45%	-8.80%	-7.92%

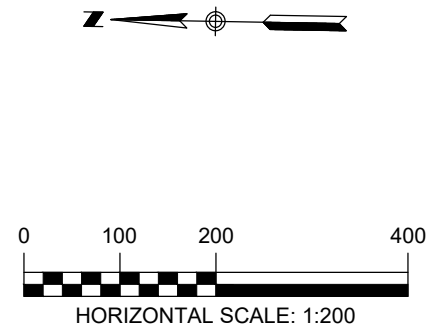
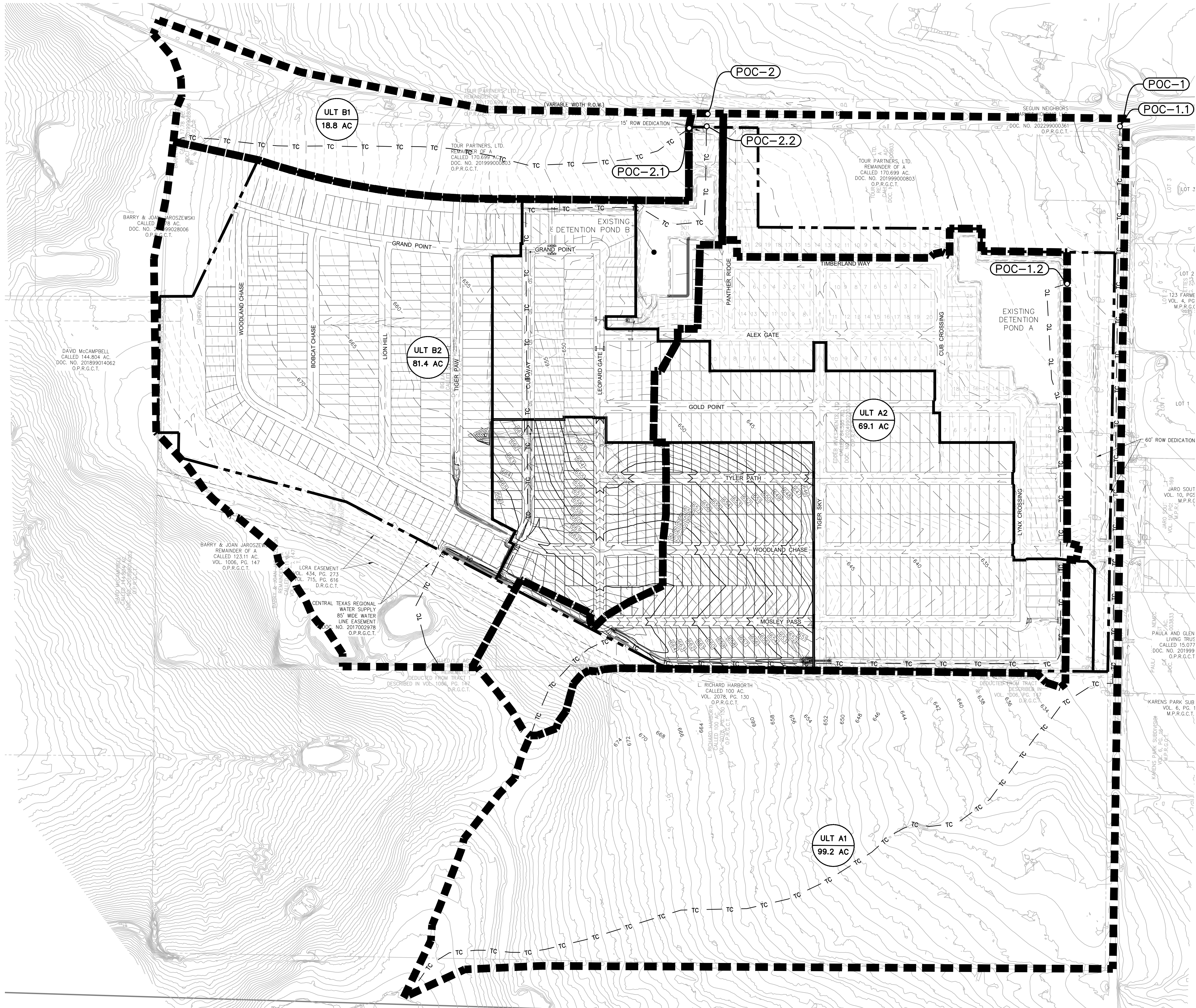
OVERALL PROPOSED  
DRAINAGE MAP

JARO NORTH UNIT 3

NO.	REVISION DESCRIPTION	REVISION DATE

DATE: October 25  
DRAWN BY: RR  
DESIGNED BY: JK  
REVIEWED BY: ZJ  
HMT PROJECT NO.: 337.102





- LEGEND**
- PROPERTY LINE
  - PHASE LINE
  - EXISTING CONTOURS
  - PROPOSED CONTOURS
  - BUILDING SETBACK LINE
  - U.E. UTILITY EASEMENT
  - D.E. DRAINAGE EASEMENT
  - DRAINAGE AREA
  - TC TIME OF CONCENTRATION
  - A-1 POINT OF CONCENTRATION
  - DRAINAGE FLOW DIRECTION
  - DA ACRES DRAINAGE AREA LABEL

Table 6 - Ultimate Conditions(Pre-Detention) Hydrology Calculations (SCS)										
Area ID	Point of Concentration	Area (ac)	T <sub>c</sub> (min)	CN	Q <sub>2</sub> (cfs)	Q <sub>10</sub> (cfs)	Q <sub>50</sub> (cfs)	Q <sub>100</sub> (cfs)	Q <sub>200</sub> (cfs)	Q <sub>500</sub> (cfs)
ULT A1	POC-1.1	99.20	41.5	84	140.85	284.89	395.64	494.37	607.38	607.38
ULT A2	POC-1.2	69.10	18.8	87	152.93	294.37	401.85	497.43	606.76	606.76
ULT B1	POC-2.1	18.80	23.8	84	33.30	67.00	93.02	116.21	142.74	142.74
ULT B2	POC-2.2	81.40	26.5	86	154.07	300.73	412.96	512.81	627.03	627.03

Table 7 - Ultimate Conditions(Post-Detention) Hydrology Calculations (SCS)										
Area ID	Point of Concentration	Area (ac)	T <sub>c</sub> (min)	CN	Q <sub>2</sub> (cfs)	Q <sub>10</sub> (cfs)	Q <sub>50</sub> (cfs)	Q <sub>100</sub> (cfs)	Q <sub>200</sub> (cfs)	Q <sub>500</sub> (cfs)
ULT A1	POC-1.1	99.2	41.5	84	140.85	284.89	395.64	494.37	607.38	607.38
ULT A2 (Pond A)	POC-1.2				107.88	201.33	275.06	355.23	453.14	453.14
ULT B1	POC-2.1	18.8	23.8	84	33.30	67.00	93.02	116.21	142.74	142.74
ULT B2 (Pond B)	POC-2.2				133.13	262.13	365.51	459.05	567.27	567.27
ULT A(POND A+PRO A1)	POC-1				247.65	484.35	668.46	844.73	1050.86	1050.86
ULT B(POND B+PRO B1)	POC-2				162.75	322.22	449.71	564.52	698.60	698.60

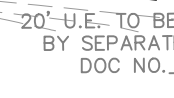
Table 8 - Ultimate POC-1 Comparison Table						
Point of Concentration	Description	Q <sub>2</sub> (cfs)	Q <sub>10</sub> (cfs)	Q <sub>50</sub> (cfs)	Q <sub>100</sub> (cfs)	Q <sub>500</sub> (cfs)
POC-1	Pre-Development Flowrates	250.17	506.03	702.74	878.11	1078.80
A	Post-Development Flowrates	247.65	484.35	668.46	844.73	1050.86
Δ		(-2.52)	(-21.68)	(-34.28)	(-33.38)	(-27.94)
Δ (%)		-1.01%	-4.28%	-4.88%	-3.80%	-2.59%

Table 9 - Ultimate POC-2 Comparison Table						
Point of Concentration	Description	Q <sub>2</sub> (cfs)	Q <sub>10</sub> (cfs)	Q <sub>50</sub> (cfs)	Q <sub>100</sub> (cfs)	Q <sub>500</sub> (cfs)
POC-2	Pre-Development Flowrates	175.90	353.96	491.44	613.94	754.08
A	Post-Development Flowrates	162.75	322.22	449.71	564.52	698.60
Δ		(-13.15)	(-31.74)	(-41.73)	(-49.42)	(-55.48)
Δ (%)		-7.48%	-8.97%	-8.49%	-8.05%	-7.36%

NO.	REVISION	DESCRIPTION	REVISION DATE

DATE: October 25  
DRAWN BY: RR  
DESIGNED BY: JK  
REVIEWED BY: ZJ  
HMT PROJECT NO.: 337.102





CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES  
24-HOURS PRIOR TO COMMENCING CONSTRUCTION.

HMT PROJECT NO.:  
337.102

DRAWN BY:	RR
DESIGNED BY:	JK

NO.						
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NO

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# H RING

**MT** **REVEY I**

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TBPEI

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RM F-  
RM 10

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CONCRETE WASHOUT AREAS

THE PURPOSE OF CONCRETE WASHOUT AREAS IS TO PREVENT OR REDUCE THE DISCHARGE OF POLLUTANTS TO STORMWATER FROM CONCRETE WASTE BY CONDUCTING WASHOUT OFFSITE, PERFORMING ONSITE WASHOUT IN A DESIGNATED AREA, AND TRAINING EMPLOYEES AND SUBCONTRACTORS.

THE FOLLOWING STEPS WILL HELP REDUCE STORMWATER POLLUTION FROM CONCRETE WASTES:

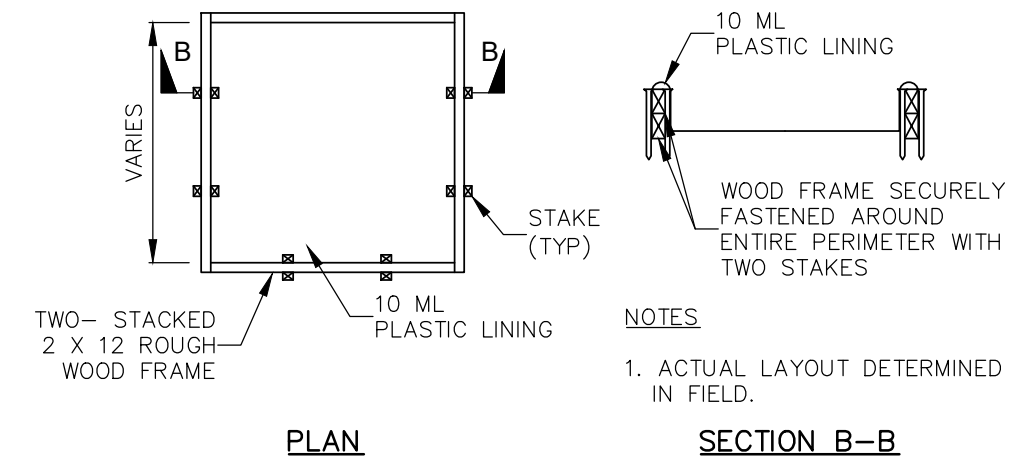
- INCORPORATE REQUIREMENTS FOR CONCRETE WASTE MANAGEMENT INTO MATERIAL SUPPLIER AND SUBCONTRACTOR AGREEMENTS.
- AVOID MIXING EXCESS AMOUNTS OF FRESH CONCRETE.
- PERFORM WASHOUT OF CONCRETE TRUCKS IN DESIGNATED AREAS ONLY.
- DO NOT WASH OUT CONCRETE TRUCKS INTO STORM DRAINS, OPEN DITCHES, STREETS, OR STREAMS.
- DO NOT ALLOW EXCESS CONCRETE TO BE DUMPED ONSITE, EXCEPT IN DESIGNATED AREAS.

FOR ONSITE WASHOUT:

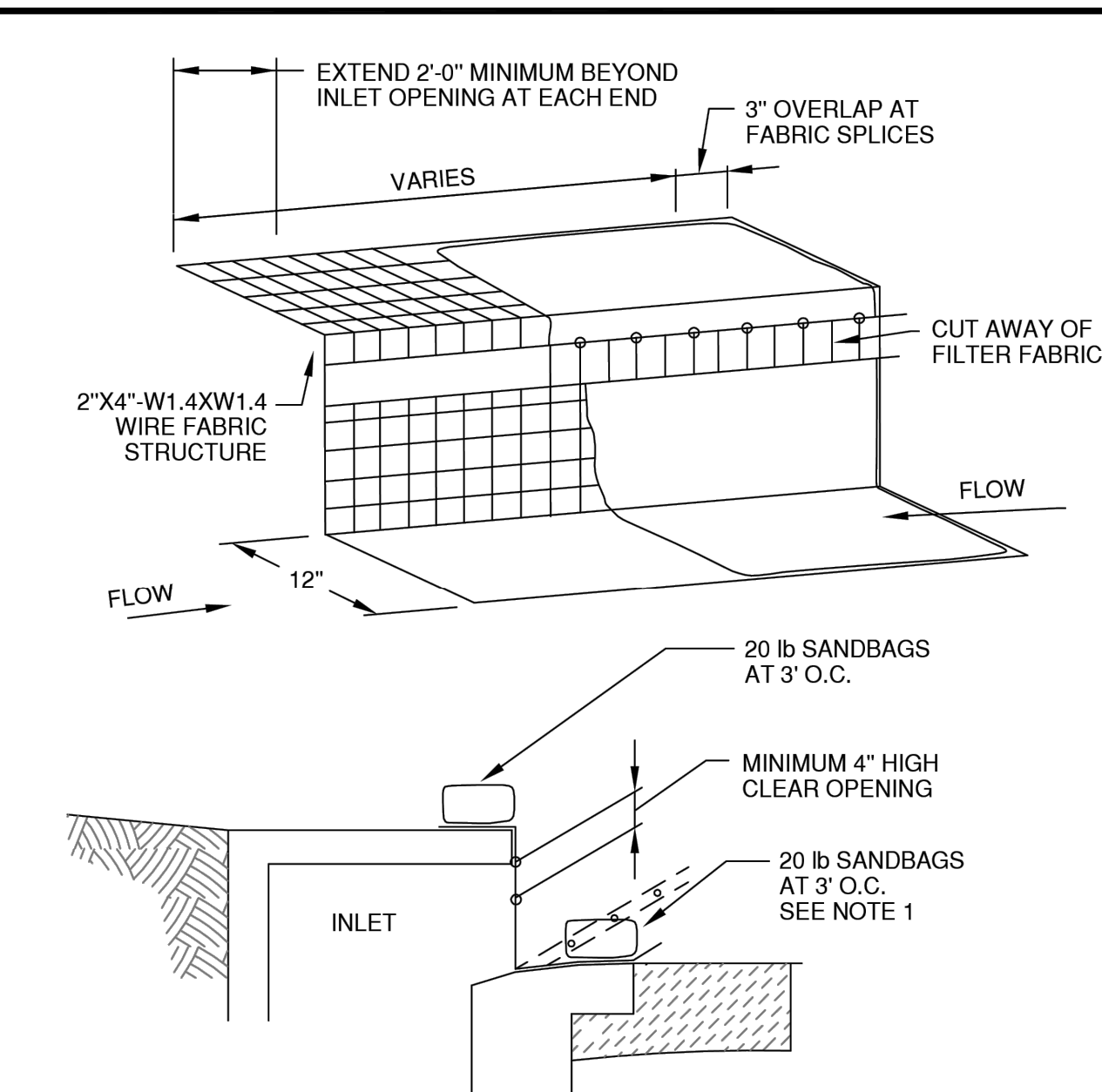
- LOCATE WASHOUT AREA AT LEAST 50 FEET FROM SENSITIVE FEATURES, STORM DRAINS, OPEN DITCHES, OR WATER BODIES. DO NOT ALLOW RUNOFF FROM THIS AREA BY CONSTRUCTING A TEMPORARY PIT OR BERMED AREA LARGE ENOUGH FOR LIQUID AND SOLID WASTE.
- WASH OUT WASTES INTO THE TEMPORARY PIT WHERE THE CONCRETE CAN SET, BE BROKEN UP, AND THEN DISPOSED PROPERLY.

BELOW GRADE CONCRETE WASHOUT FACILITIES ARE TYPICAL. THESE CONSIST OF A LINED EXCAVATION SUFFICIENTLY LARGE TO HOLD EXPECTED VOLUME OF WASHOUT MATERIAL. ABOVE GRADE FACILITIES ARE USED IF EXCAVATION IS NOT PRACTICAL. TEMPORARY CONCRETE WASHOUT FACILITY (TYPE ABOVE GRADE) SHOULD BE CONSTRUCTED AS SHOWN ON THE DETAILS AT THE END OF THIS SECTION, WITH SUFFICIENT QUANTITY AND VOLUME TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS. PLASTIC LINING MATERIAL SHOULD BE A MINIMUM OF 10 MIL IN POLYETHYLENE SHEETING AND SHOULD BE FREE OF HOLES, TEARS, OR OTHER DEFECTS THAT COMPROMISE THE IMPERMEABILITY OF THE MATERIAL.

WHEN TEMPORARY CONCRETE WASHOUT FACILITIES ARE NO LONGER REQUIRED FOR THE WORK, THE HARDENED CONCRETE SHOULD BE REMOVED AND DISPOSED OF. MATERIALS USED TO CONSTRUCT TEMPORARY CONCRETE WASHOUT FACILITIES SHOULD BE REMOVED FROM THE SITE OF THE WORK AND DISPOSED OF HOLES, DEPRESSIONS OR OTHER GROUND DISTURBANCE CAUSED BY THE REMOVAL OF THE TEMPORARY CONCRETE WASHOUT FACILITIES SHOULD BE BACKFILLED AND REPAIRED.




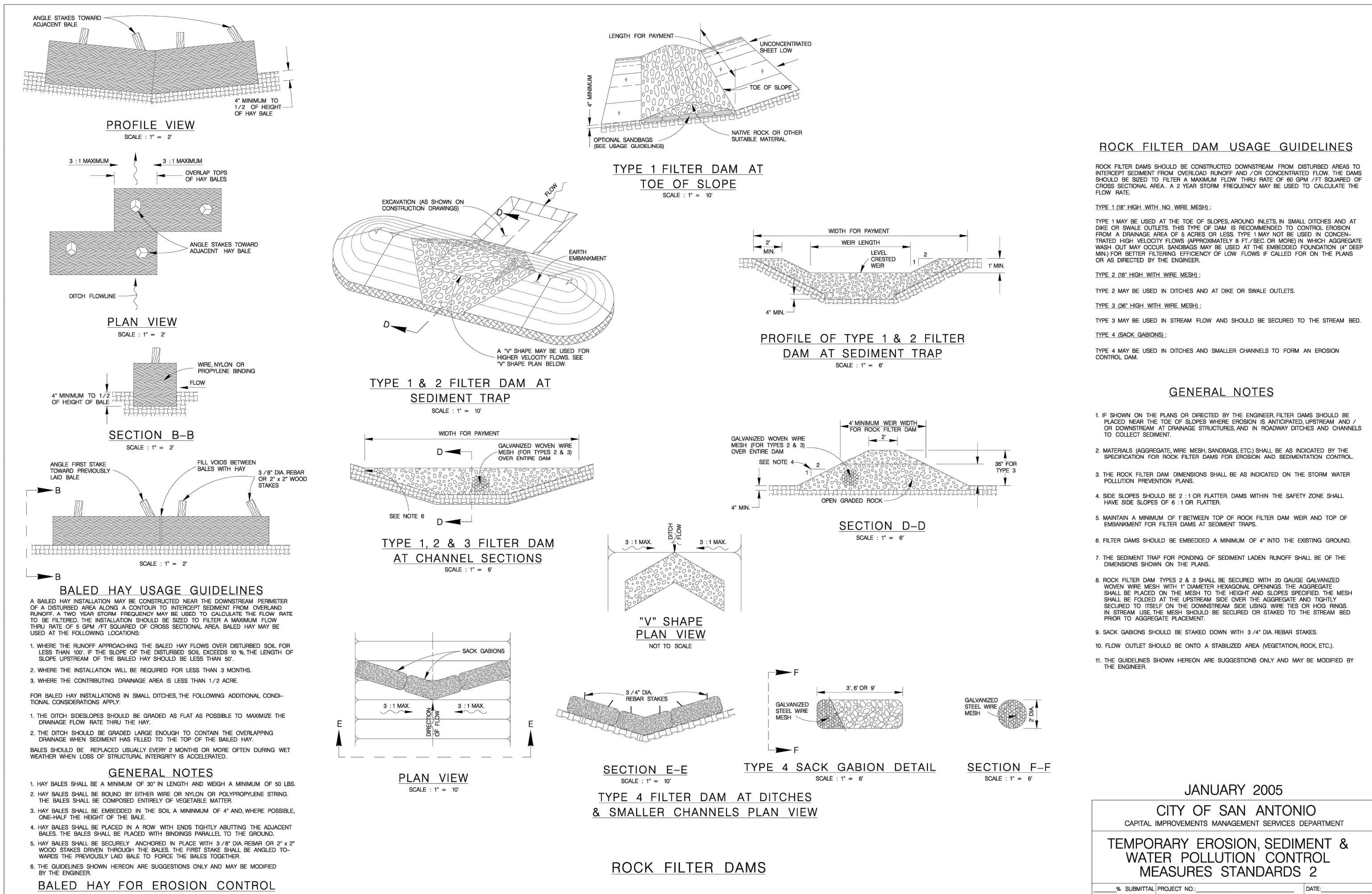
CONCRETE WASHOUT PIT DETAIL  
TYPE "ABOVE GRADE"  
NOT TO SCALE



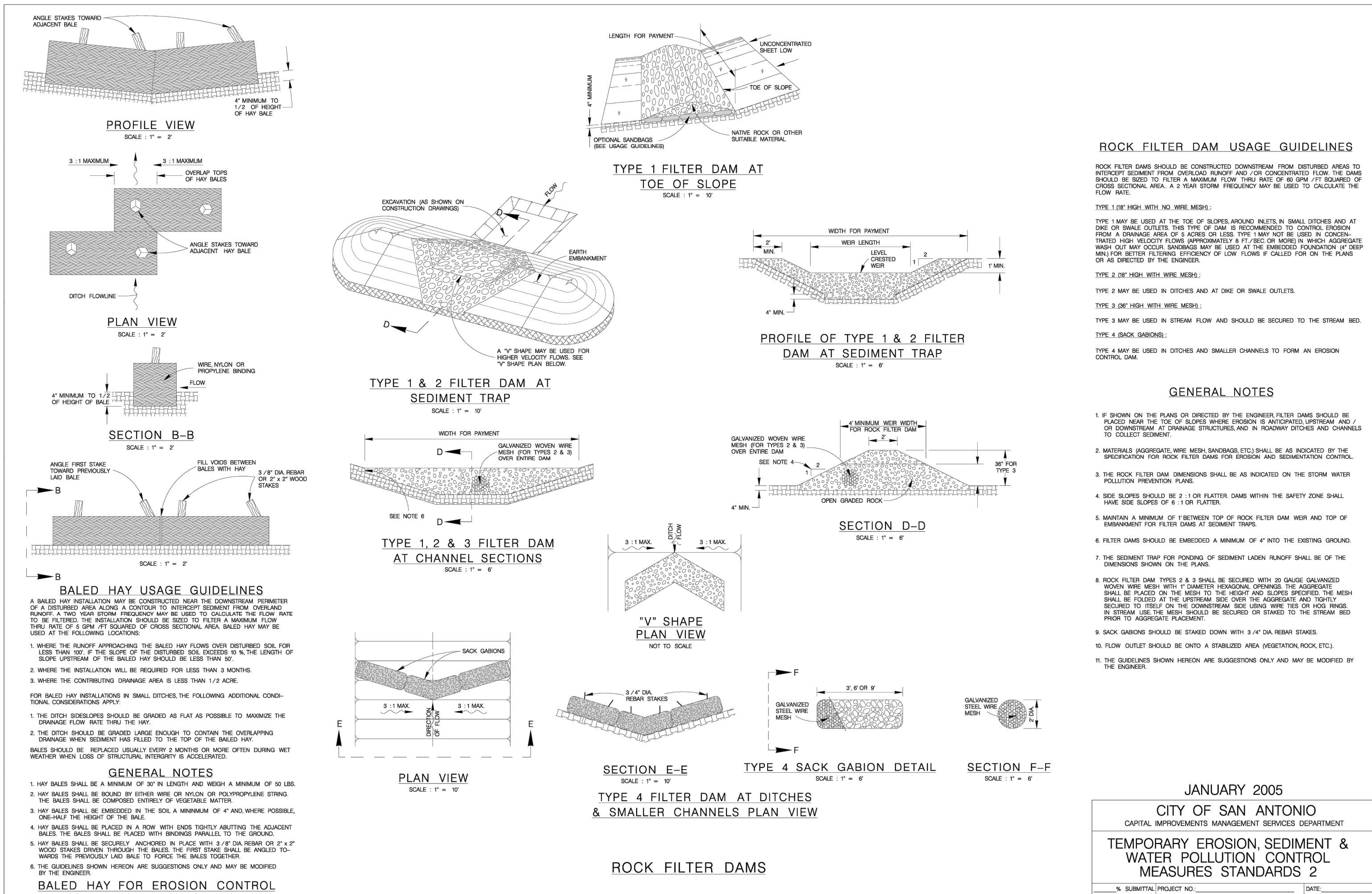
NOTES:

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 OVER-TOP THE CURB.
5. INLET PROTECTIONS SHALL BE REMOVED AS SOON AS THE SOURCE OF SEDIMENT IS STABILIZED.

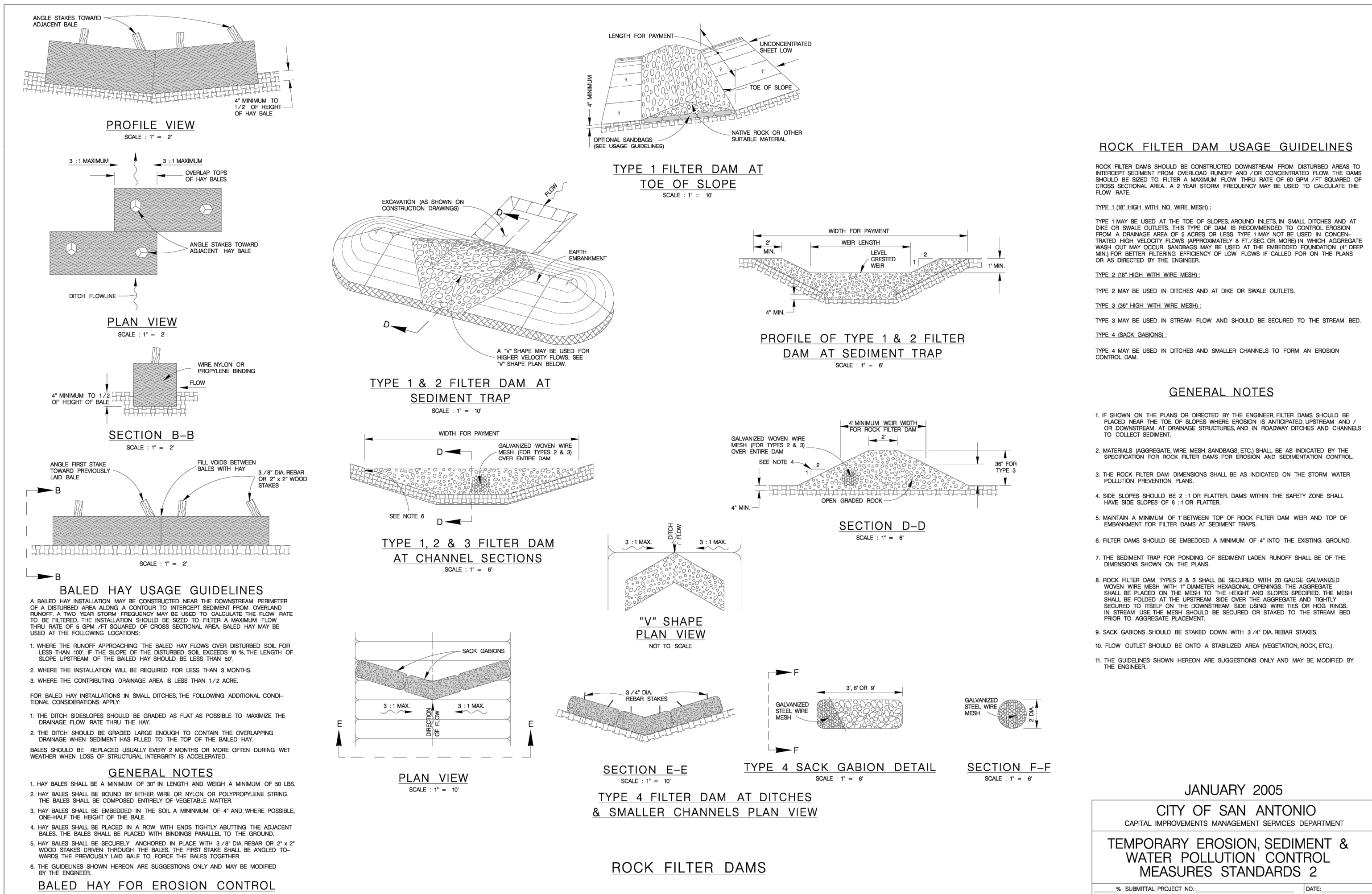
 NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING	DRAWN BY: <b>H Shadrock</b>		STANDARD DRAWING: <b>FILTER DIKE CURB INLET PROTECTION</b>	
	APPROVED BY:	DATE: <b>4-29-03</b>	SCALE: <b>N.T.S.</b>	SHEET: <b>1 OF 1</b>
		UPDATED:	SCALE:	SHEET: <b>1 OF 1</b>
		DRAWING NO. <b>505</b>		



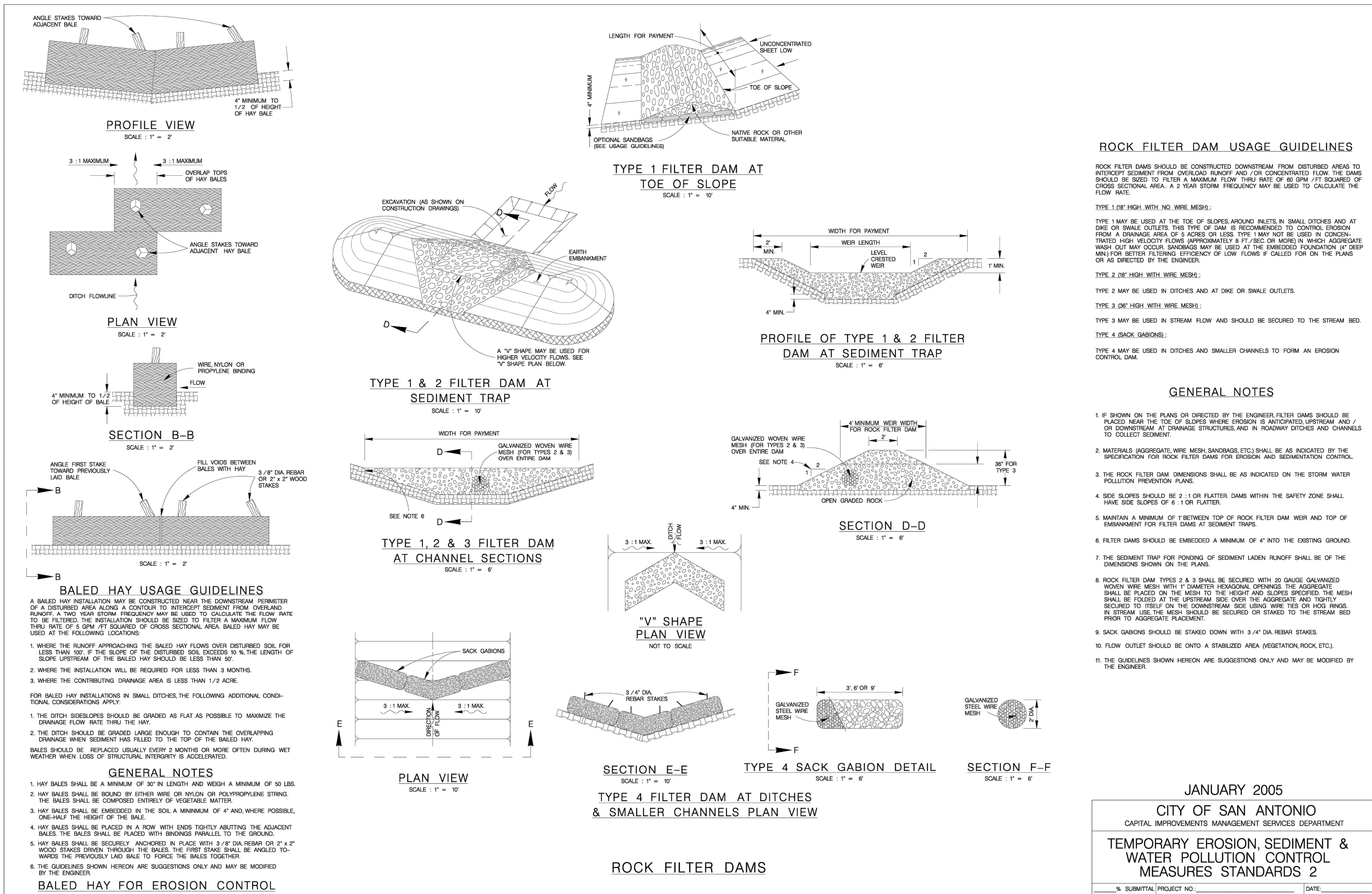
GRAVEL FILTER BAGS



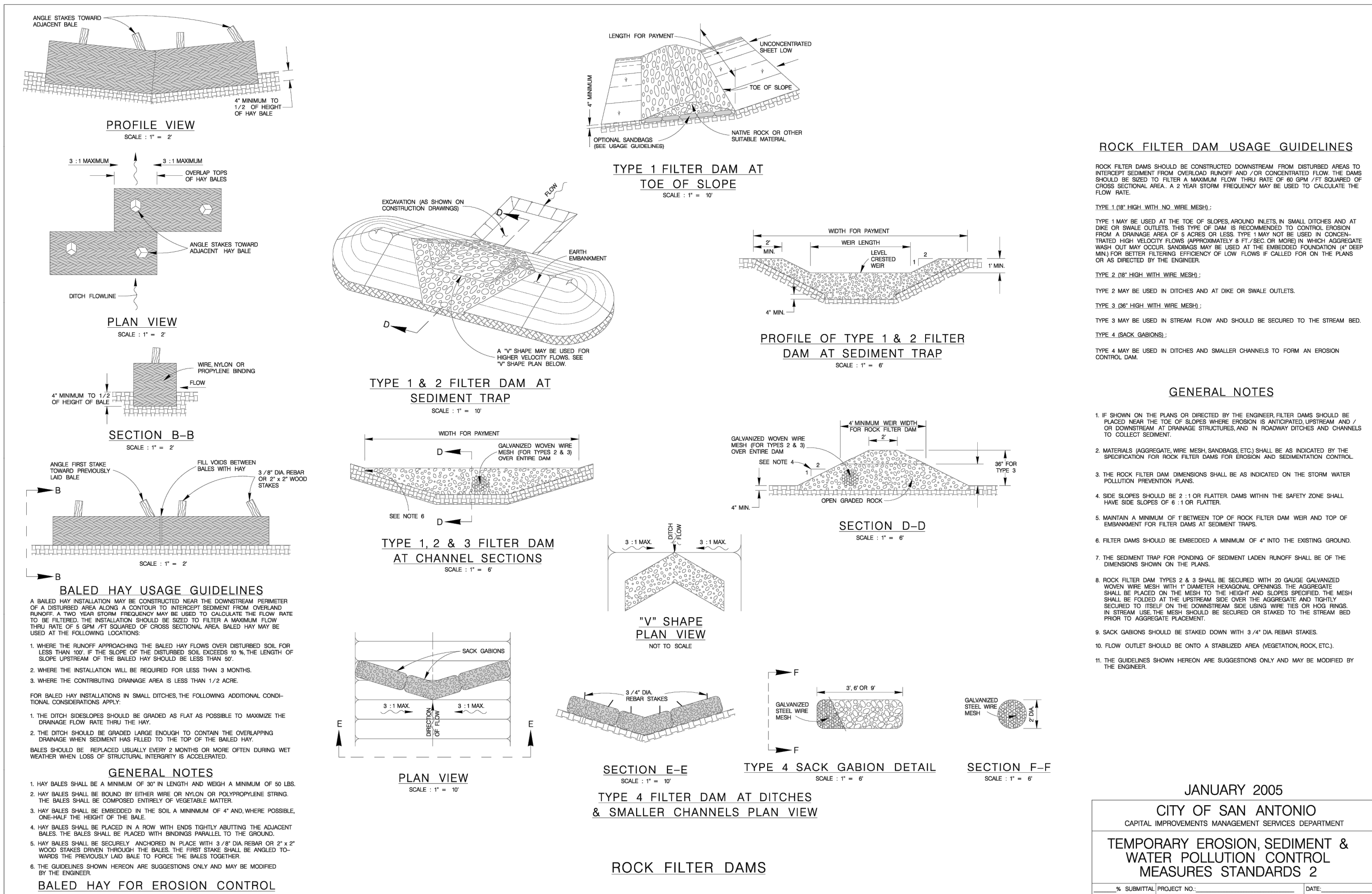
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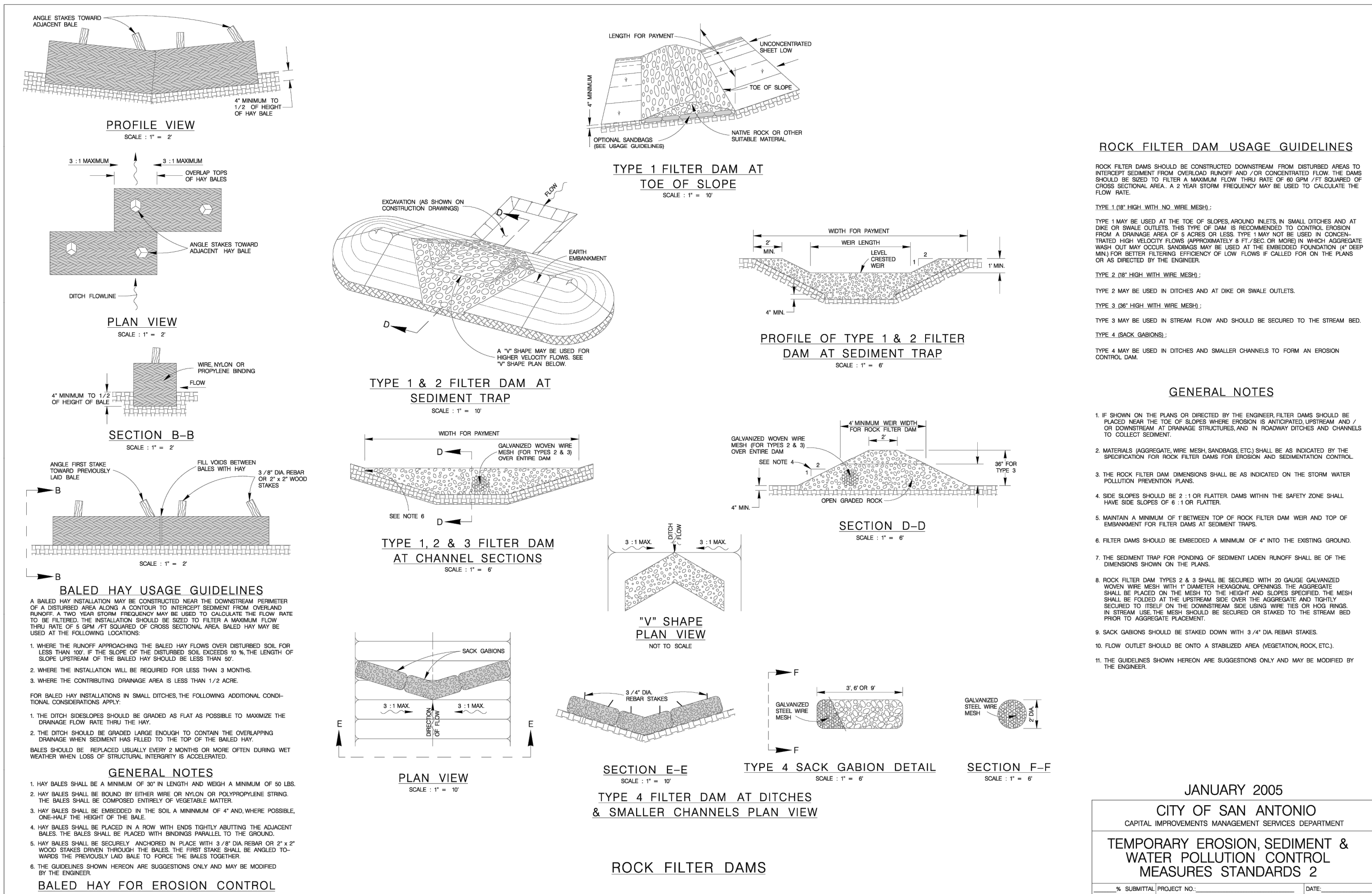
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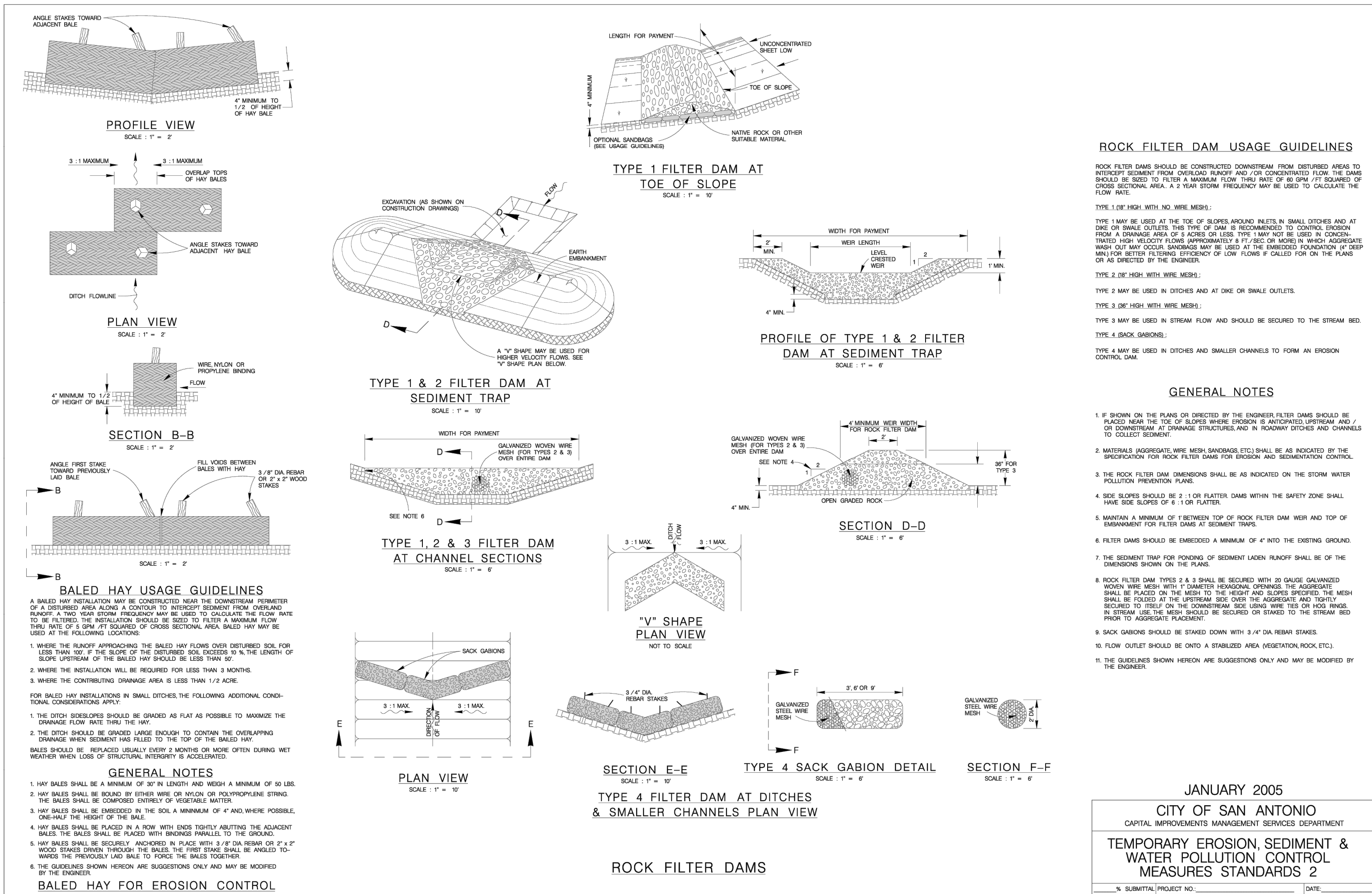
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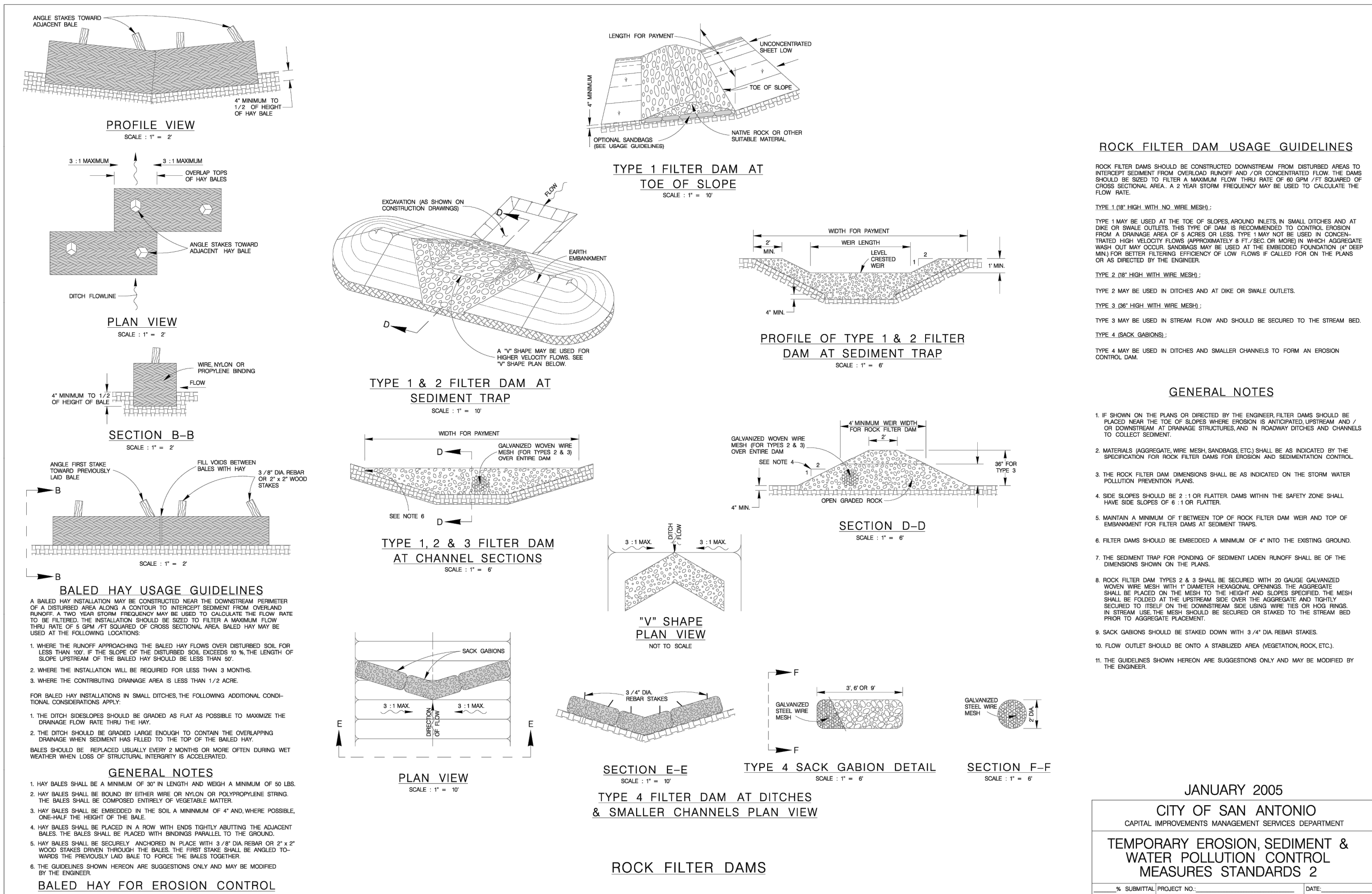
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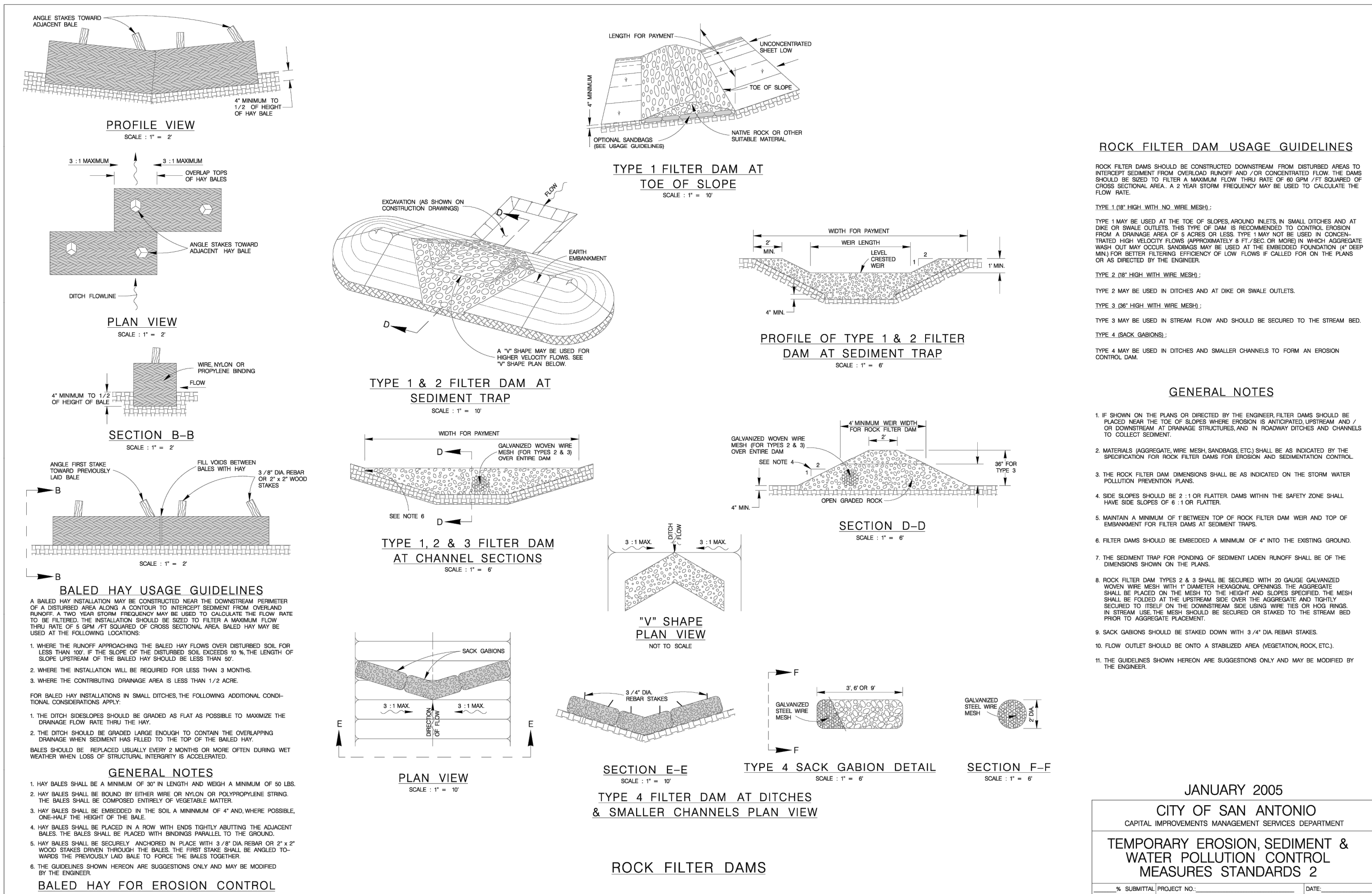
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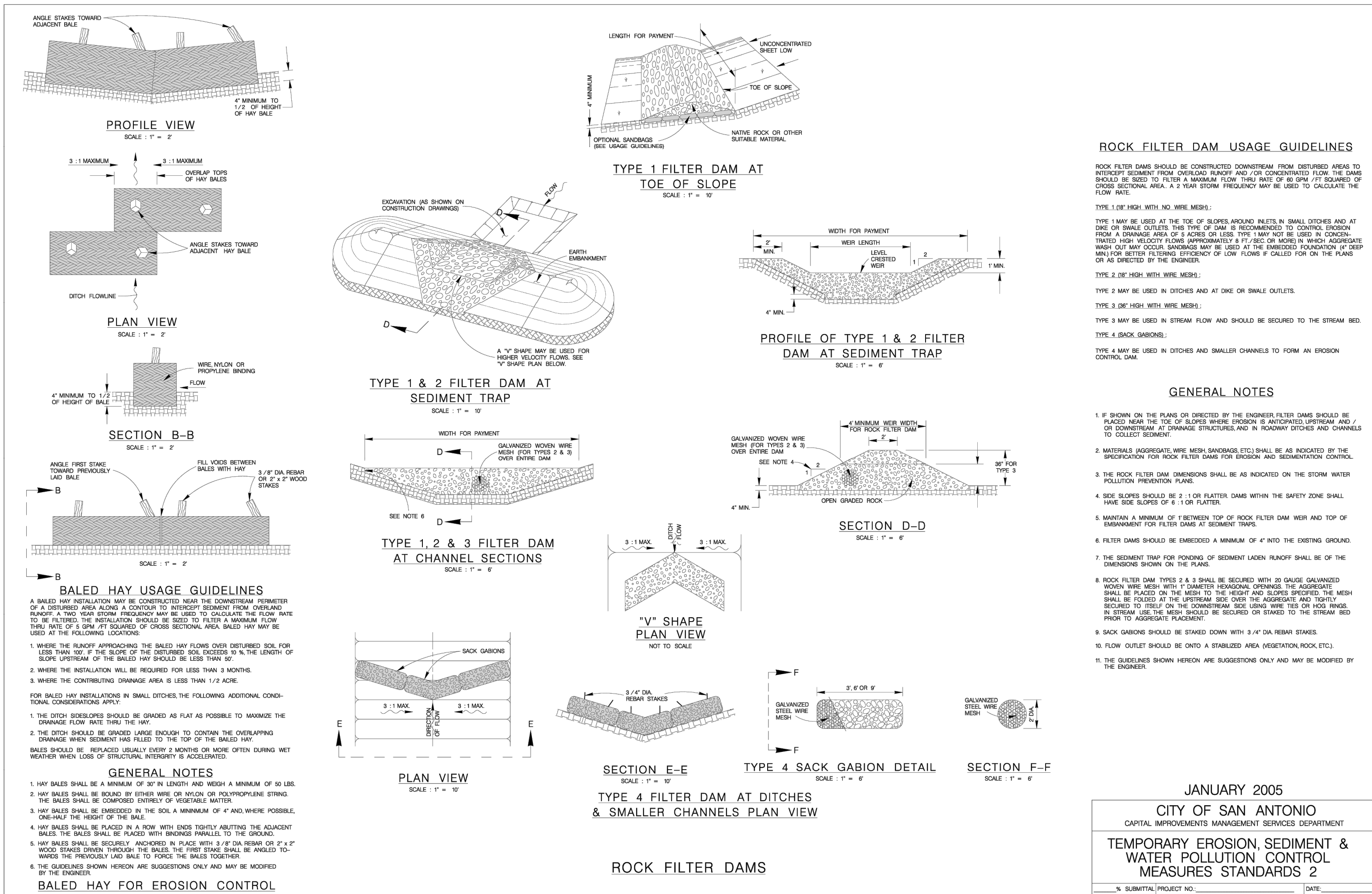
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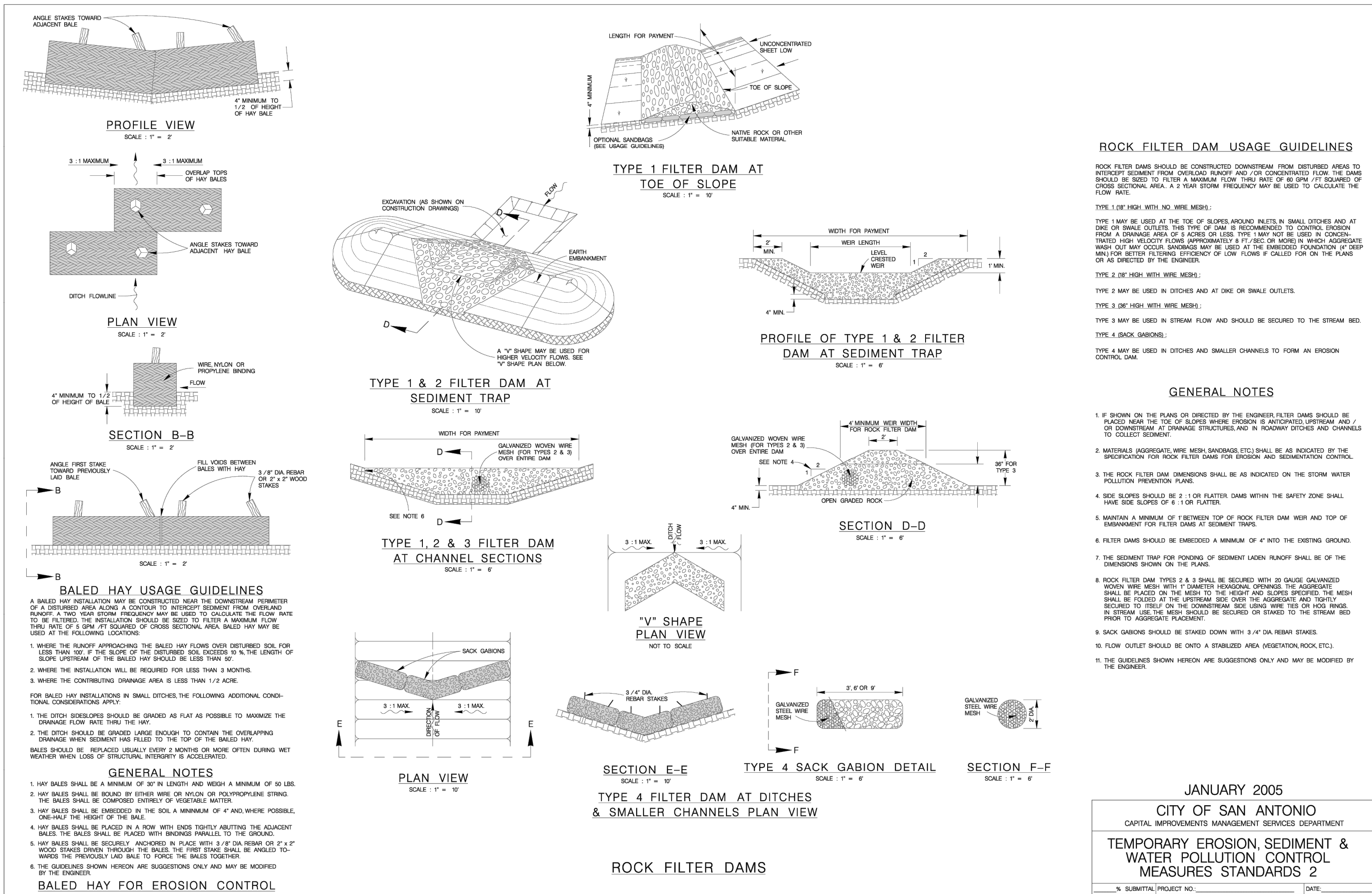
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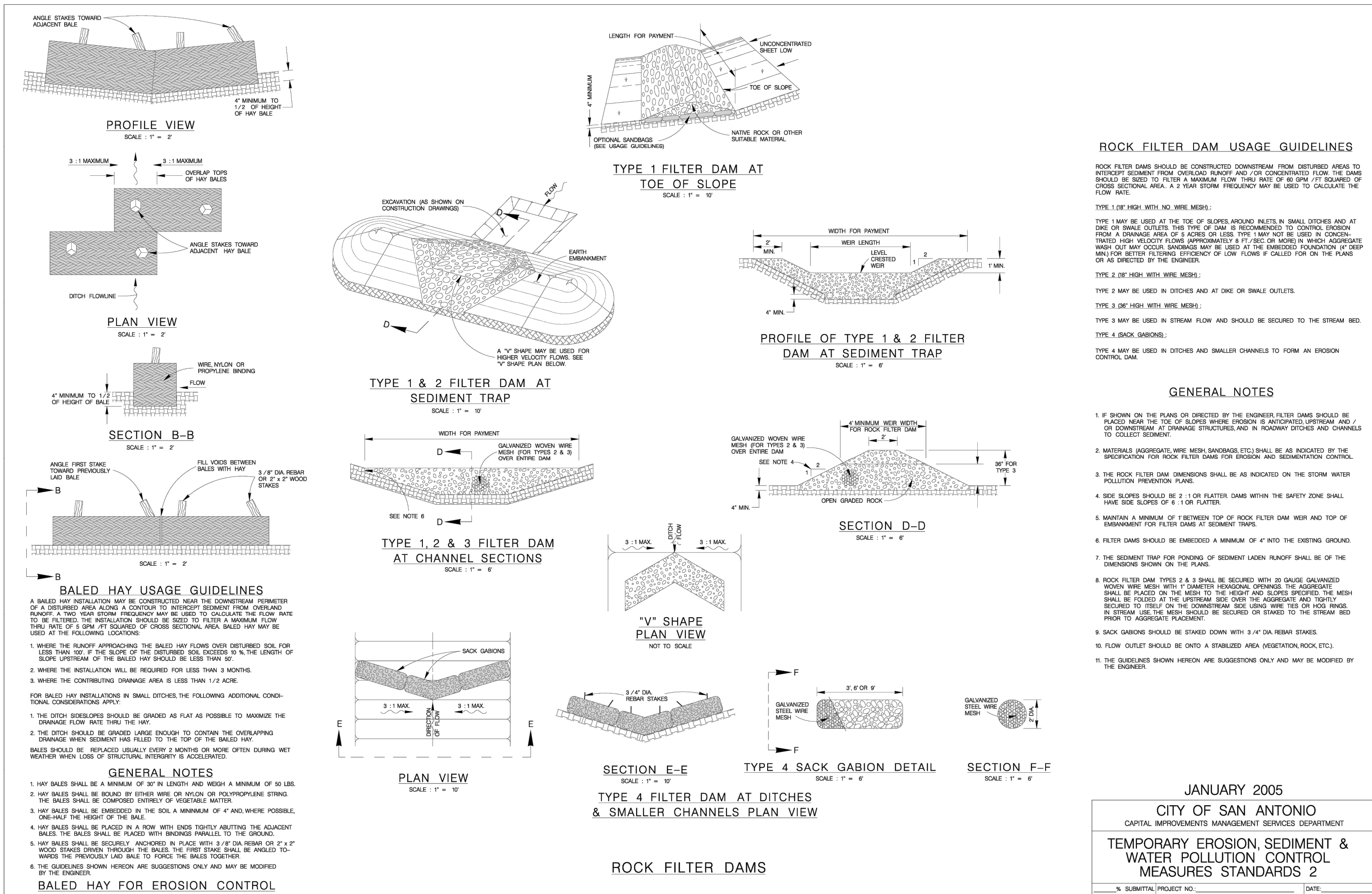
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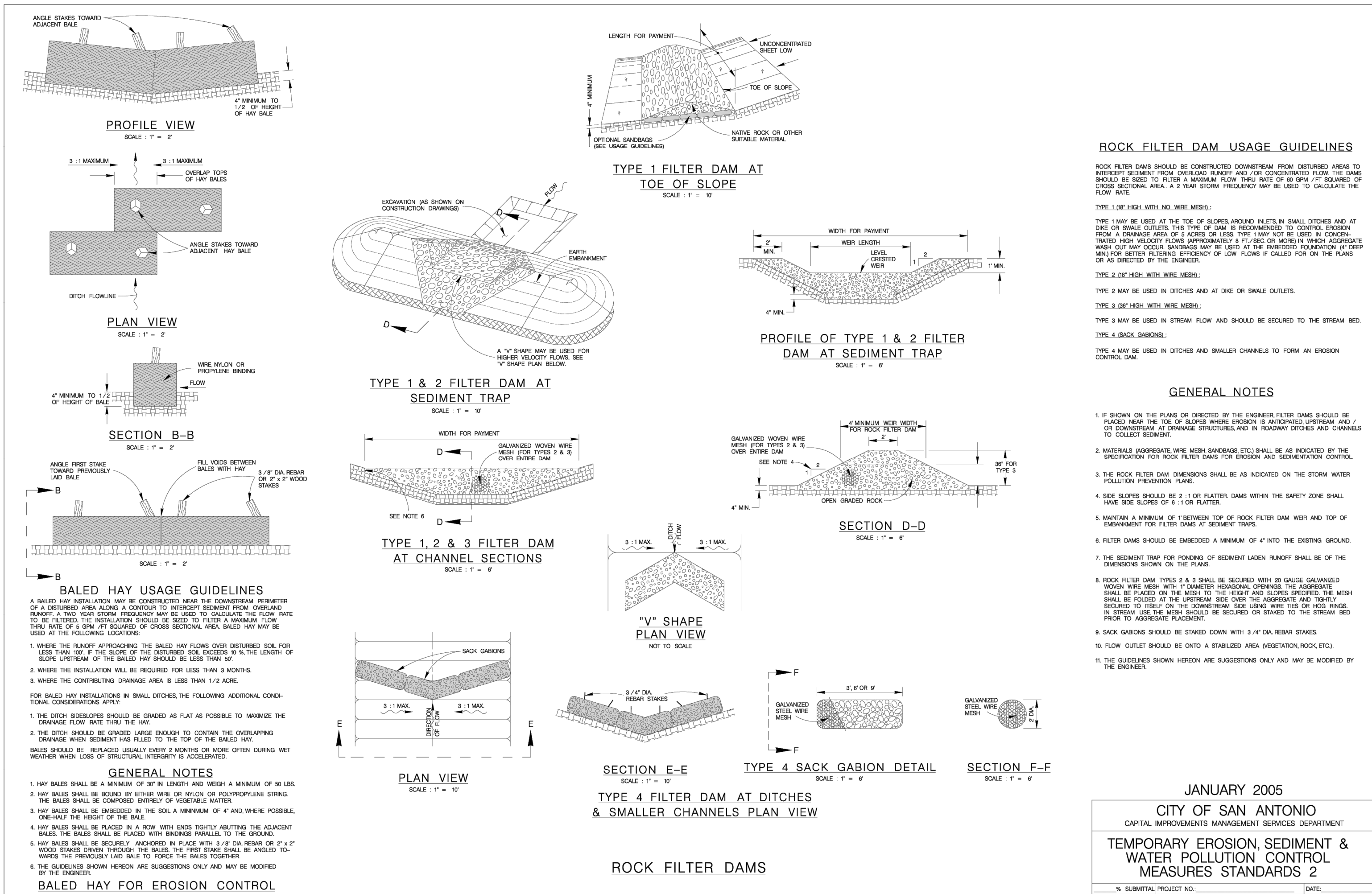
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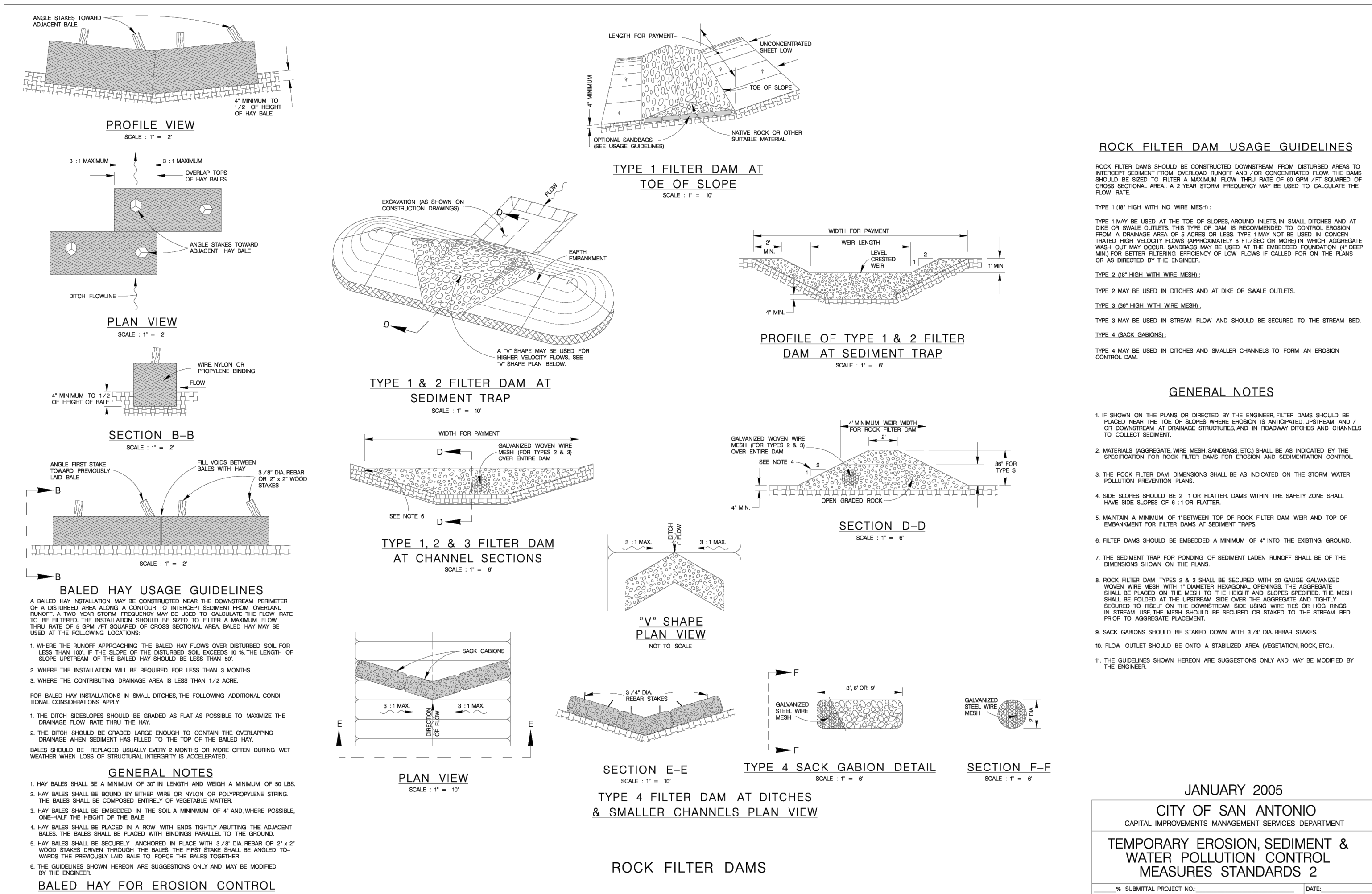
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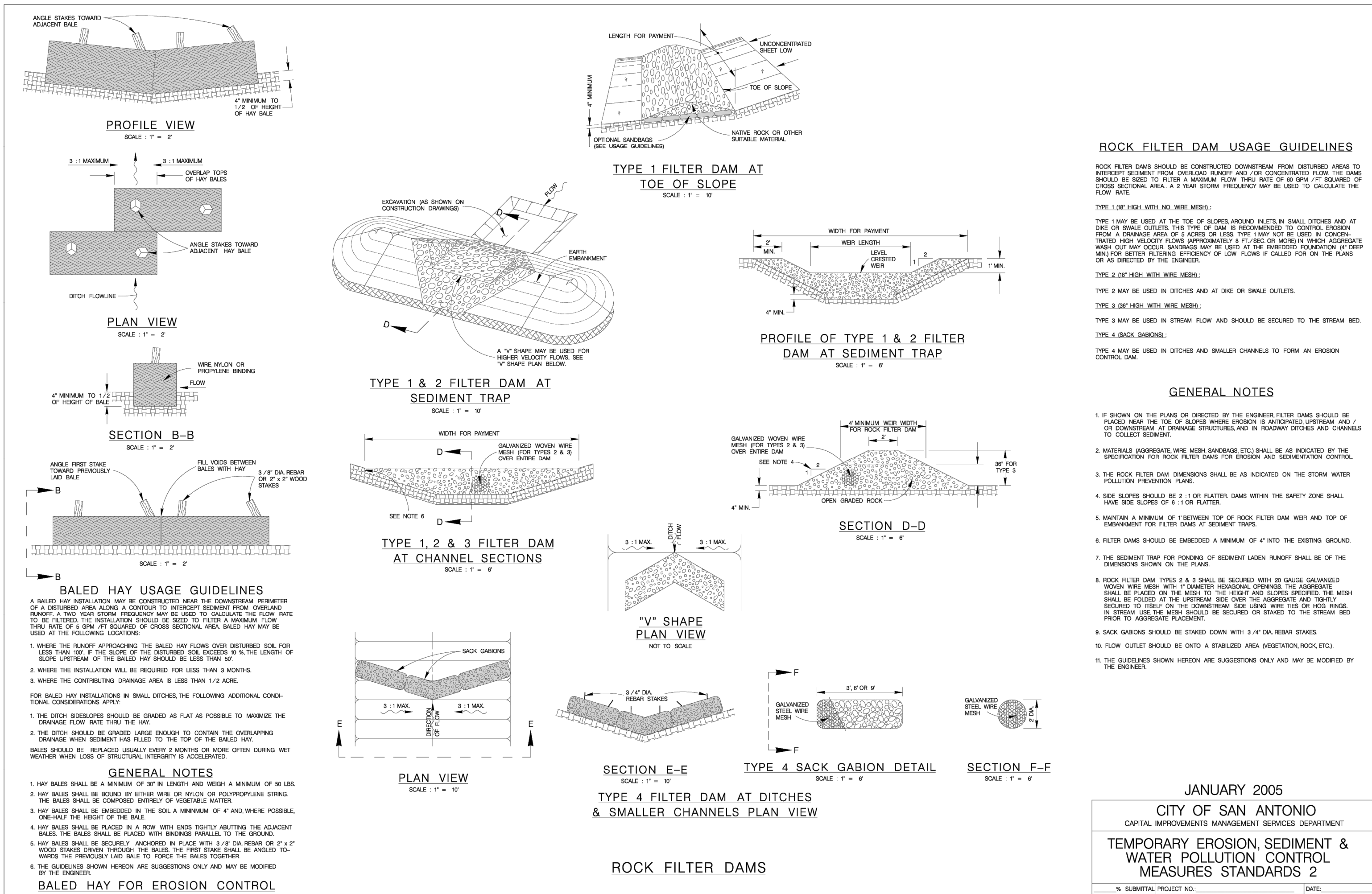
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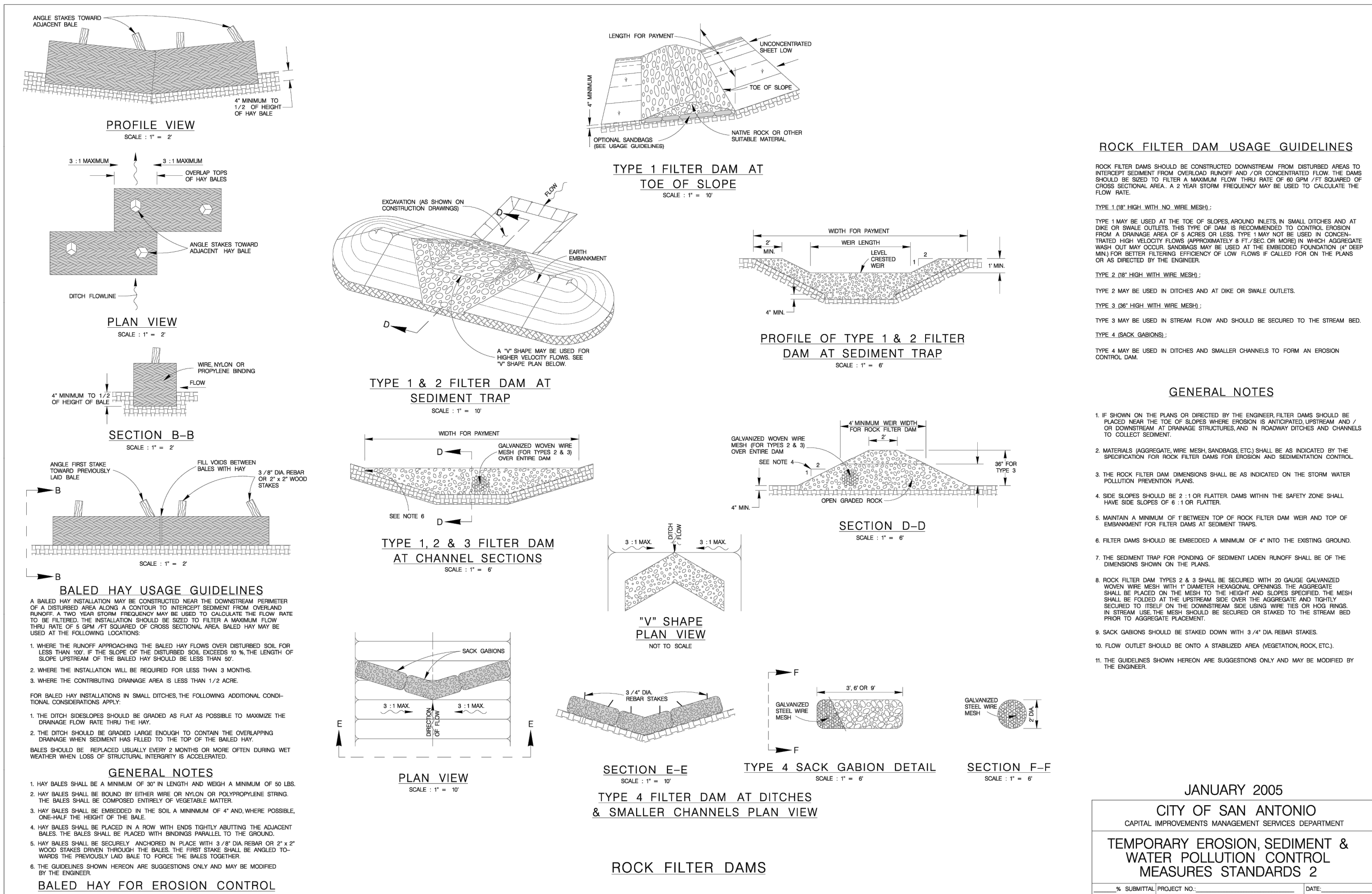
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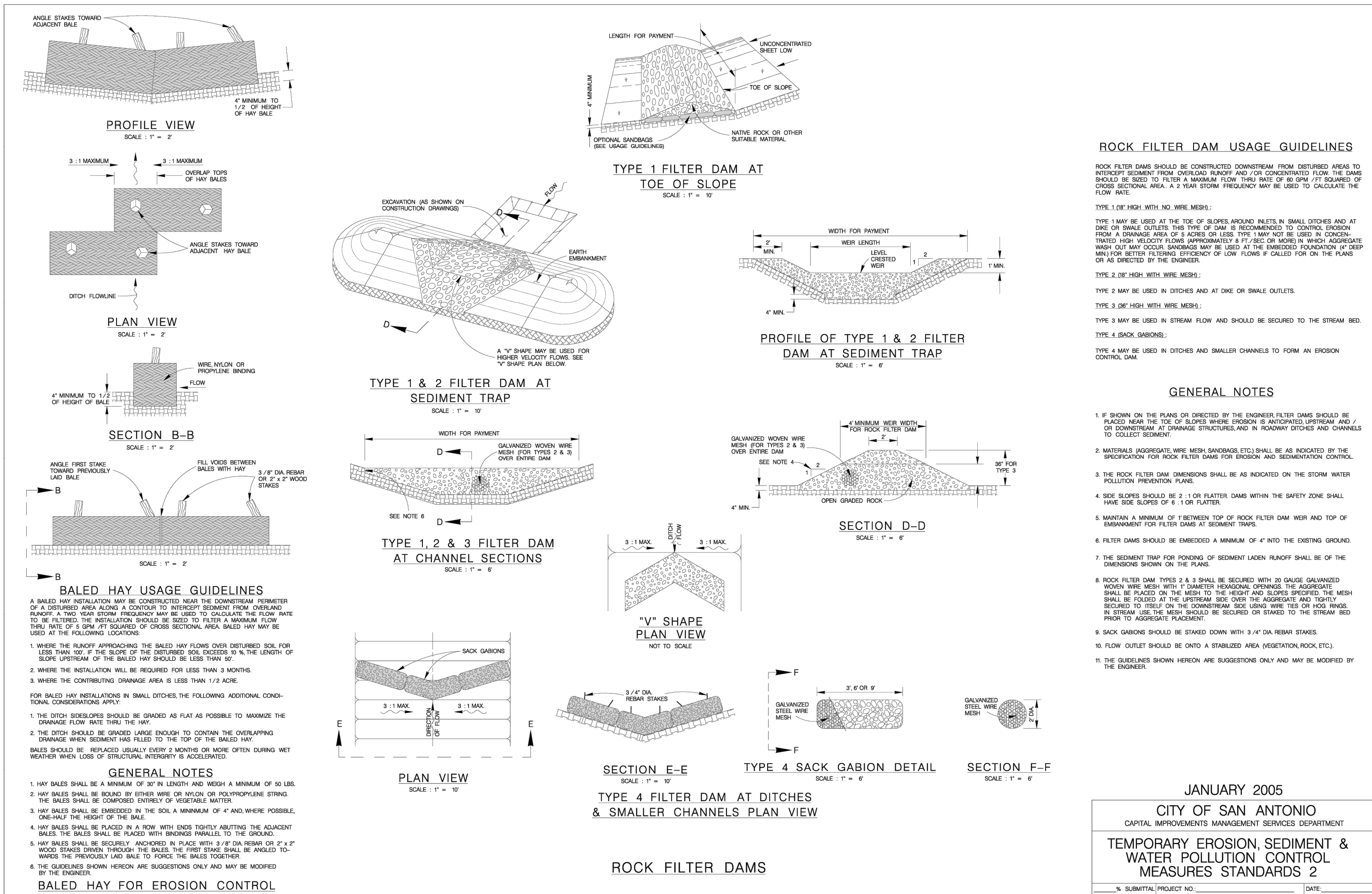
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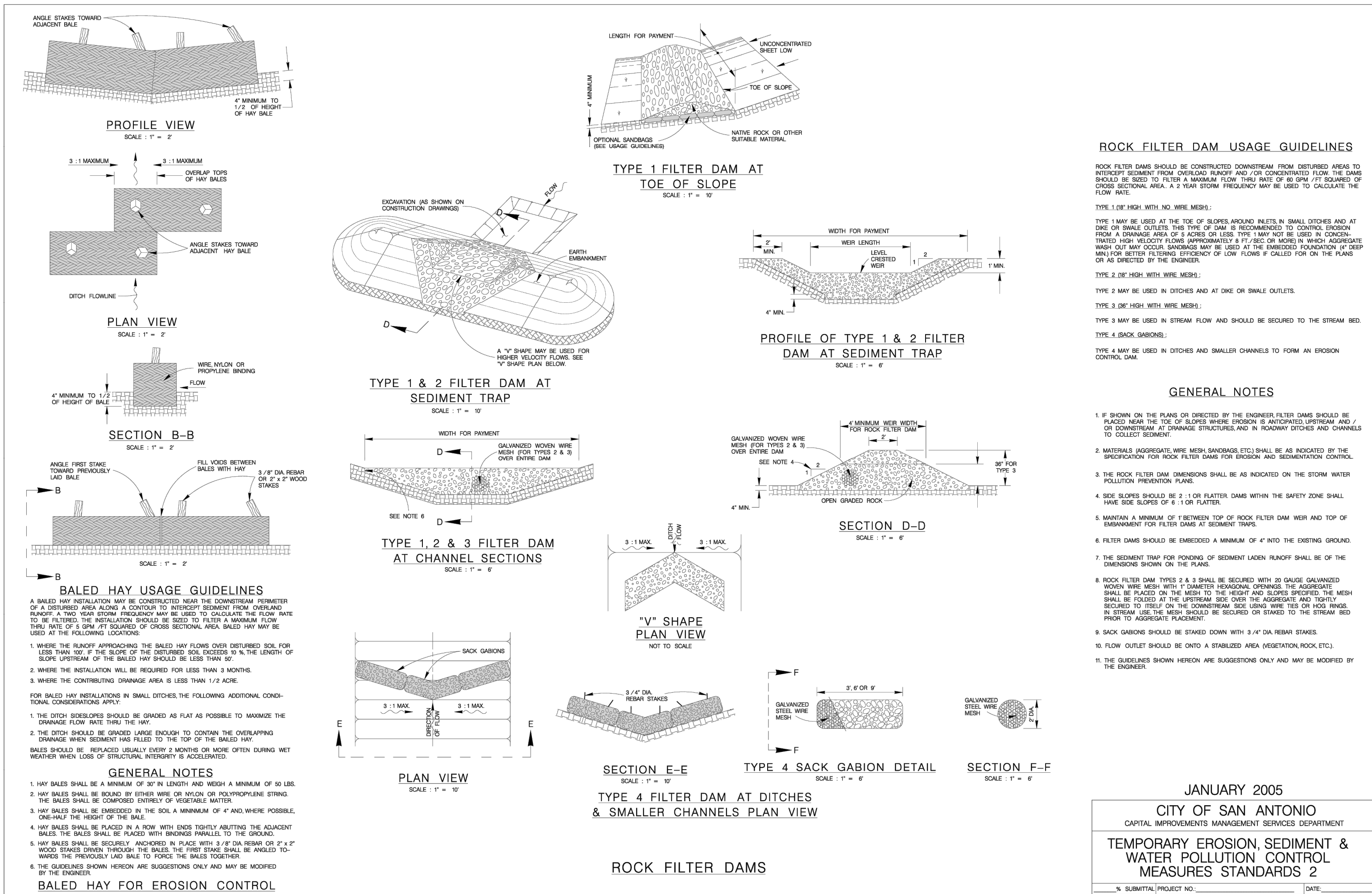
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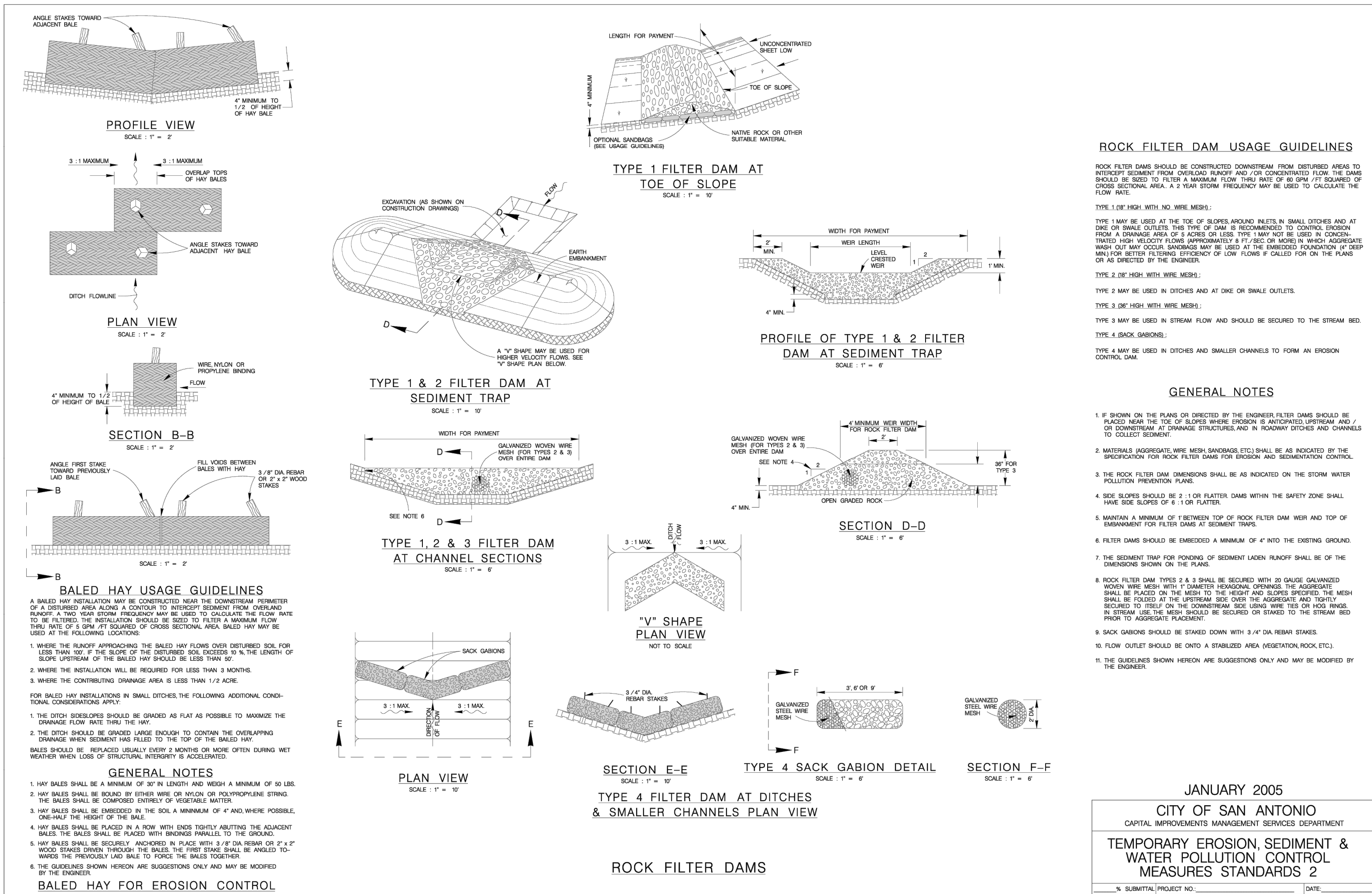
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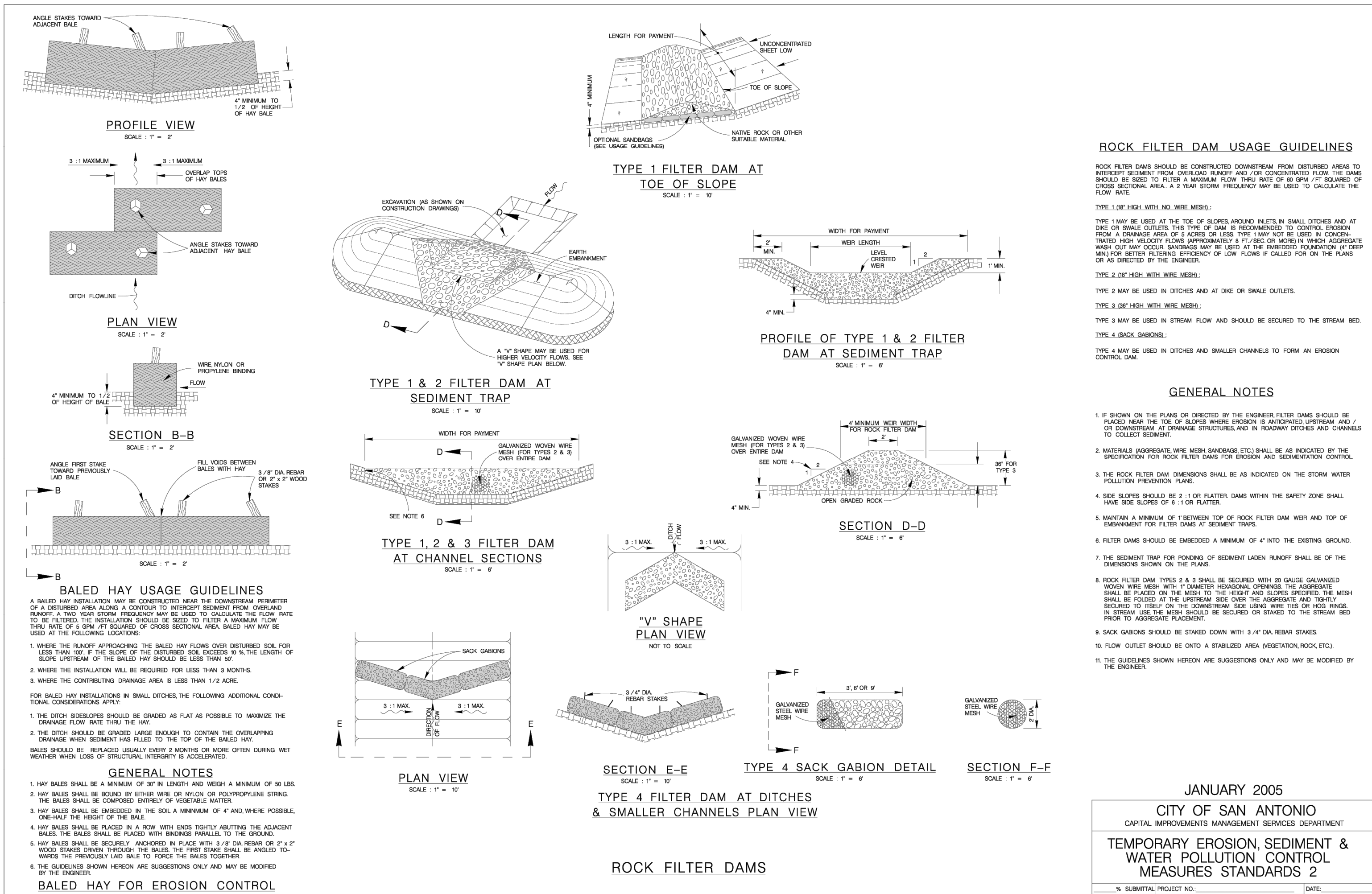
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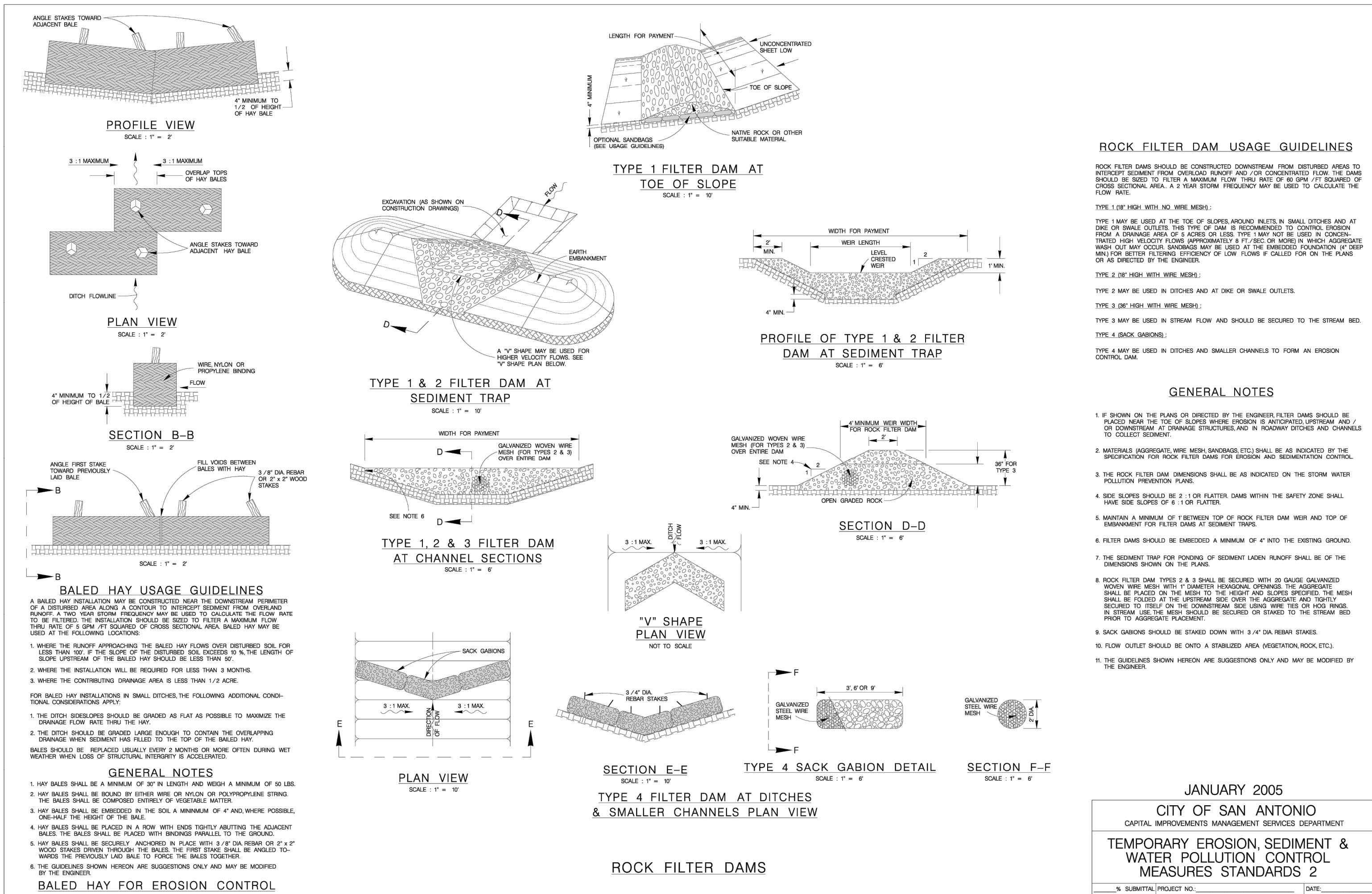
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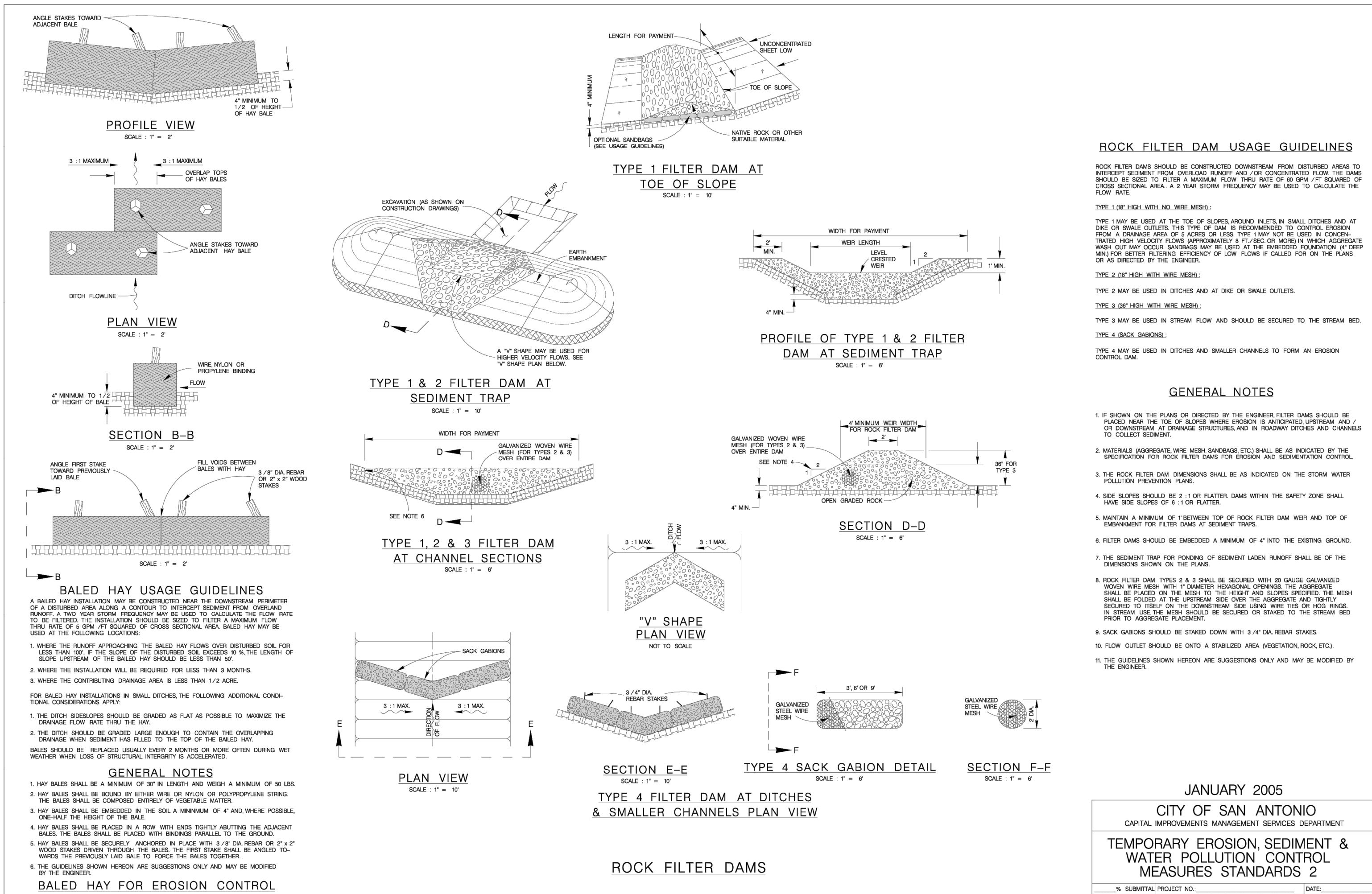
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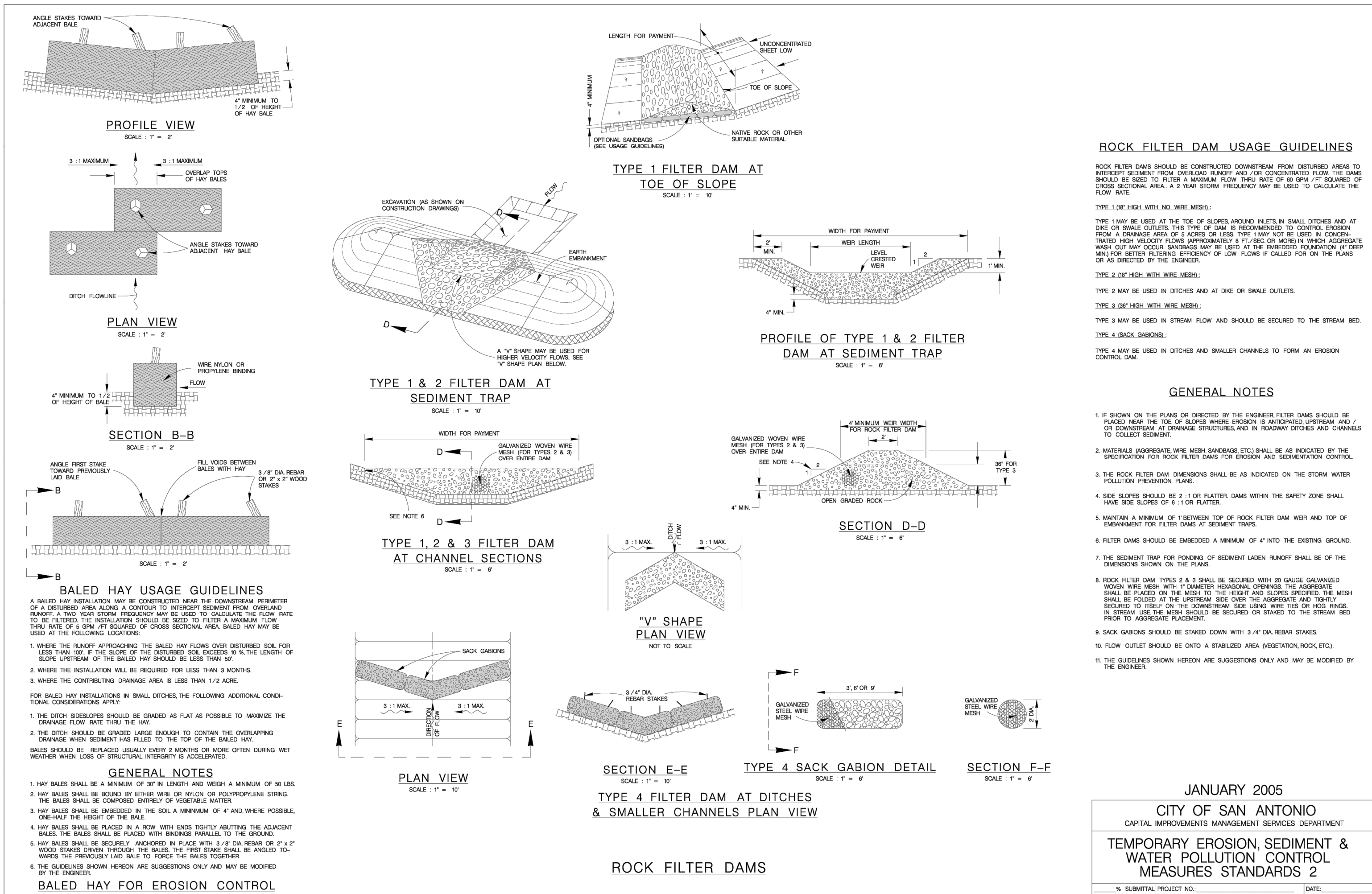
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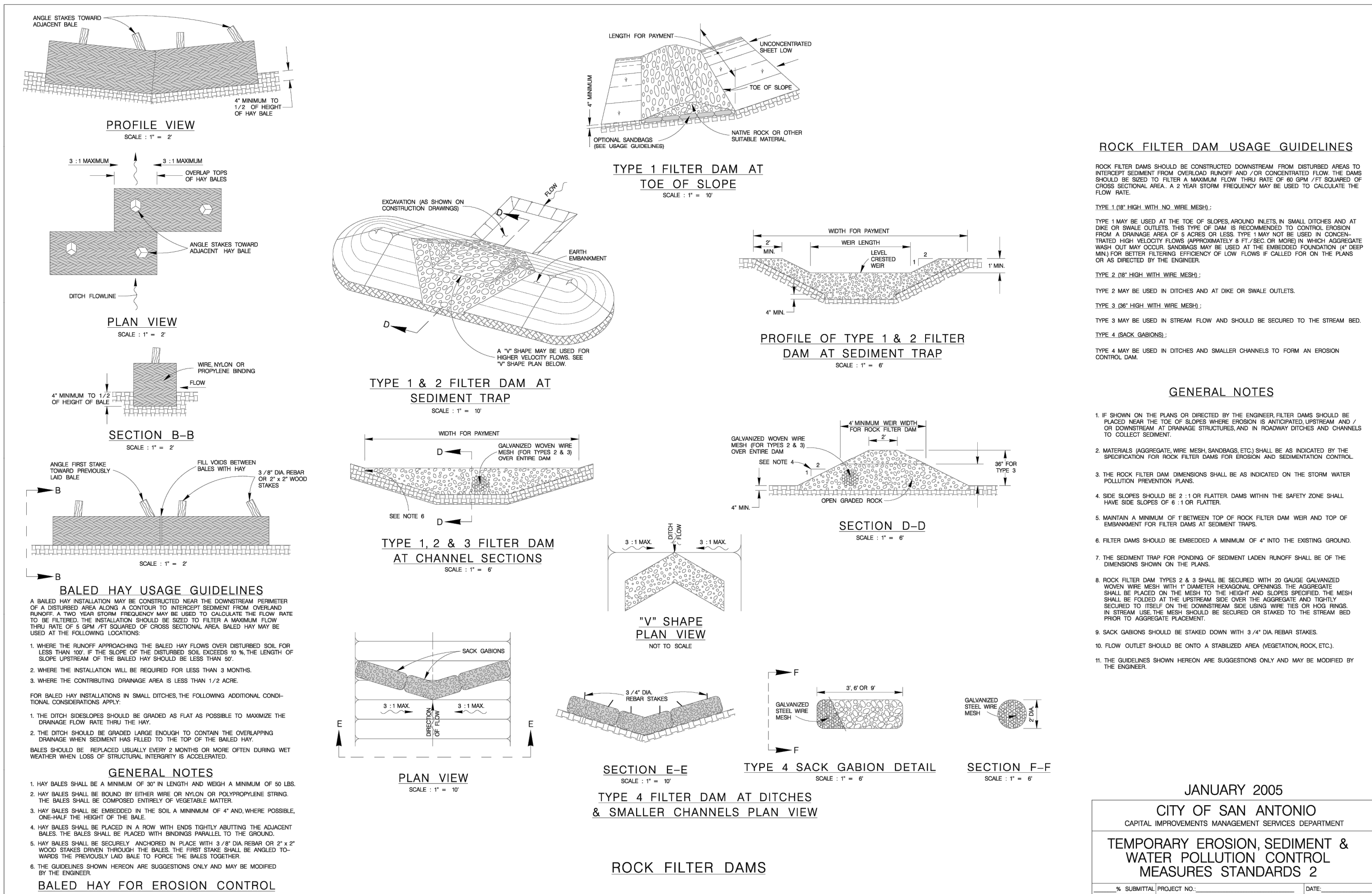
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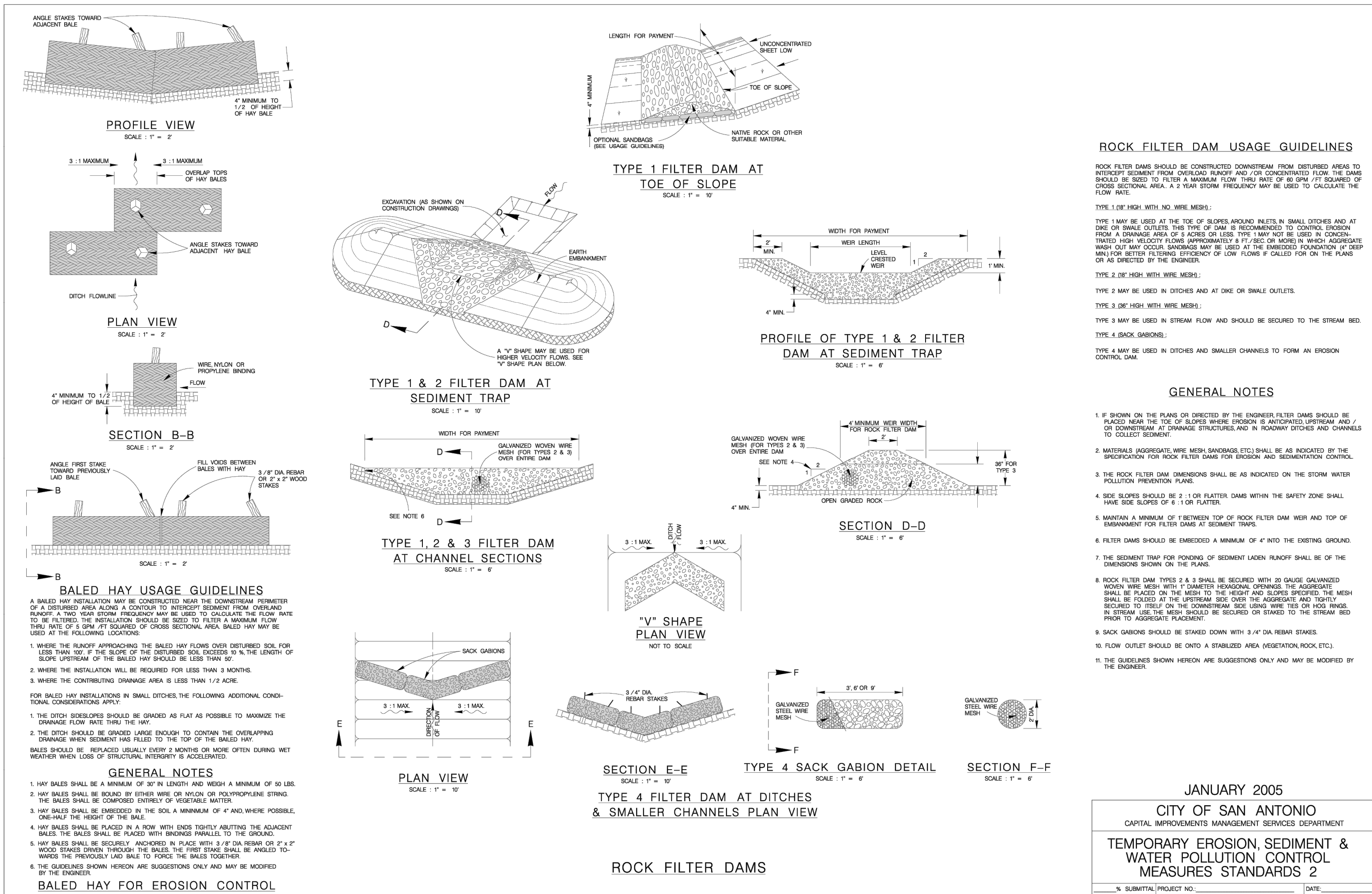
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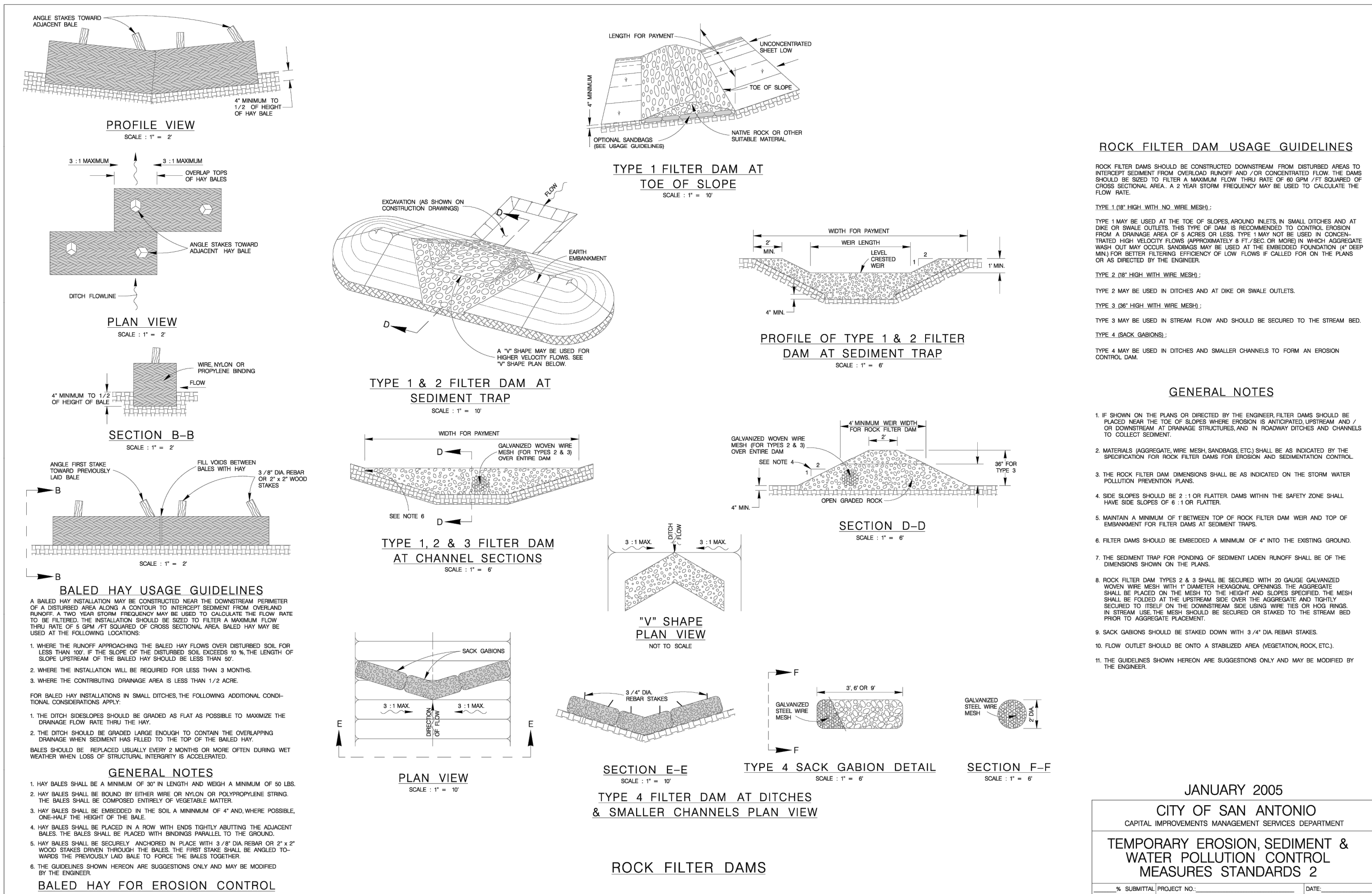
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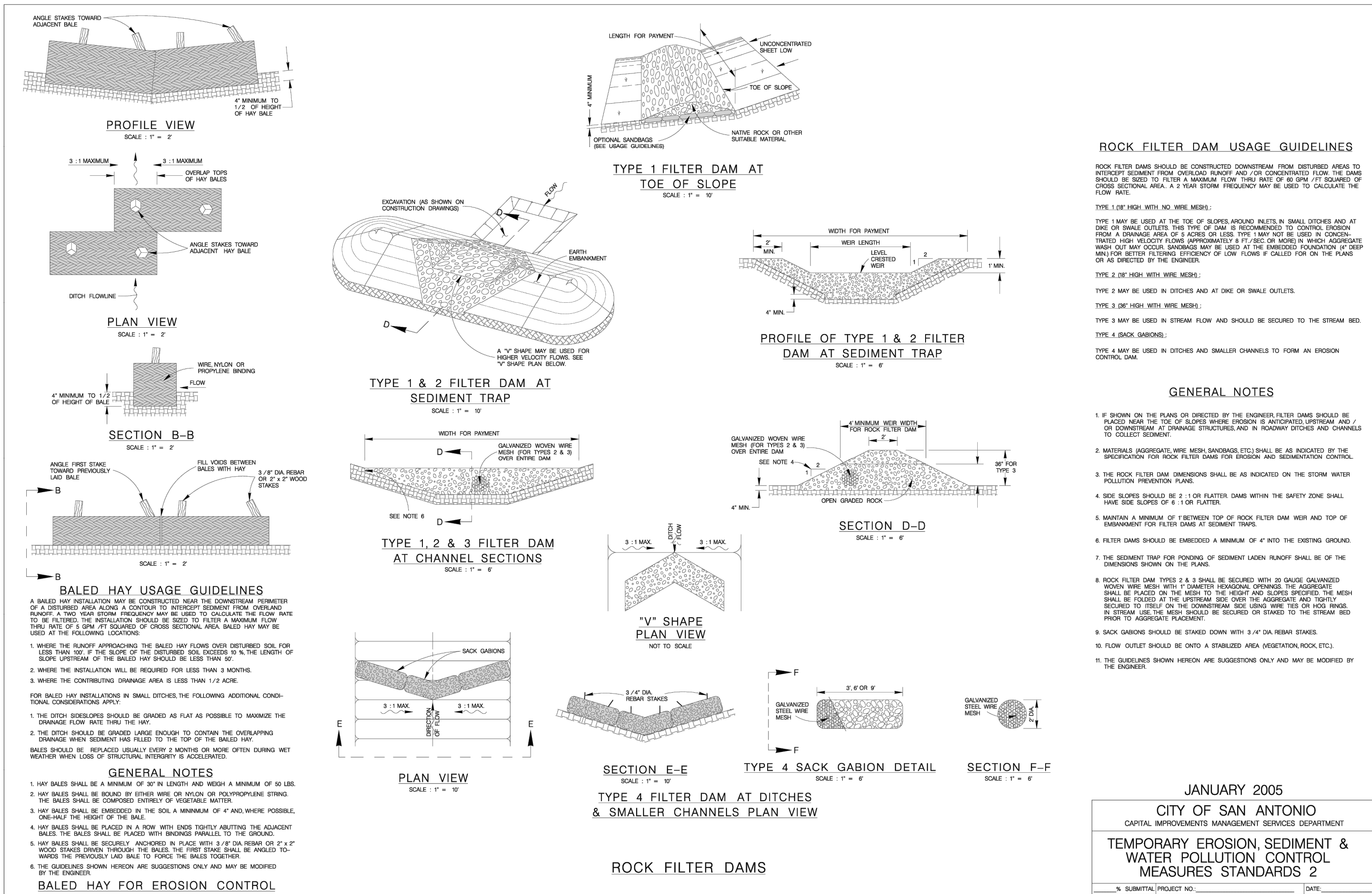
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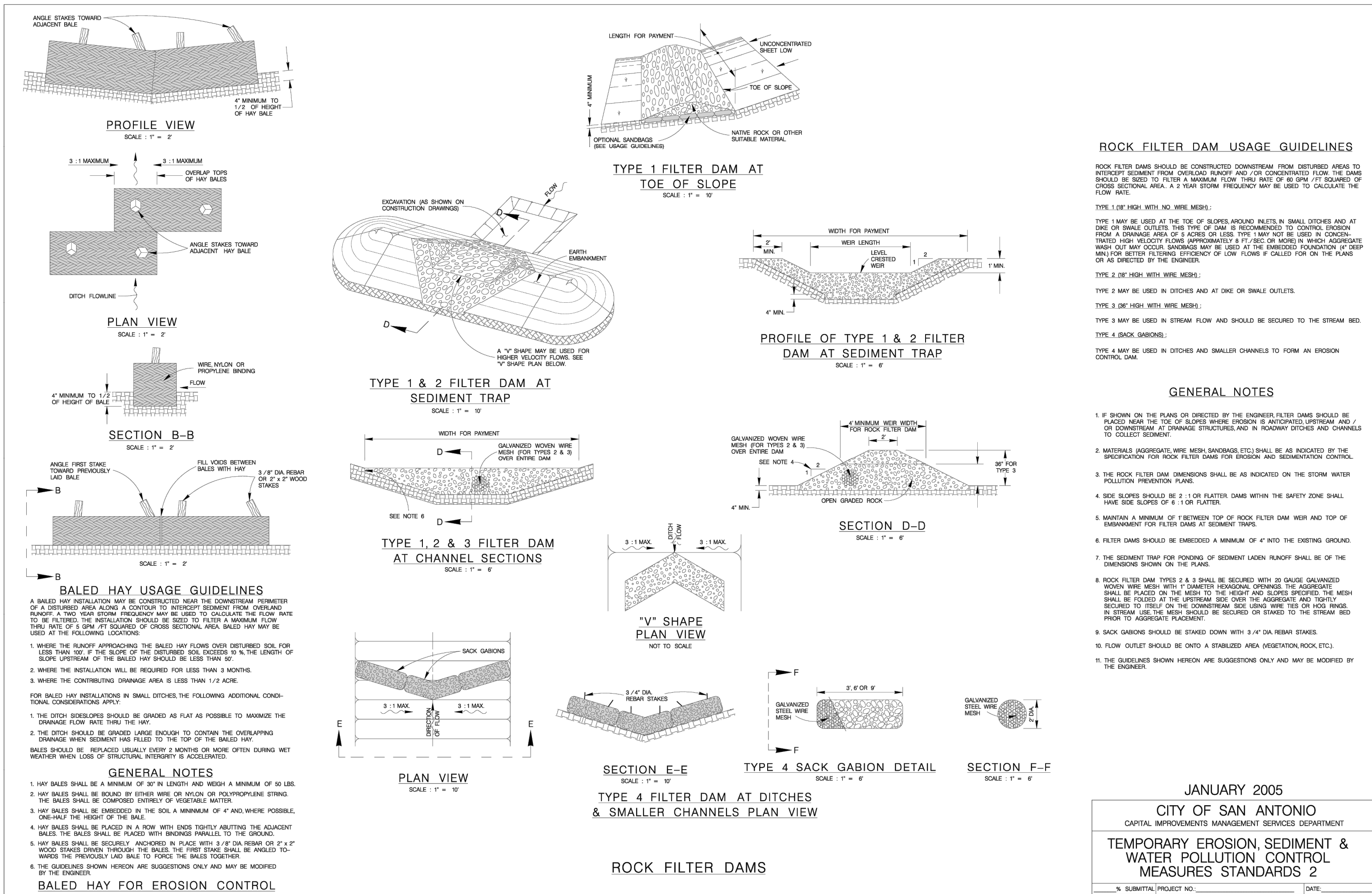
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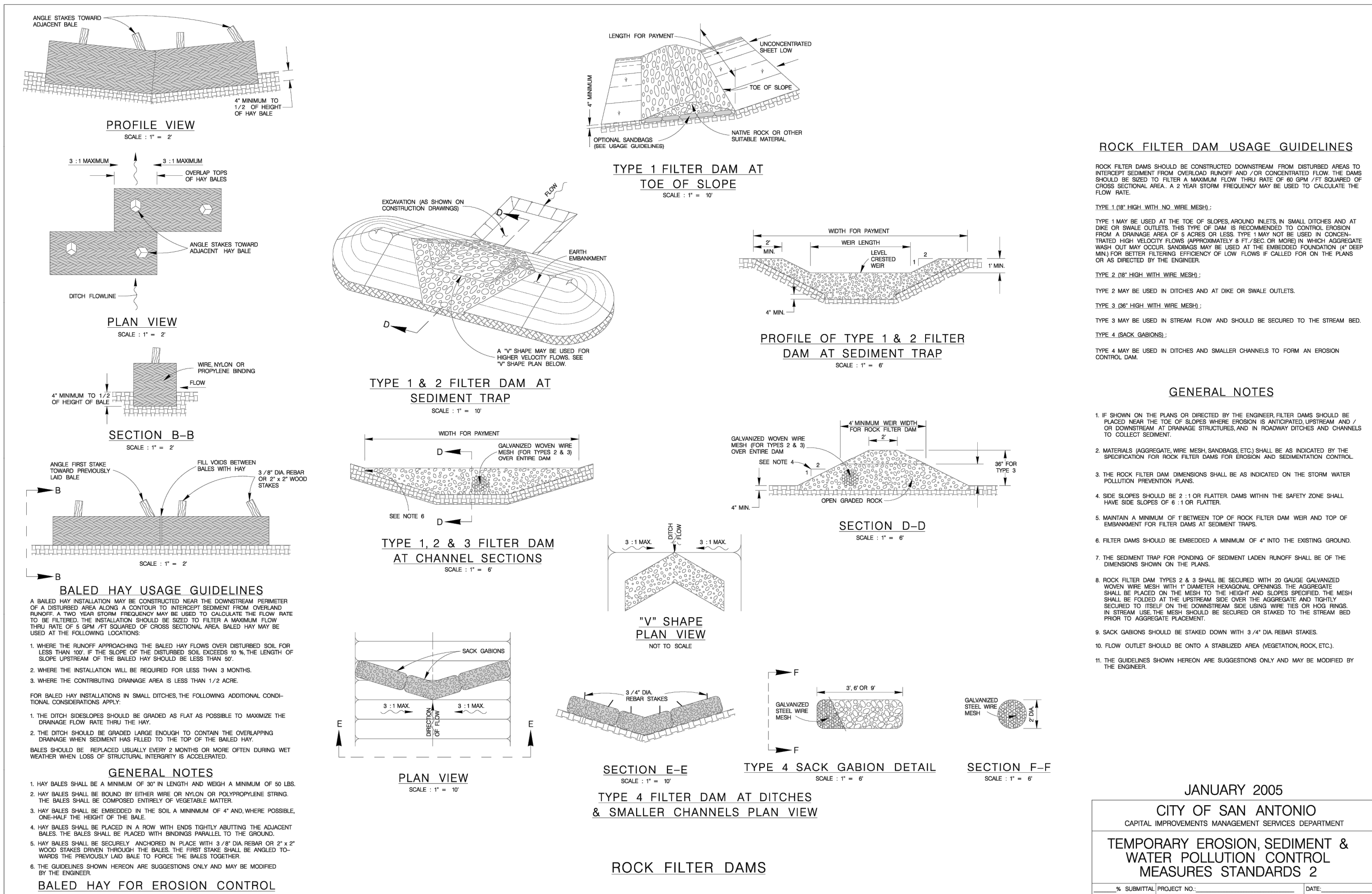
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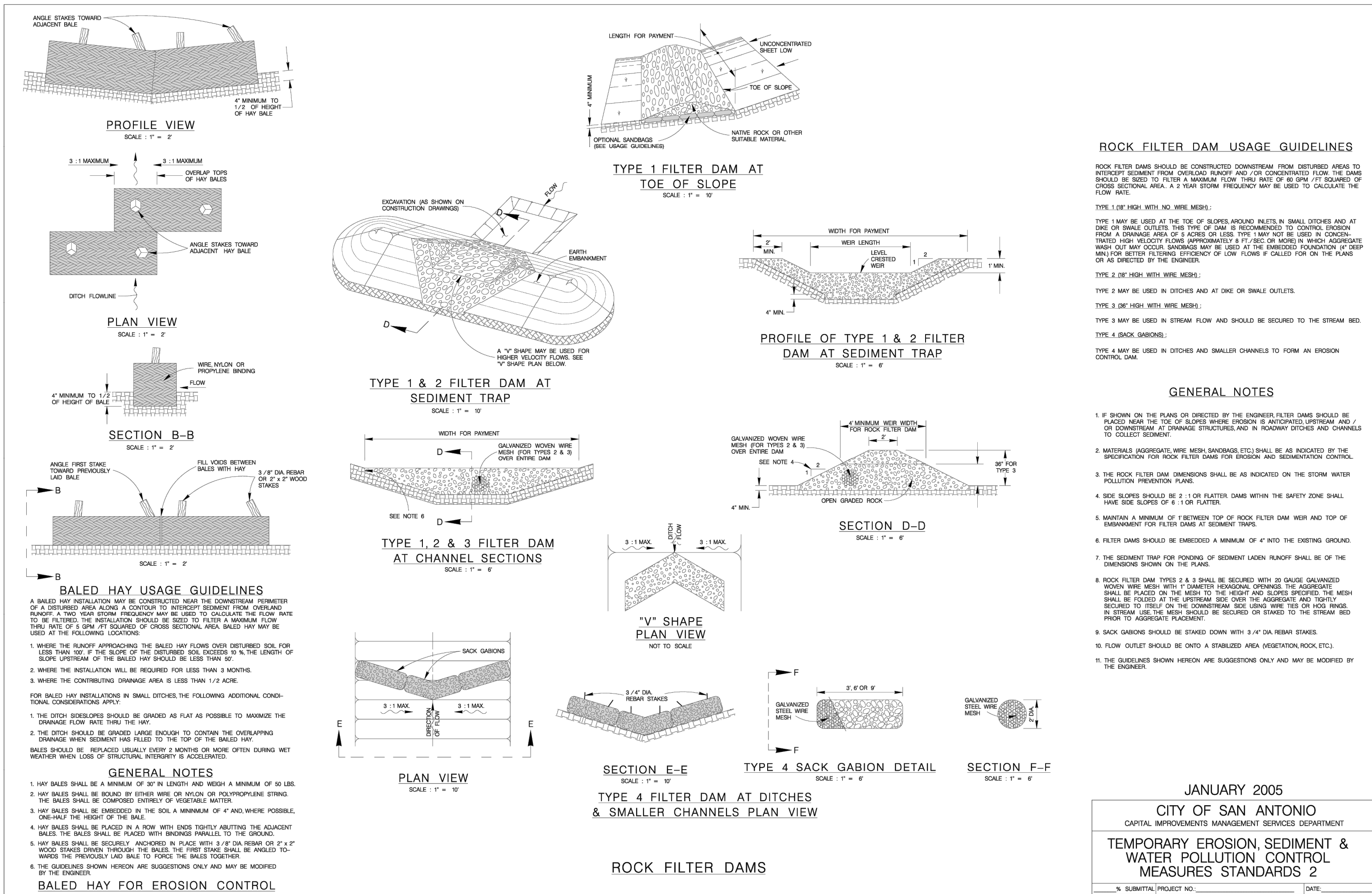
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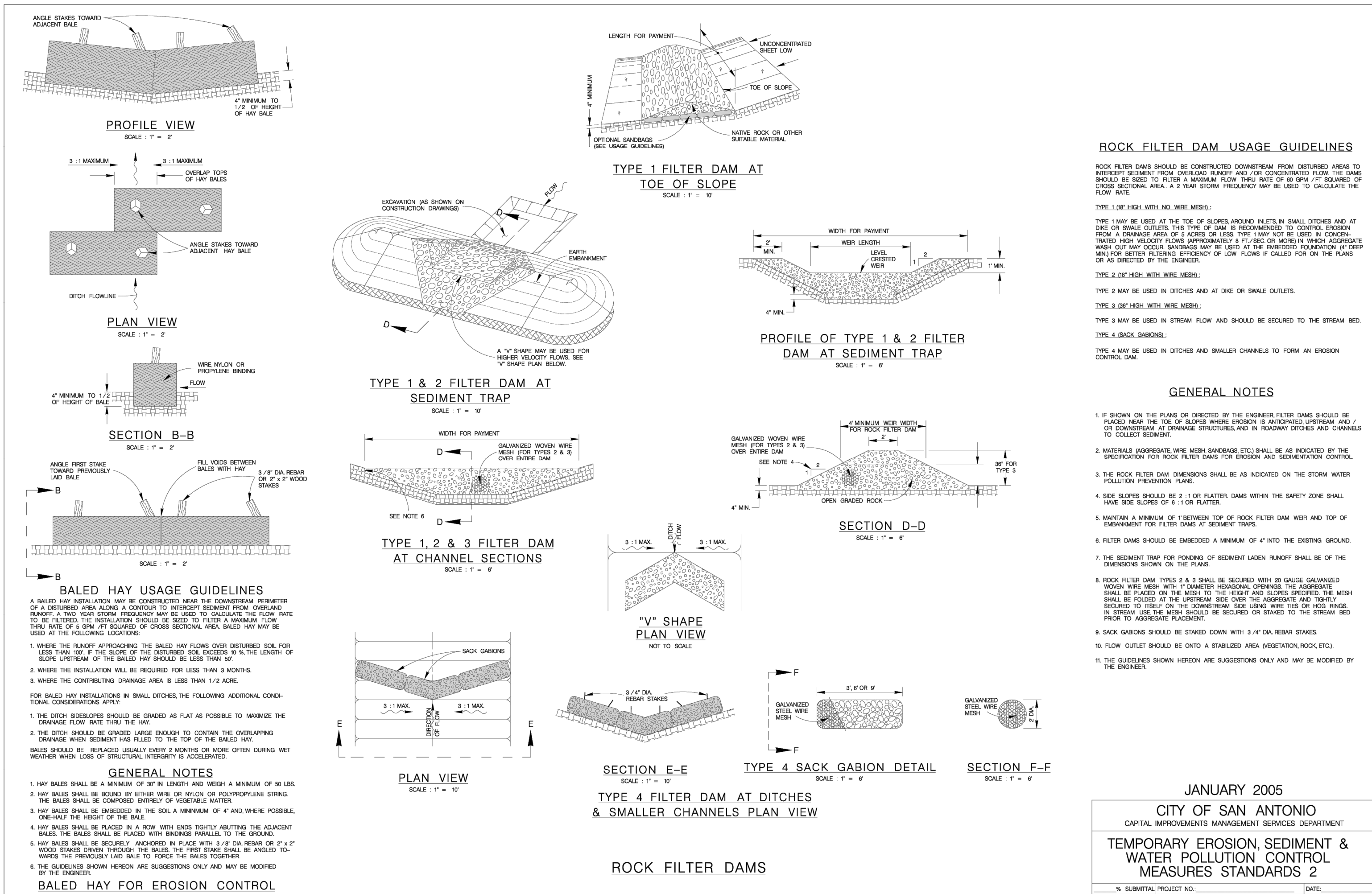
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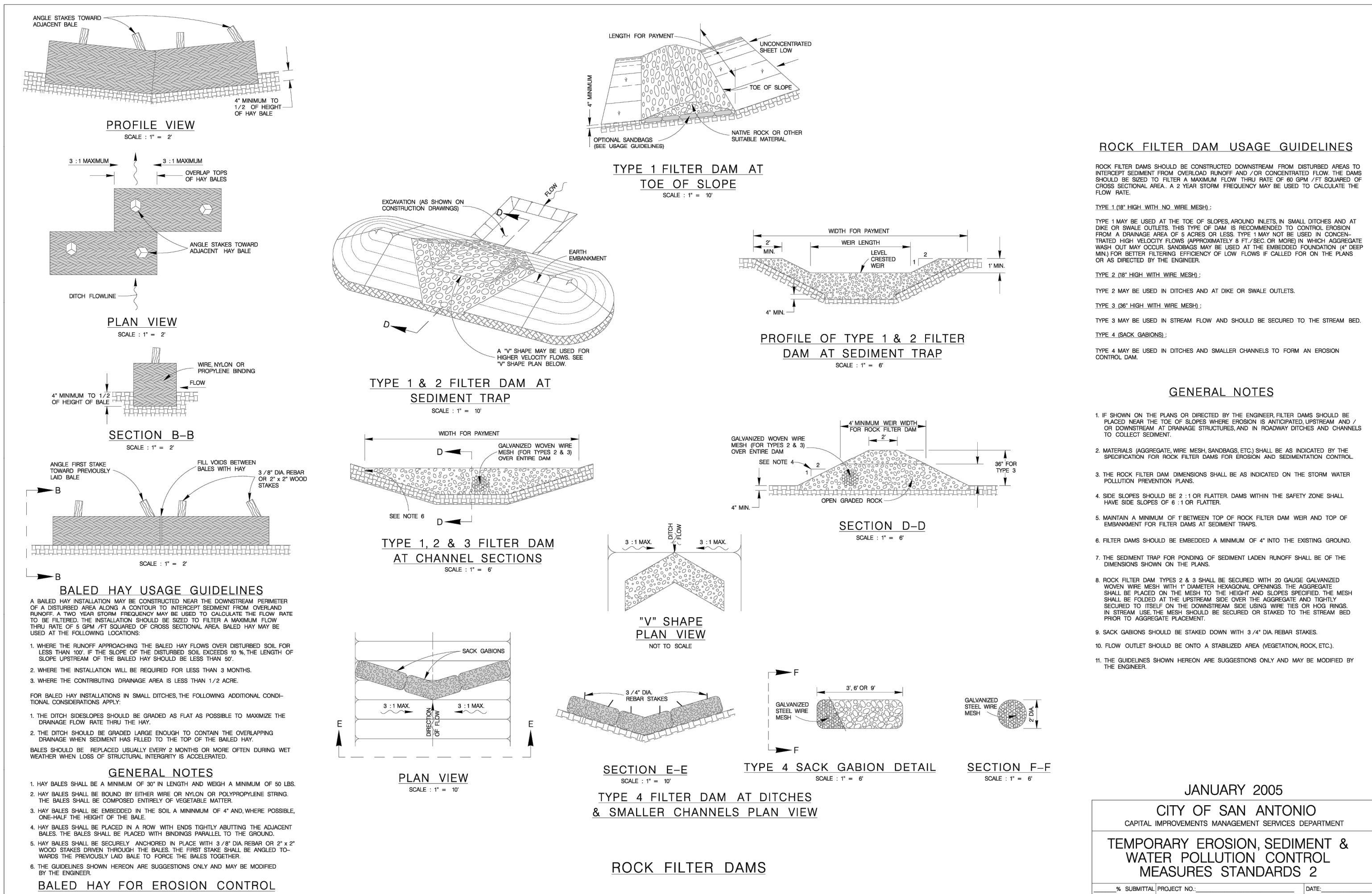
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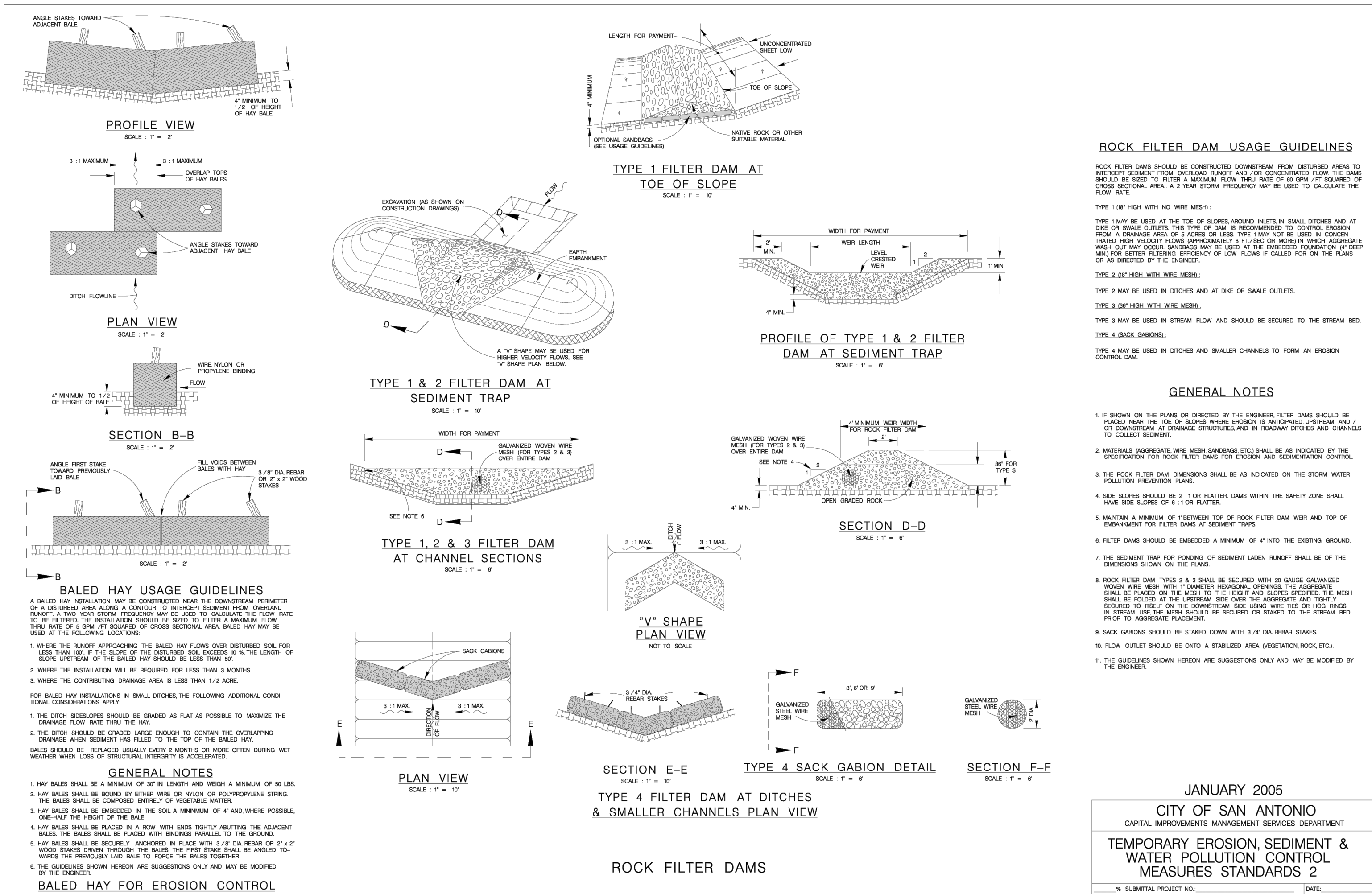
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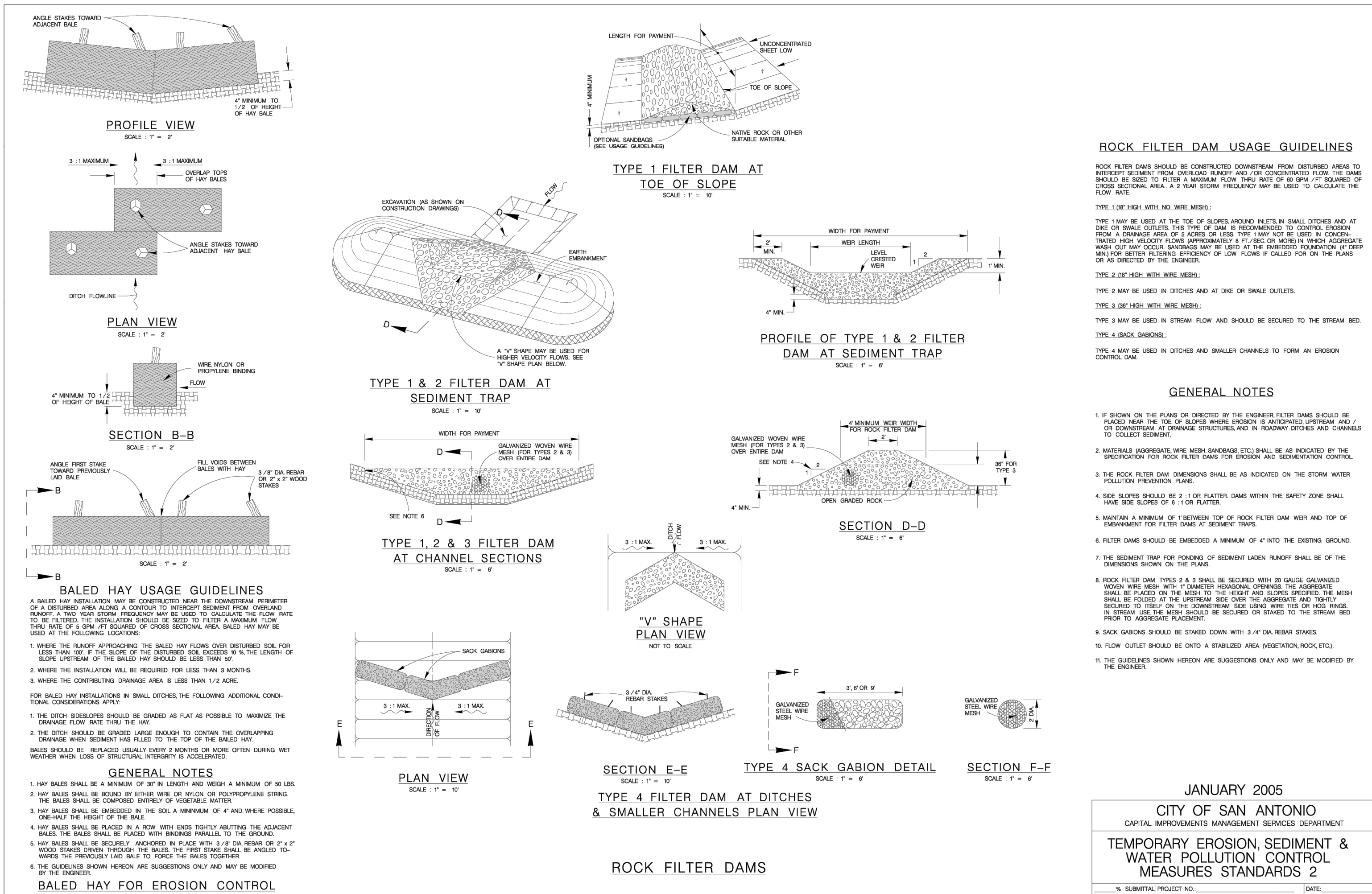
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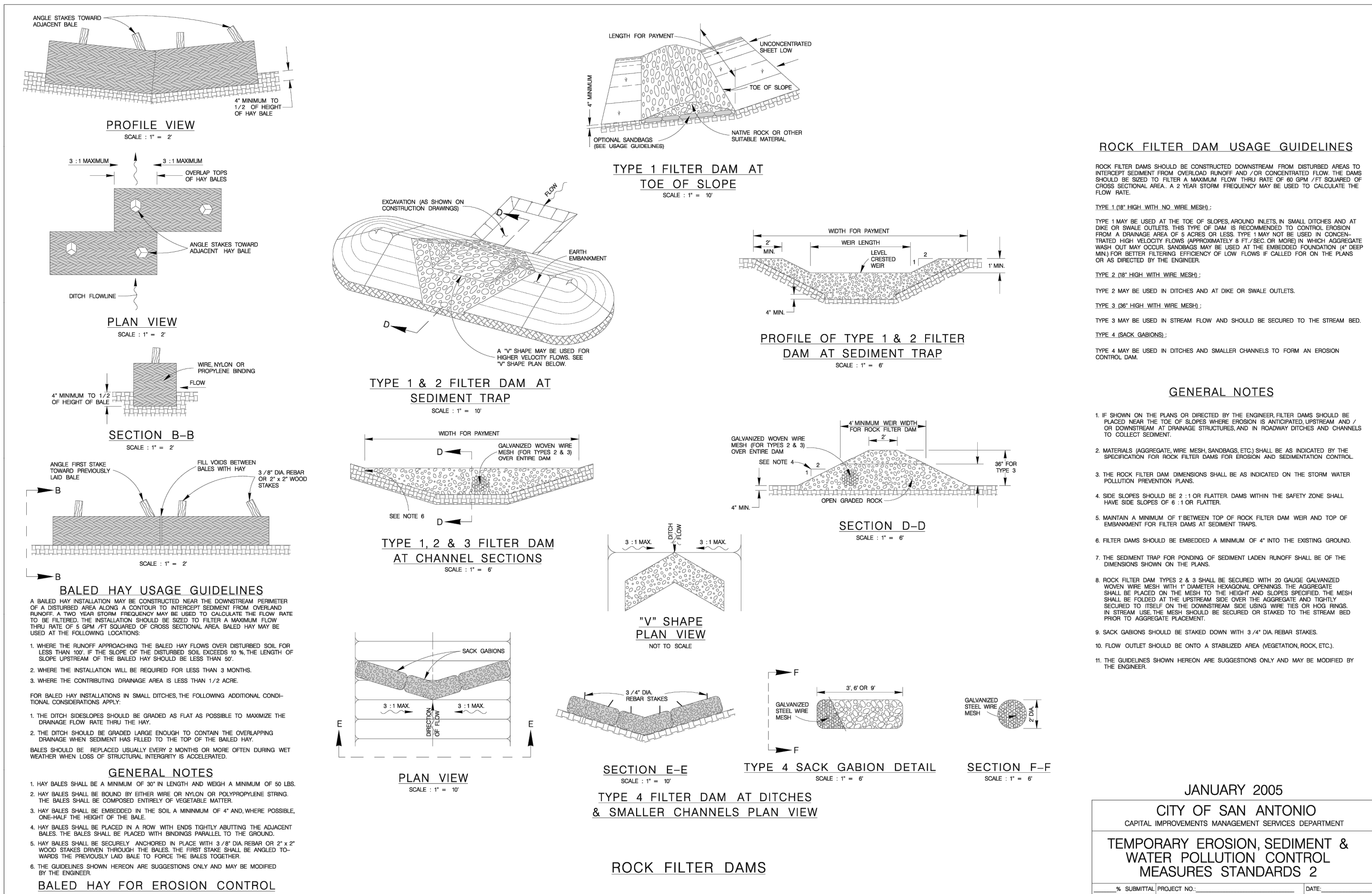
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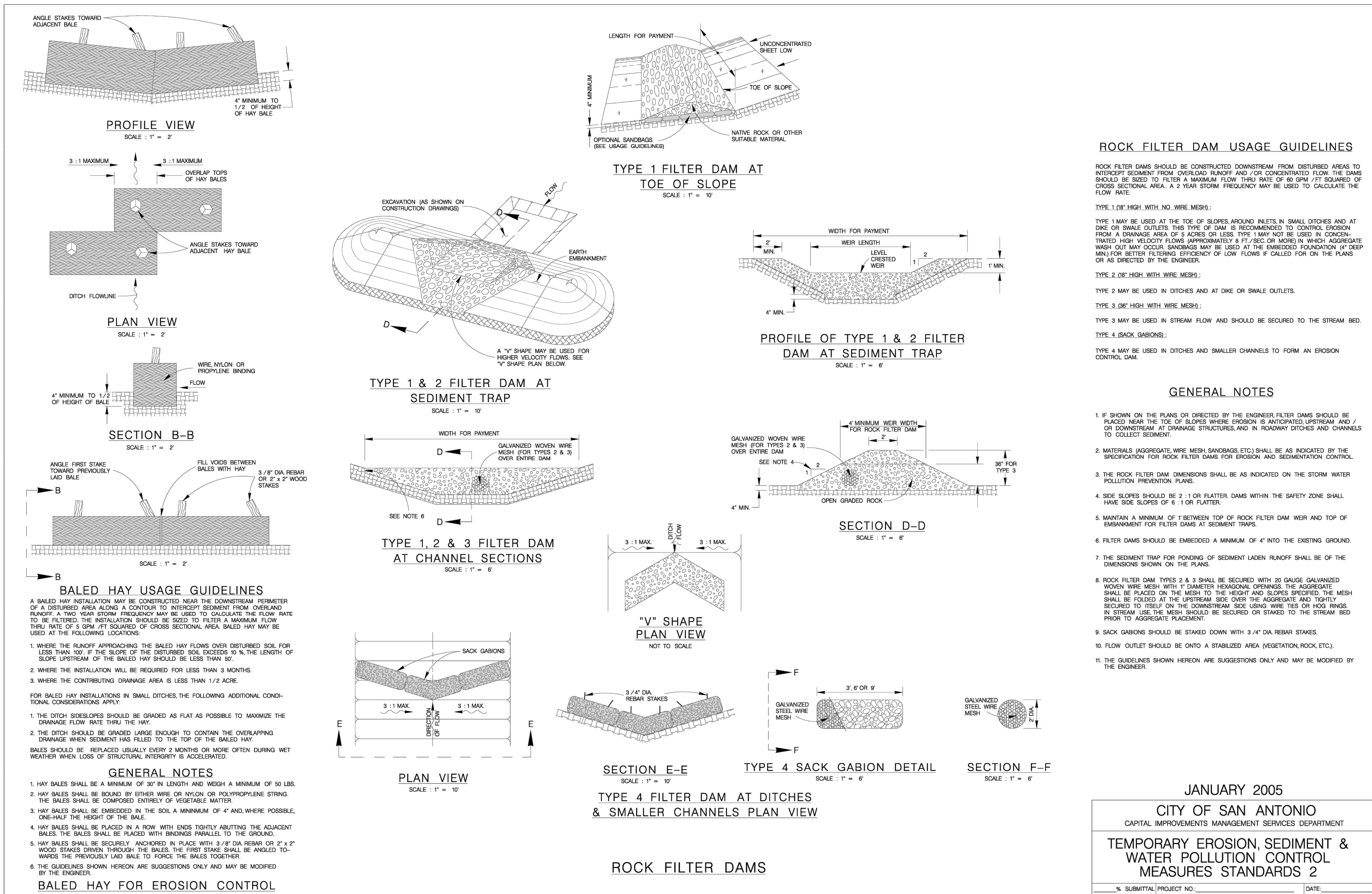
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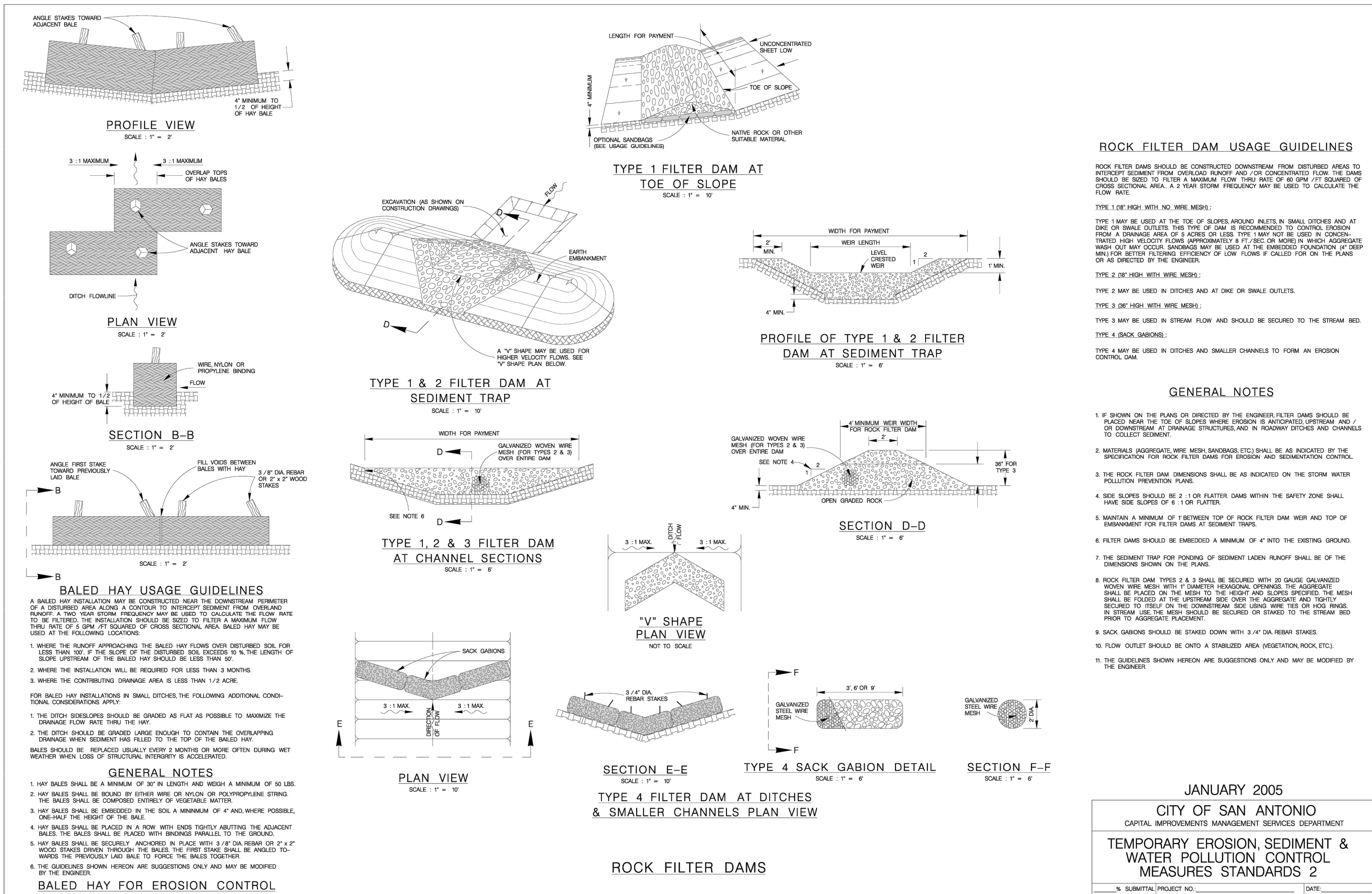
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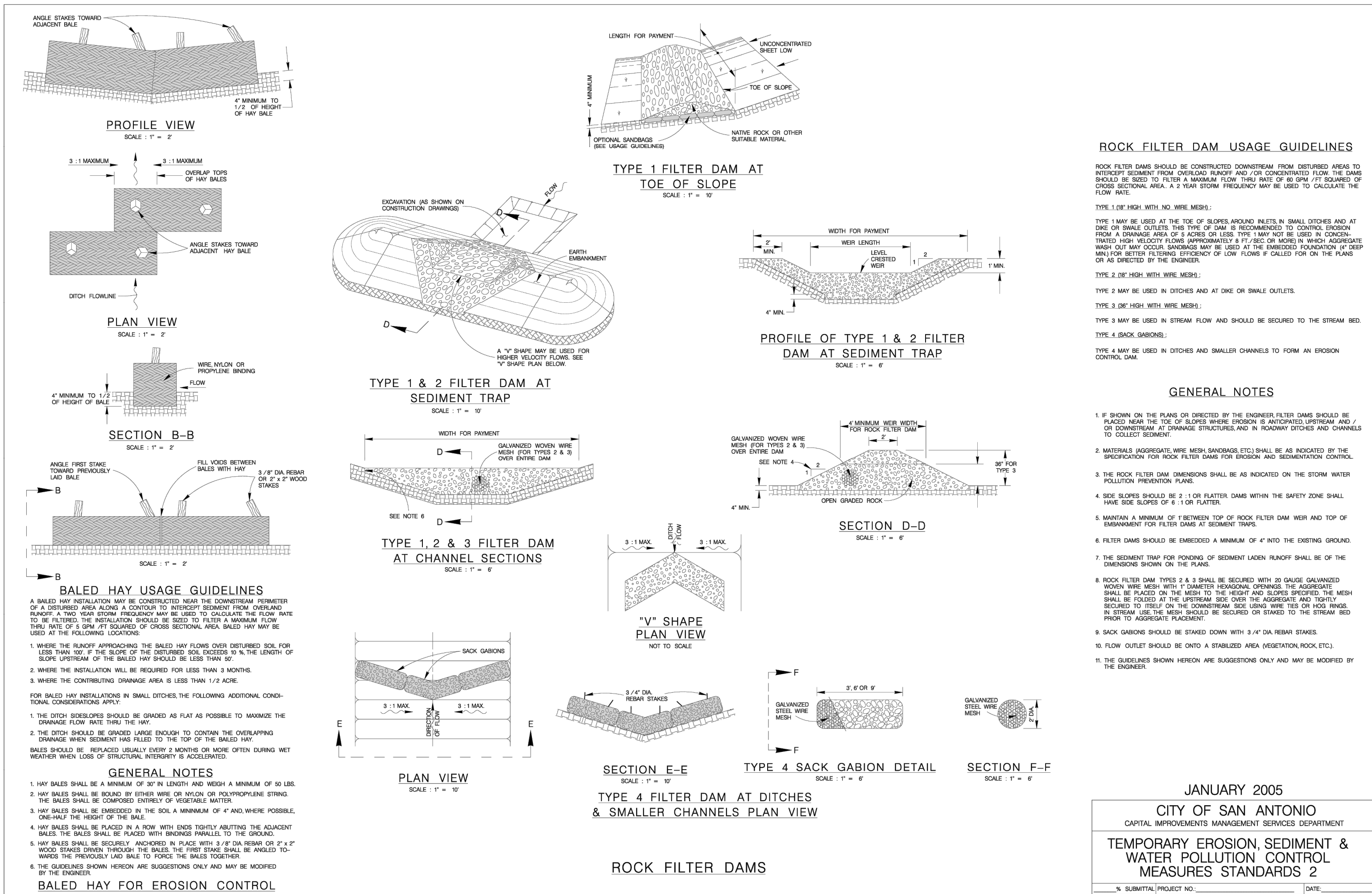
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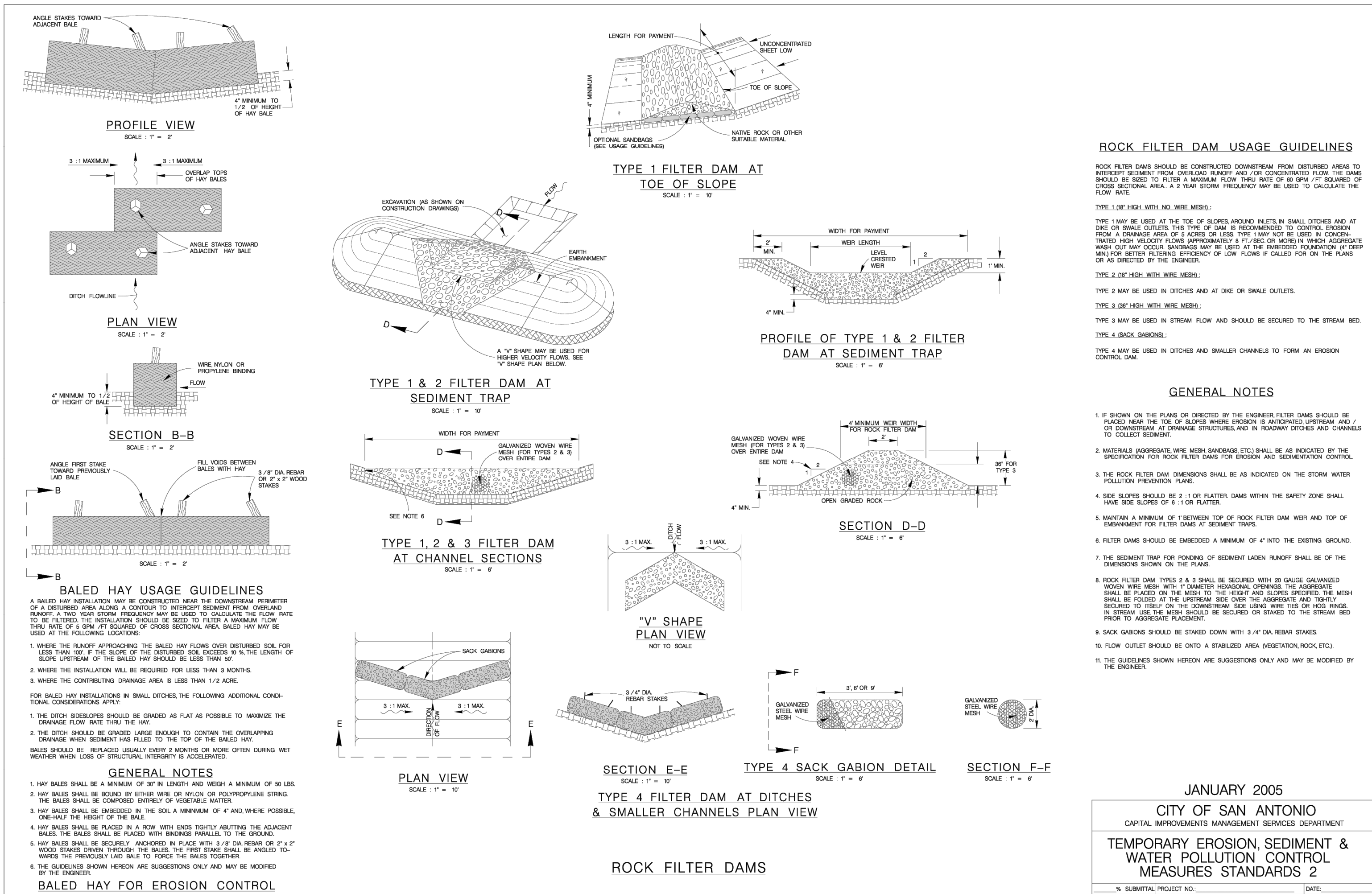
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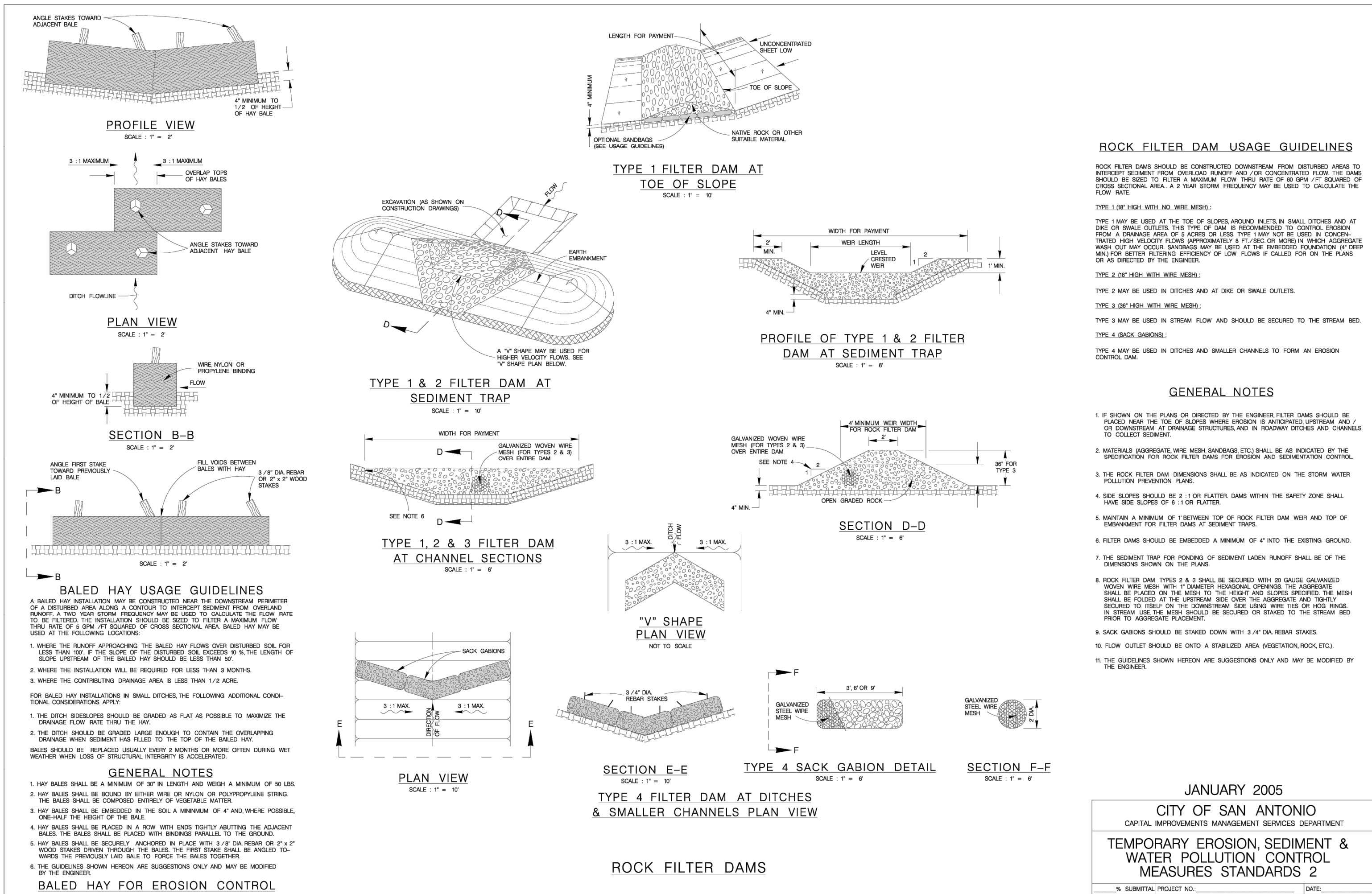
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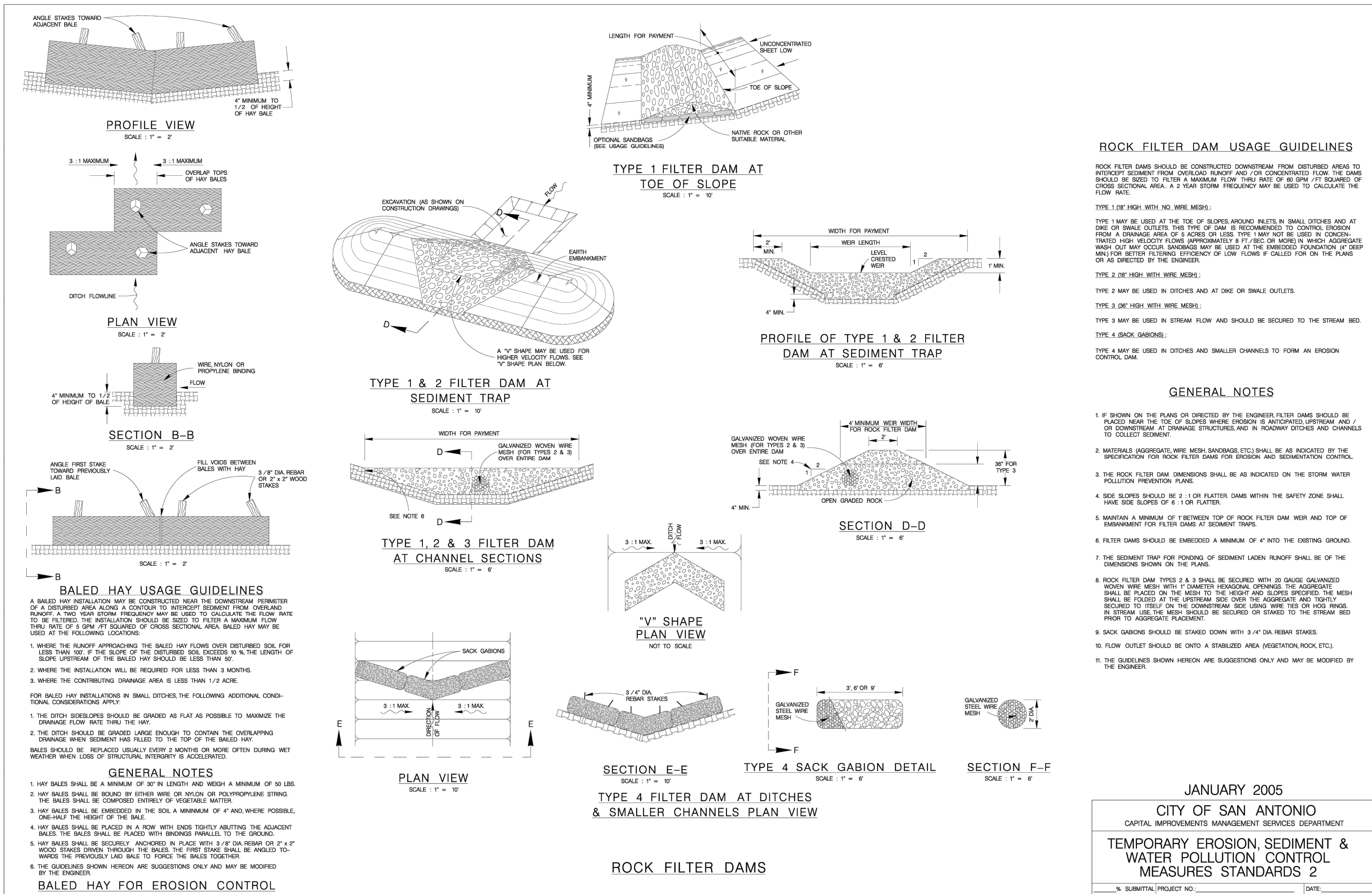
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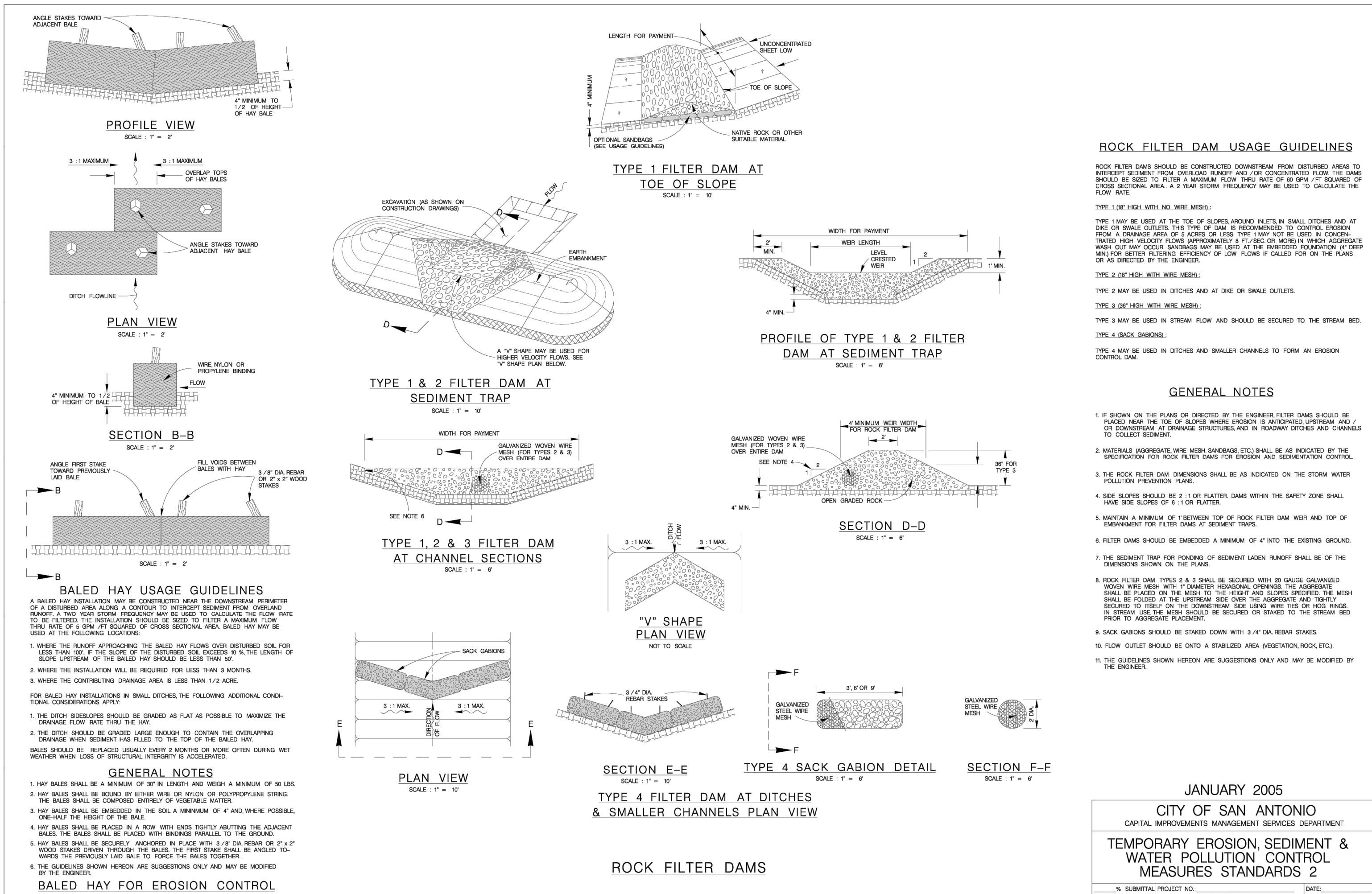
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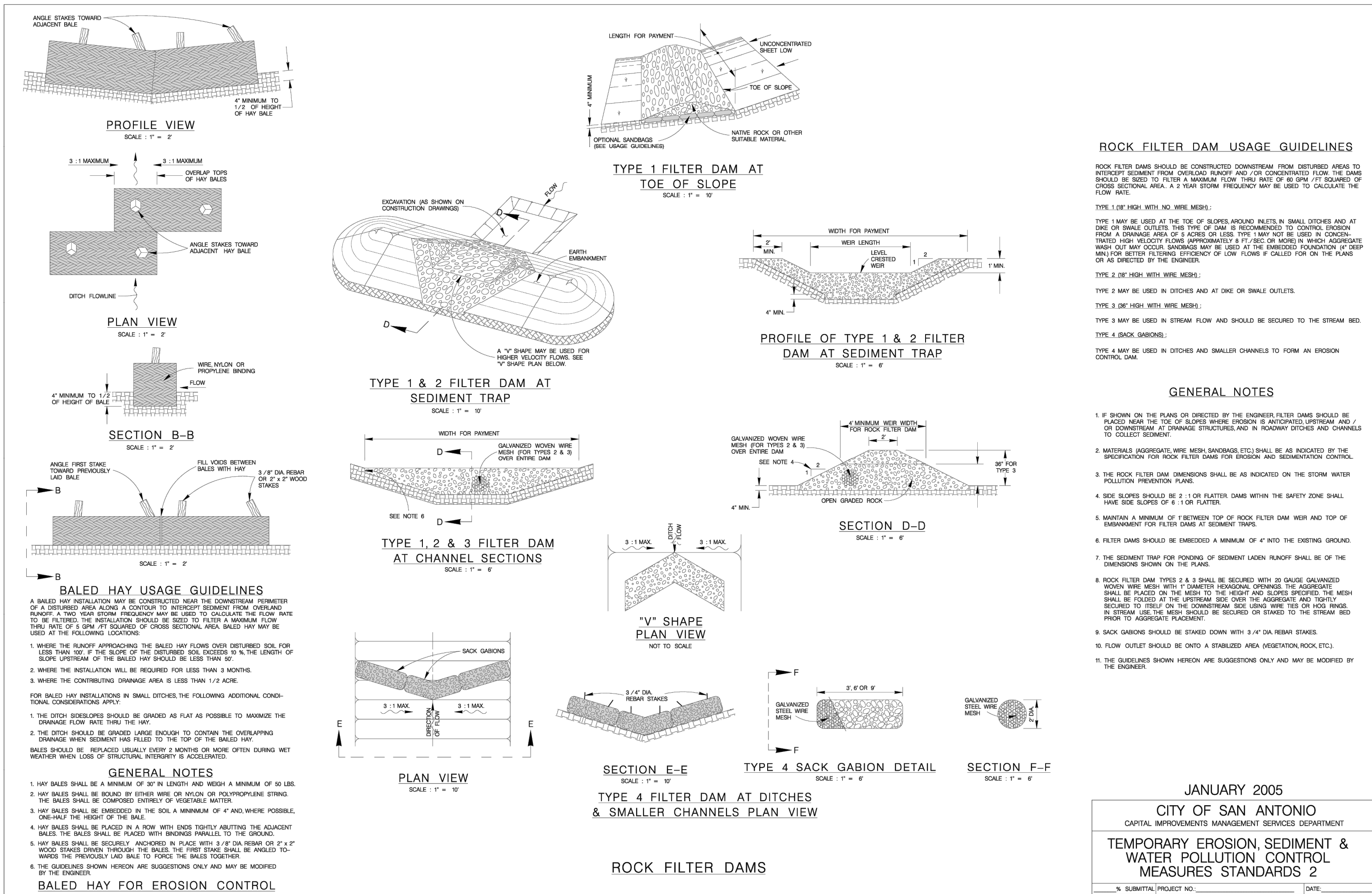
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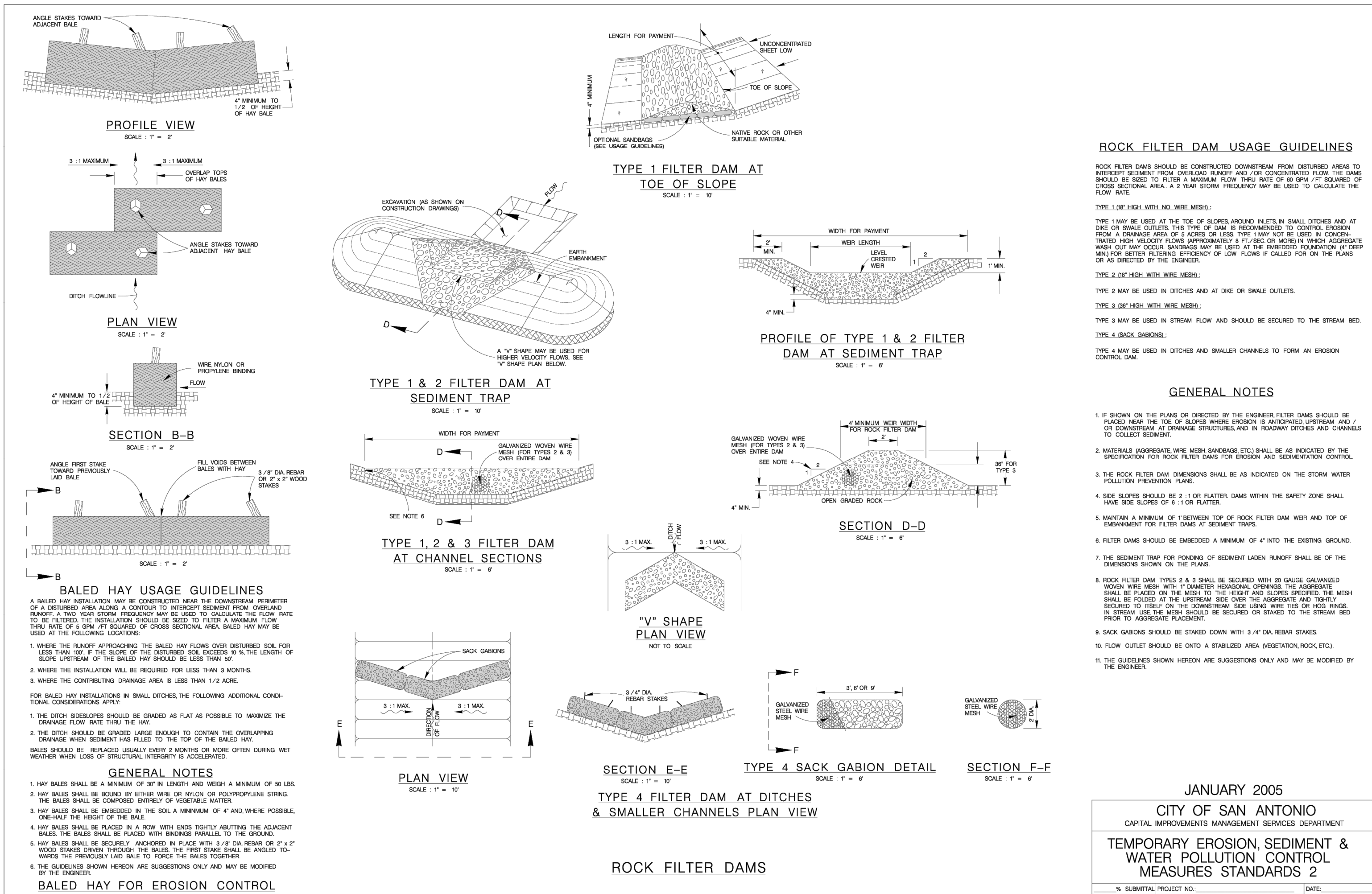
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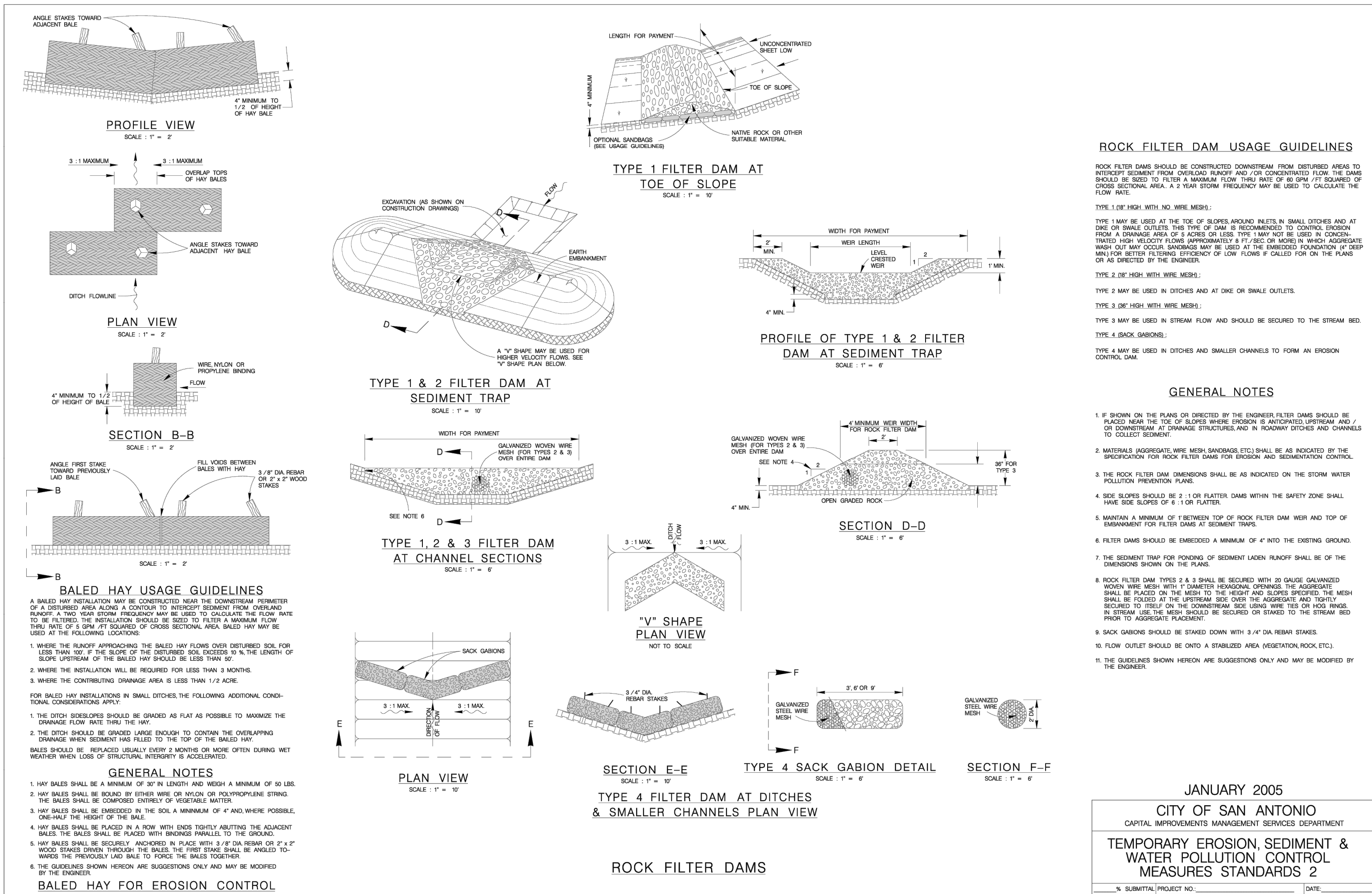
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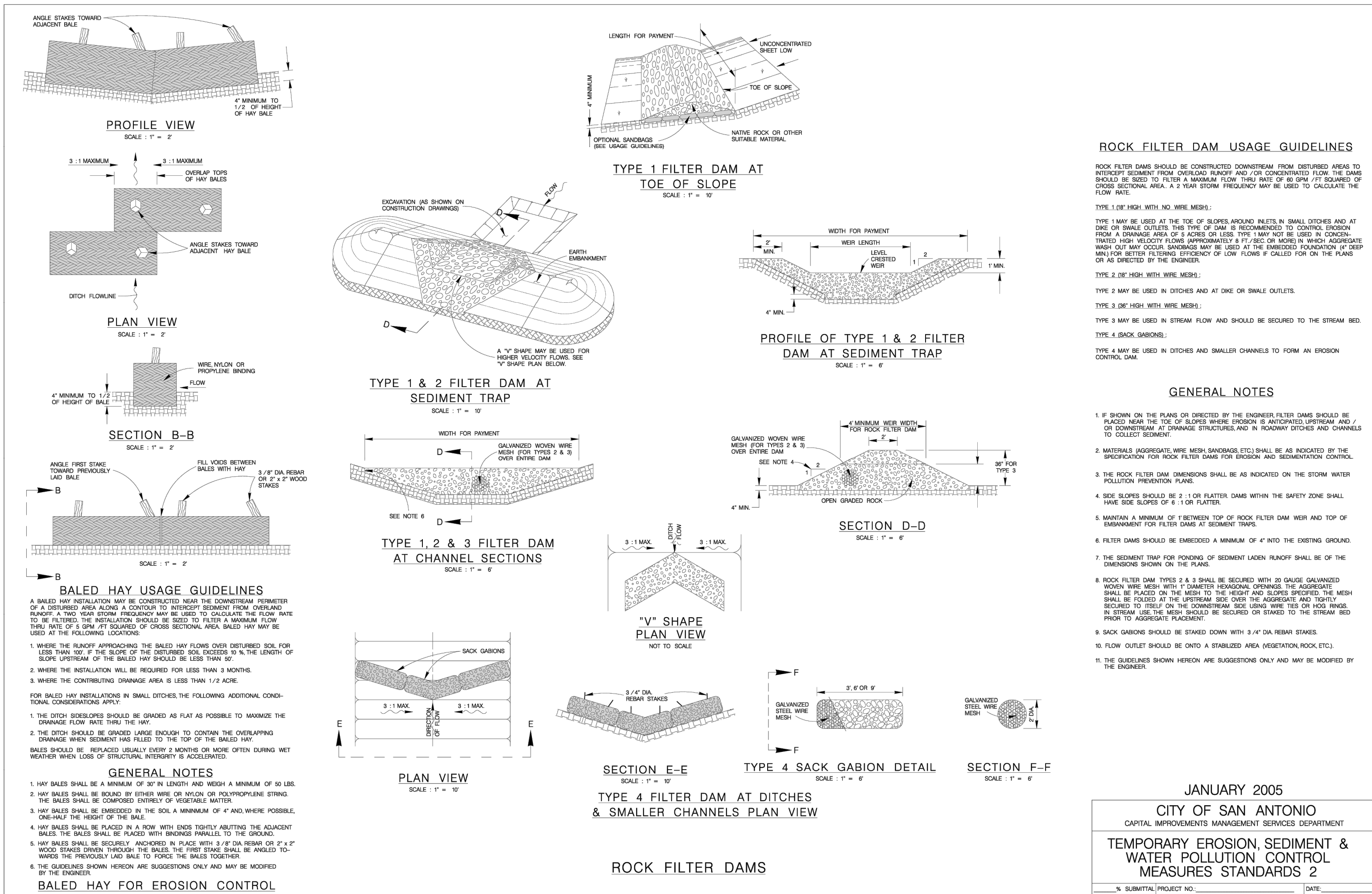
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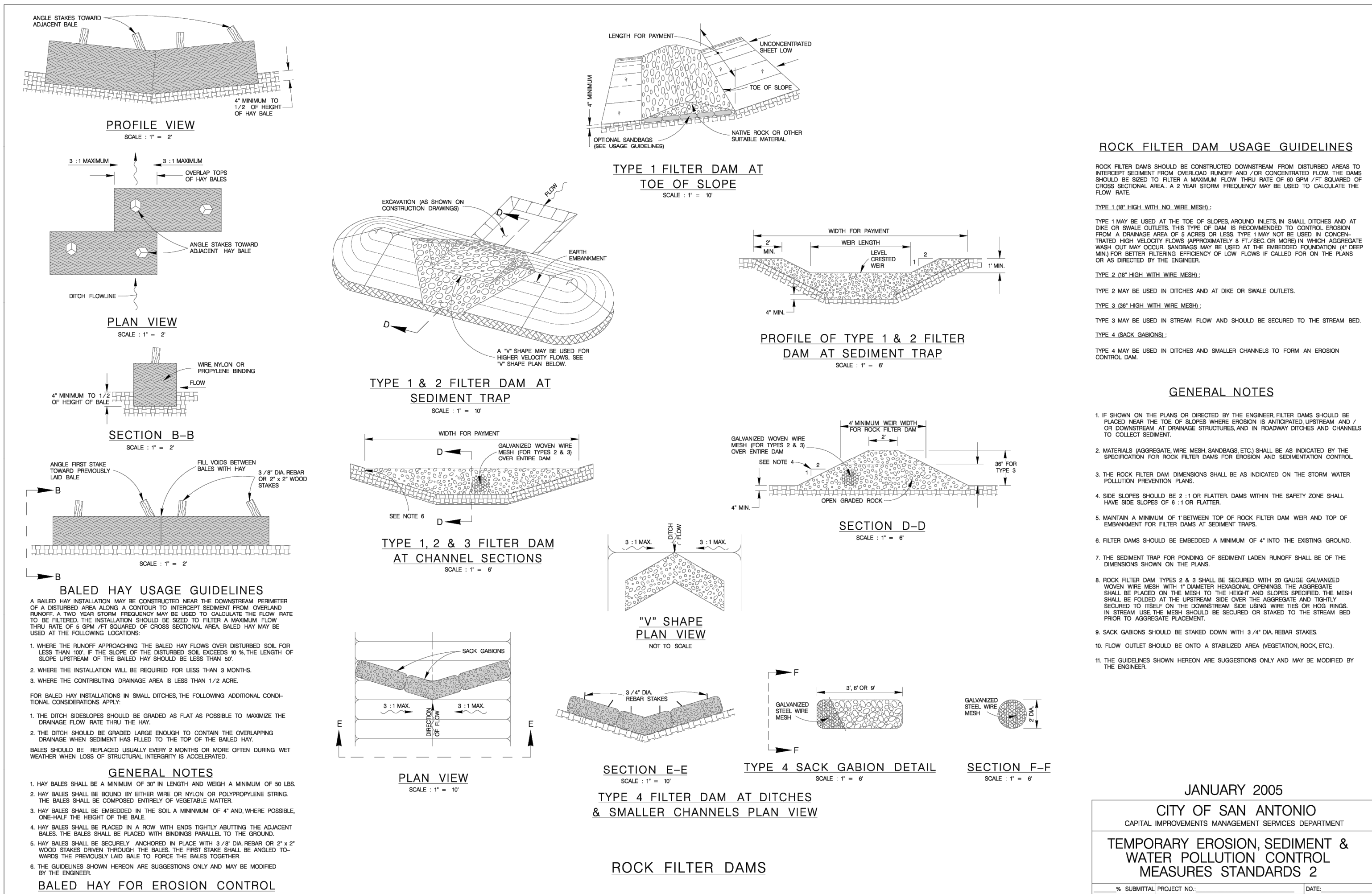
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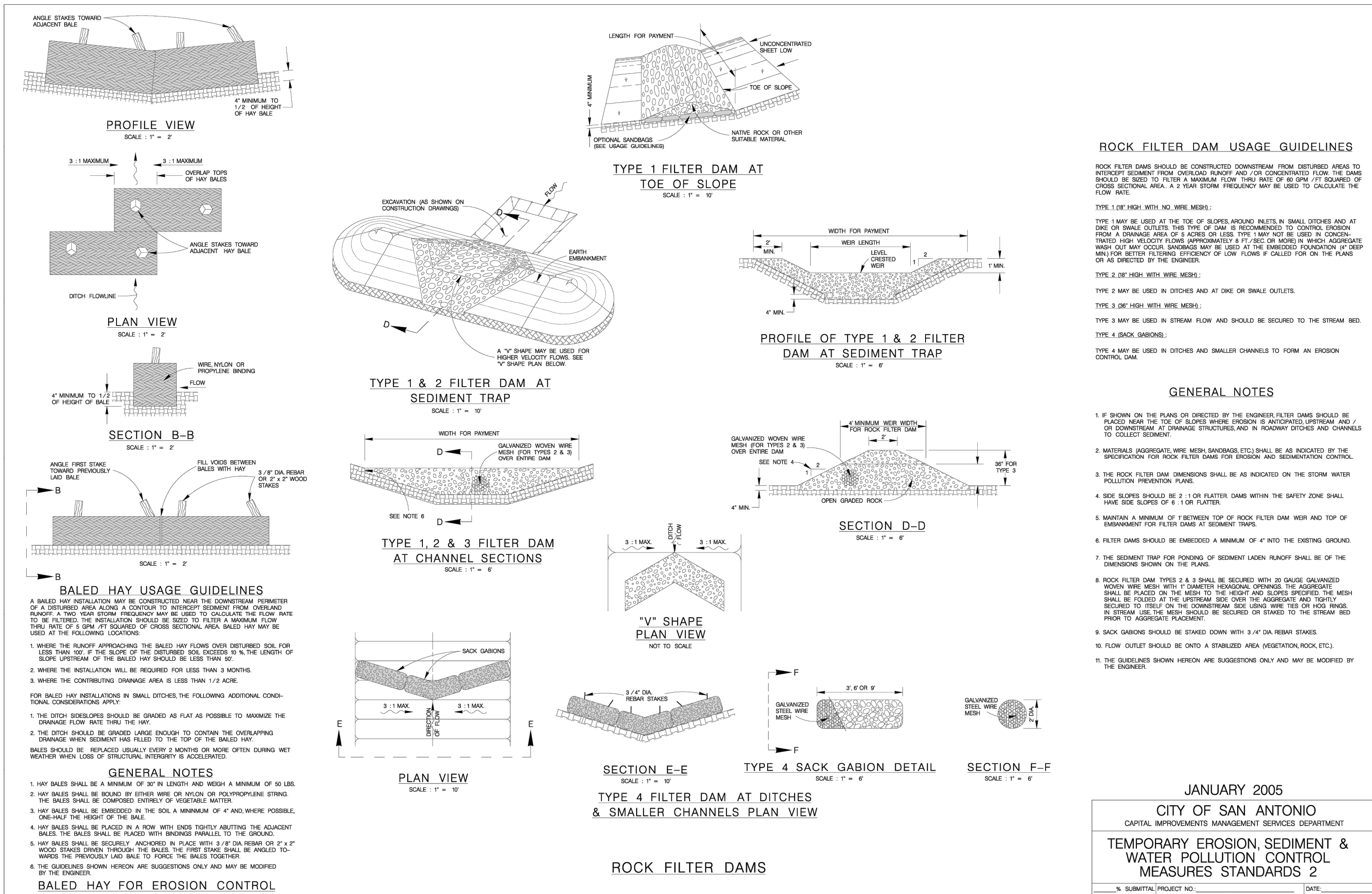
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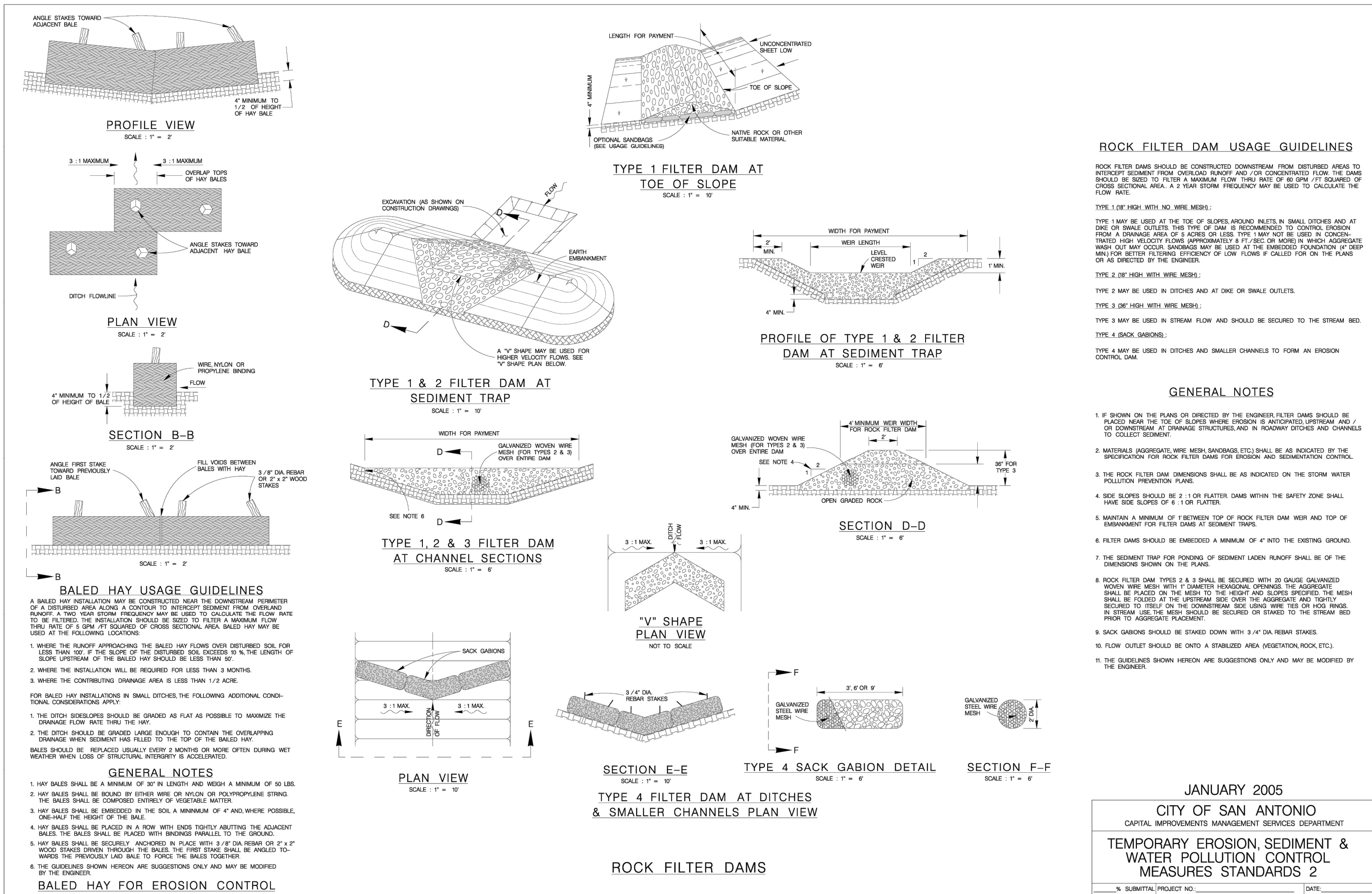
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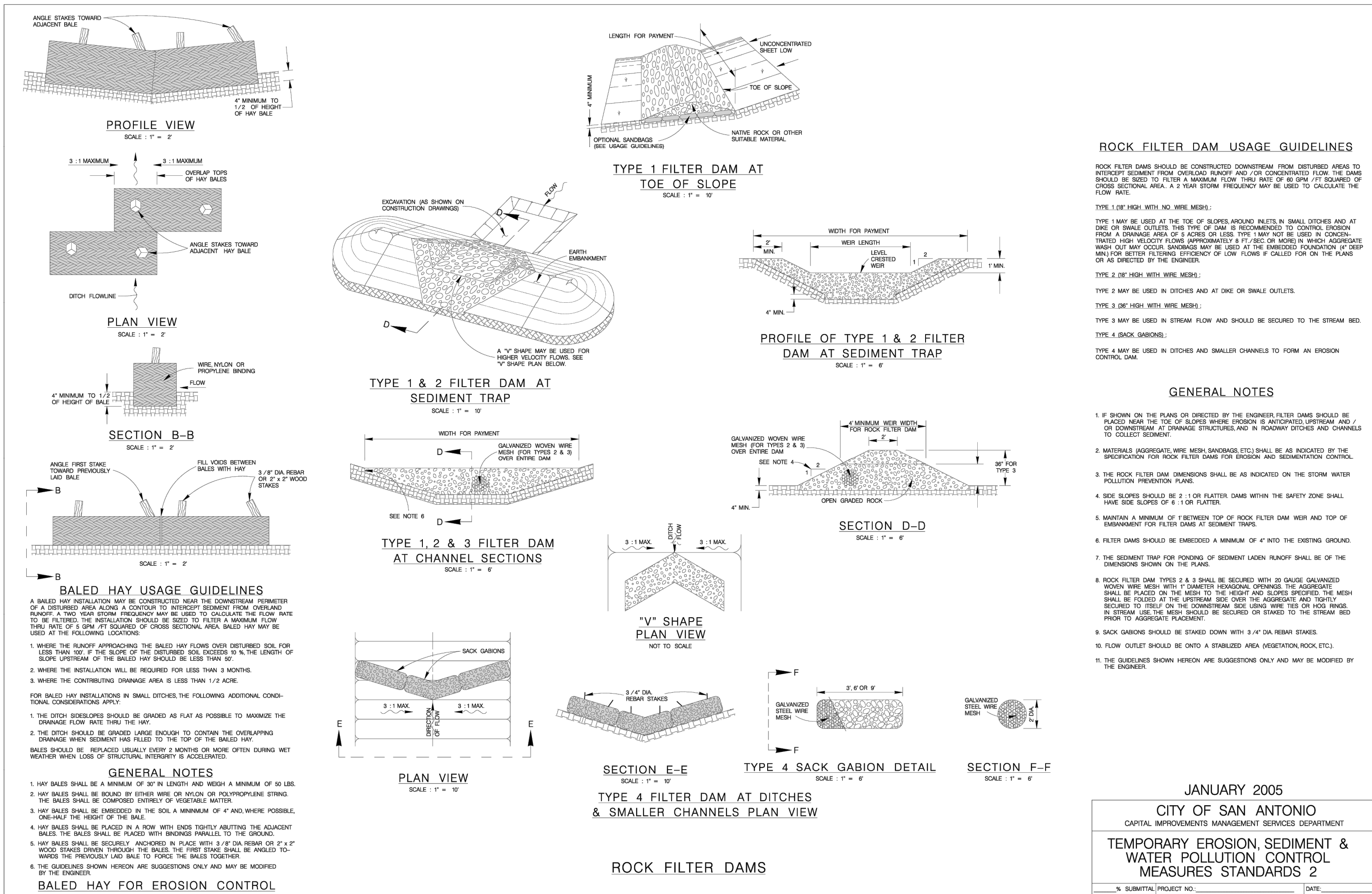
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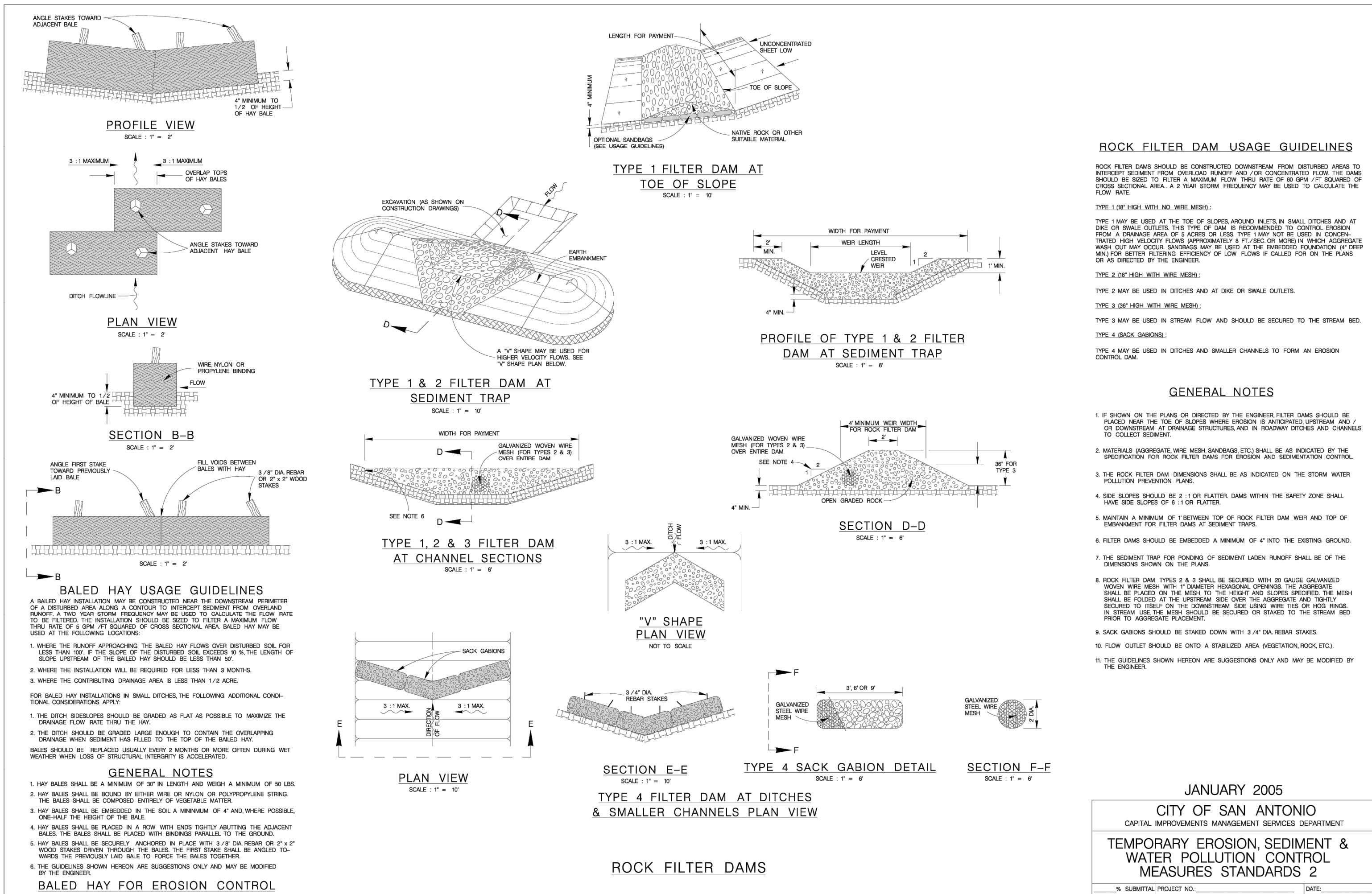
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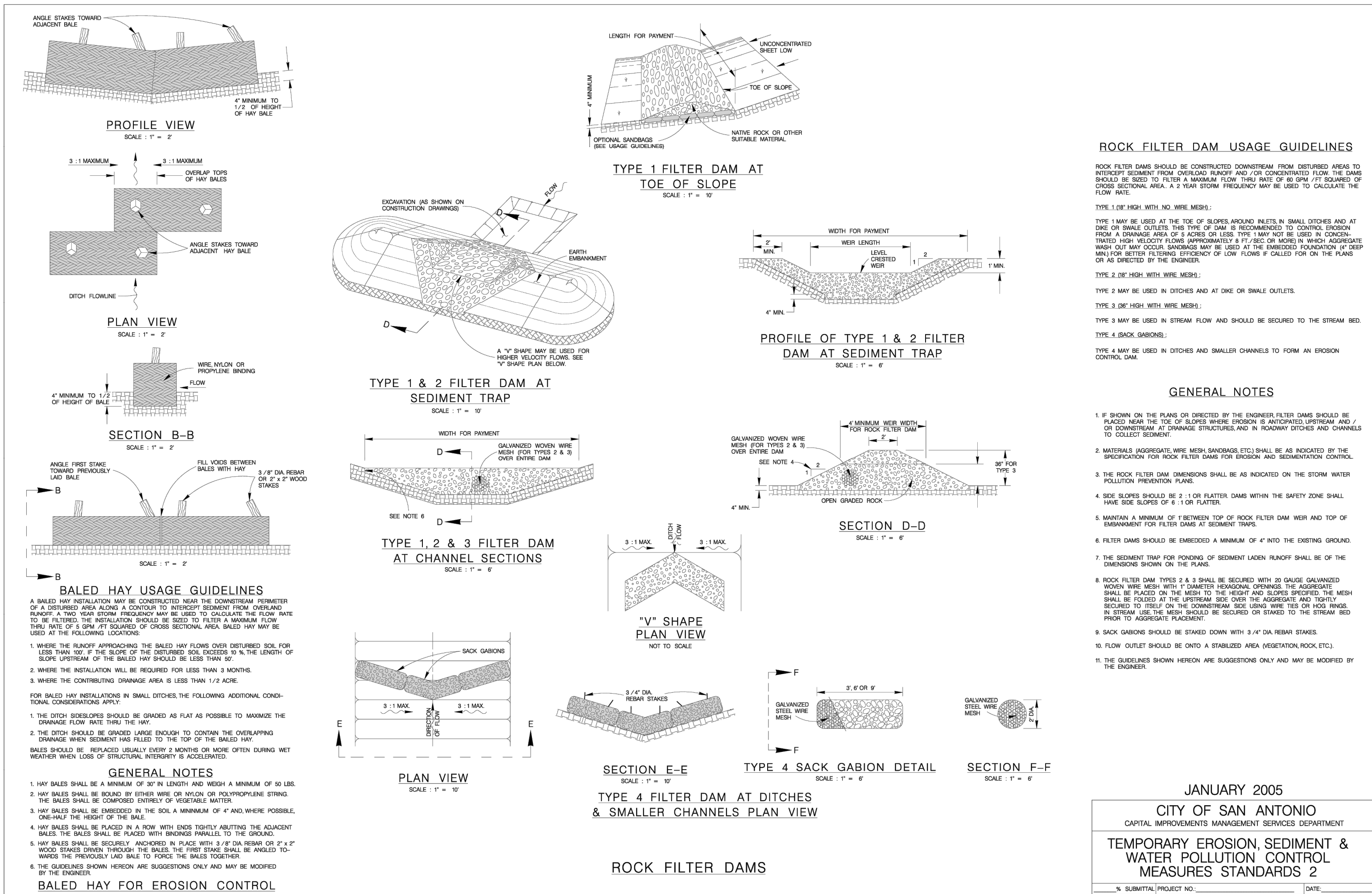
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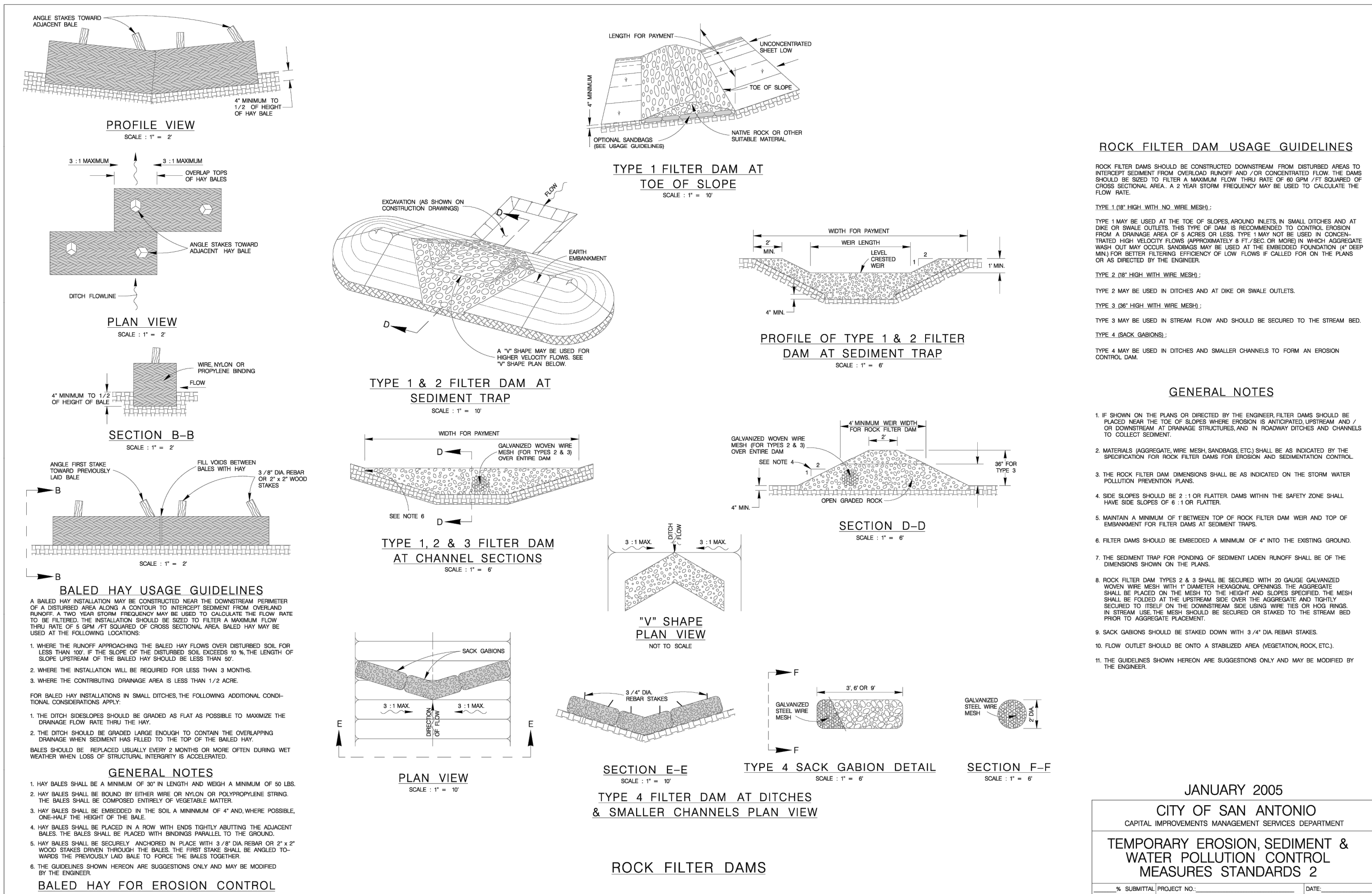
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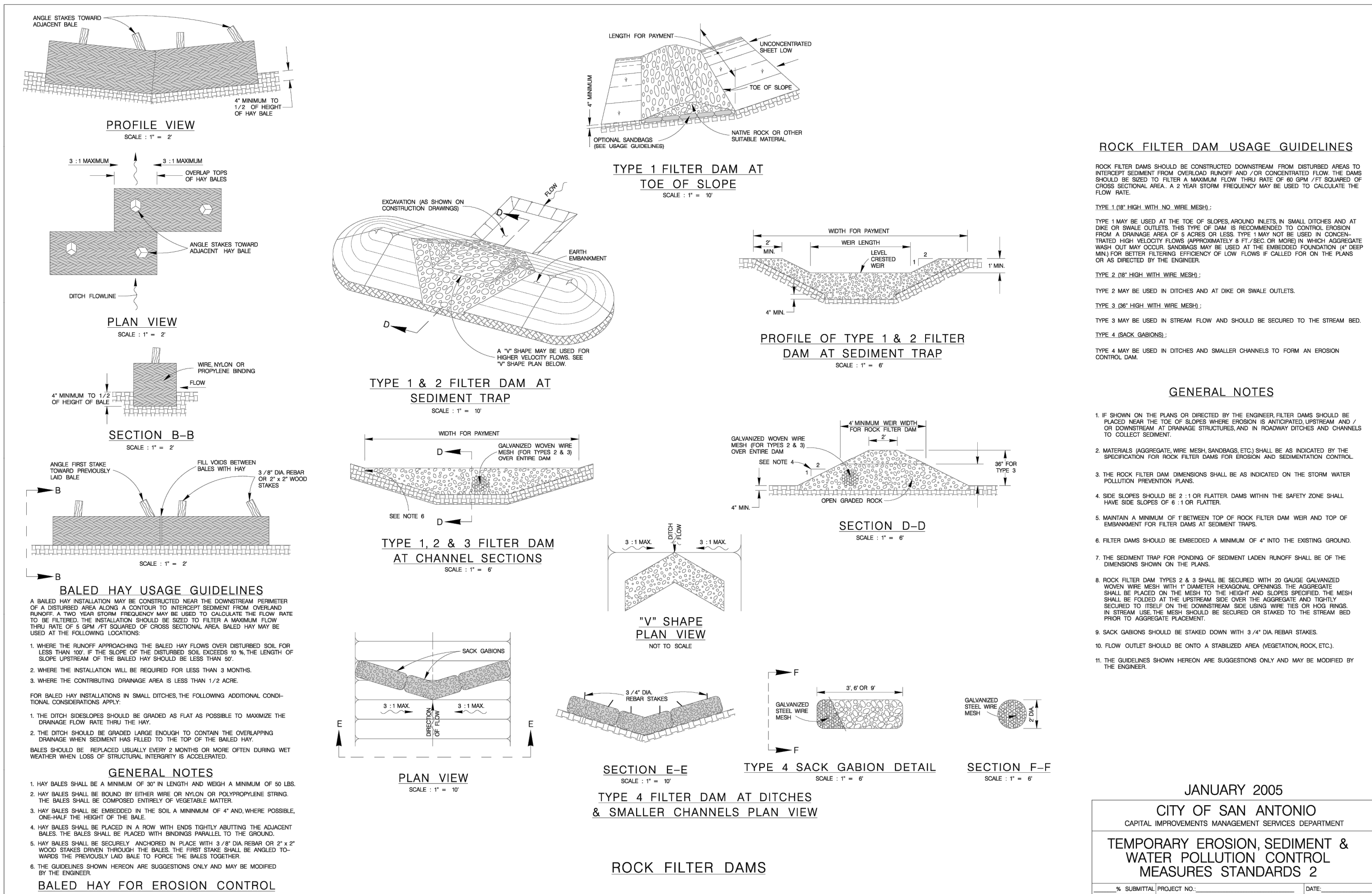
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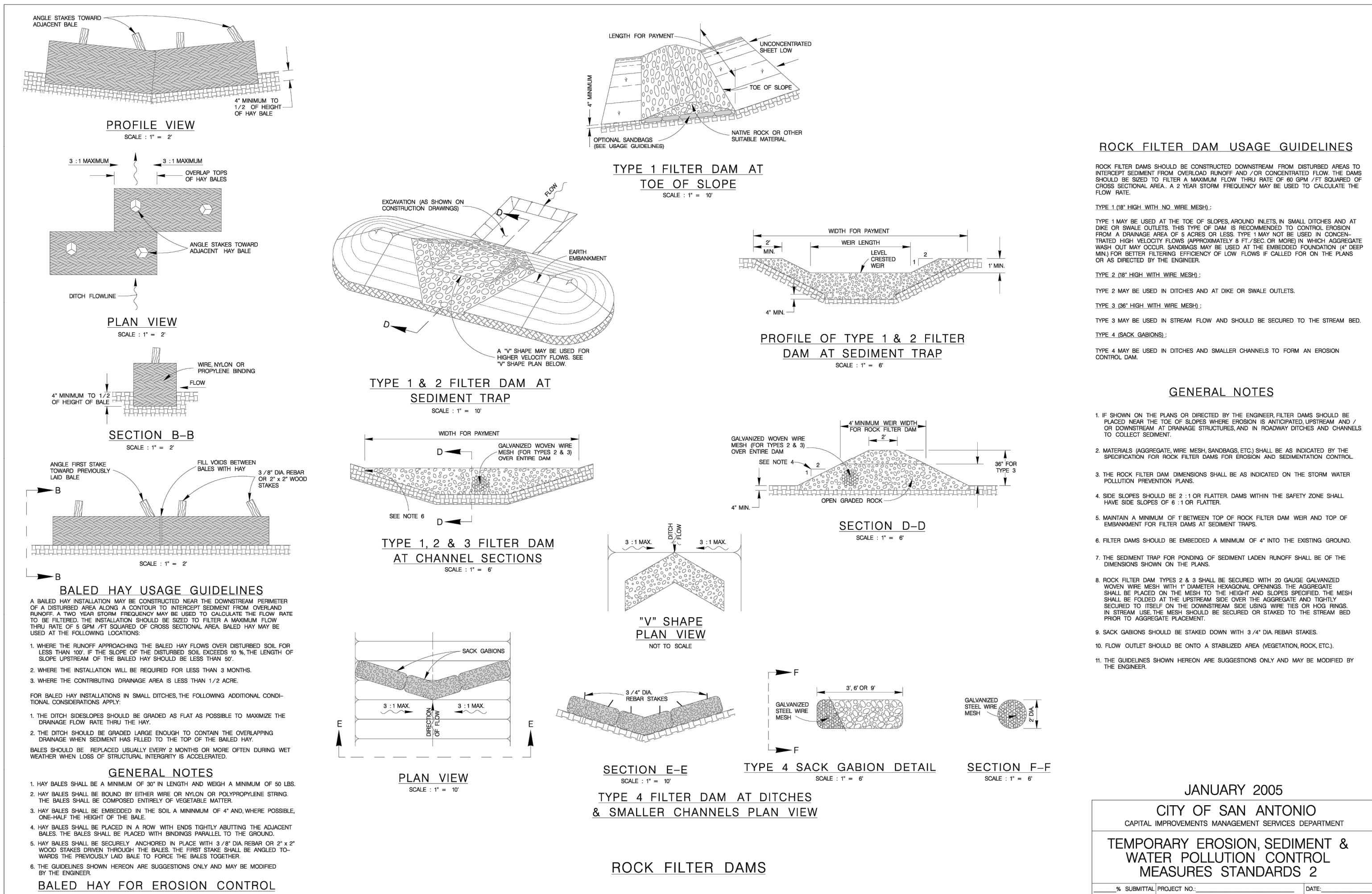
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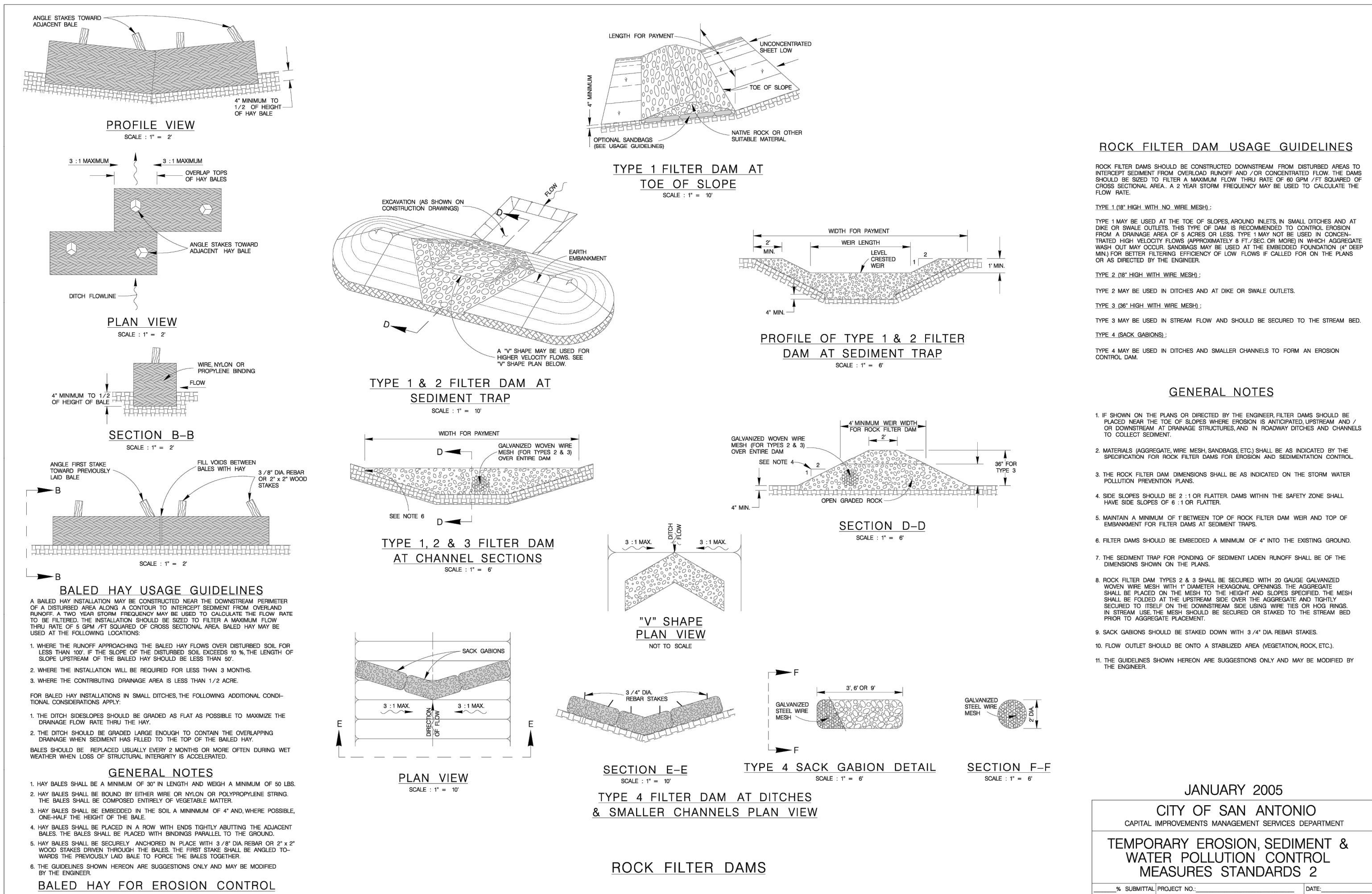
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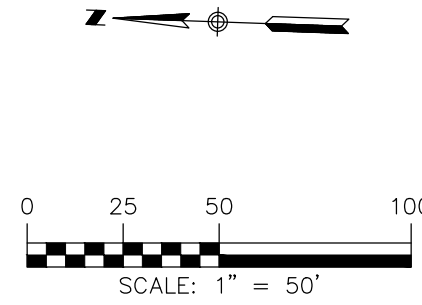
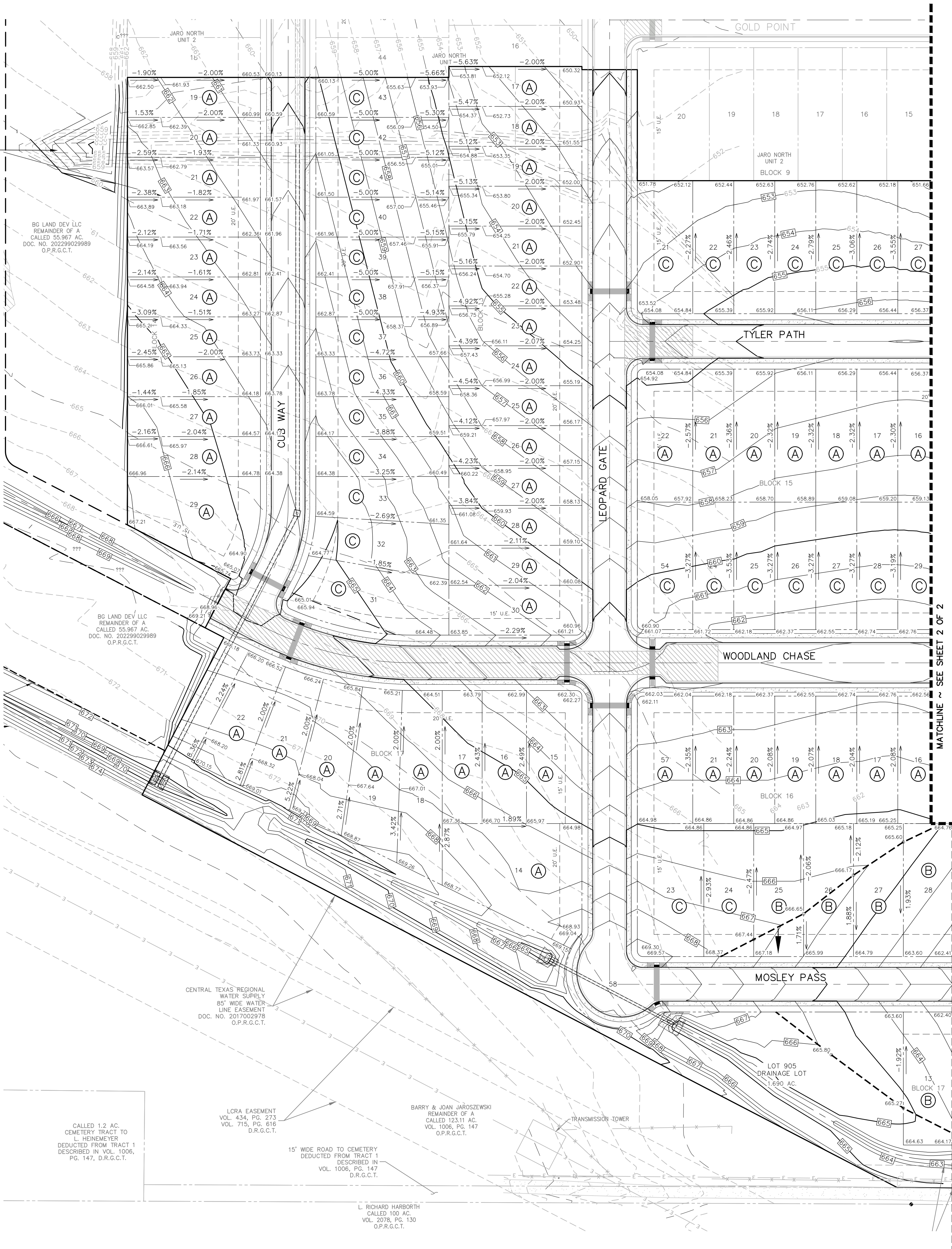


GRAVEL FILTER BAGS





CONTRACTOR TO FILL IN EXISTING INTERCEPTOR CHANNEL. REMOVE INITIAL 6" OF SOIL AND FILL AND 6" COMPACT SOIL IN 6" LOOSE LIFTS.



- LEGEND**
- 700 — EXISTING CONTOURS
  - 700 — PROPOSED CONTOURS
  - B.L. BUILDING SETBACK LINE
  - U.E. UTILITY EASEMENT
  - D.E. DRAINAGE EASEMENT
  - (A) LOT GRADING SEE DETAILS SHEET C3.2
  - DRAINAGE FLOW DIRECTION
  - FF=XXX.XX MINIMUM FINISHED FLOOR ELEVATION
  - - - BREAK LINE

**NOTES:**

- DRAINAGE IMPROVEMENTS SUFFICIENT TO MITIGATE OFFSITE IMPACT OF CONSTRUCTION MUST BE COMPLETED AND IN PLACE PRIOR TO ADDING IMPERVIOUS COVER TO THE SITE.
- ALL FINISHED FLOOR ELEVATIONS SHALL MEET THE FOLLOWING REQUIREMENTS:
  - PER NOTE 10 ON PLAT SHEET C0.2.
  - HUD DETAILS SHOWN ON SHEET C3.2.
- WHEN POSSIBLE, CONTRACTOR SHALL PHASE GRADING SO AS TO EXPOSE THE MINIMUM AMOUNT OF AREA TO SOIL EROSION FOR THE SHORTEST PERIOD OF TIME.
- FOR ANY LOTS ADJACENT TO A DRAINAGE STRUCTURE, HOME BUILDER TO ENSURE FINISHED FLOOR HAS A MINIMUM ELEVATION AS LABELED OR AS PER NOTE 2 ABOVE, WHICHEVER IS GREATER.
- STRIPPING OF VEGETATION FROM PROJECT SITES SHALL BE PHASED SO AS TO EXPOSE THE MINIMUM AMOUNT OF AREA TO SOIL EROSION FOR THE SHORTEST POSSIBLE PERIOD OF TIME PER THE NEW BRAUNFELS DRAINAGE AND EROSION CONTROL DESIGN MANUAL SEC. 12.2(N).
- PER TPDES REQUIREMENTS, DISTURBED AREAS ON WHICH CONSTRUCTION ACTIVITIES HAVE CEASED (TEMPORARILY OR PERMANENTLY ) SHALL BE STABILIZED WITHIN 14 DAYS UNLESS ACTIVITY RESUMES WITHIN 21 DAYS. SEEDING AND/OR HYDROMULCH DOES NOT CONSTITUTE STABILIZATION, MINIMUM 70 PERCENT VEGETATIVE COVER OF DISTURBED AREAS IS REQUIRED.
- ALL SIDEWALKS SHALL HAVE A MAX RUNNING SLOPE OF 5%.
- ALL SIDEWALKS SHALL HAVE A MAX CROSS SLOPE OF 2%.
- RAMPS SHALL NOT EXCEED 8.33%. RAMPS LONGER THAN 6' REQUIRE HANDRAILS. RAMPS LONGER THAN 30' REQUIRE A LEVEL LANDING.

**GRADING PLAN  
(1 OF 2)**

JARO NORTH UNIT 3

NO.	REVISION	DESCRIPTION	DATE

DATE: October 25

DRAWN BY: RR

DESIGNED BY: JK

REVIEWED BY: ZJ

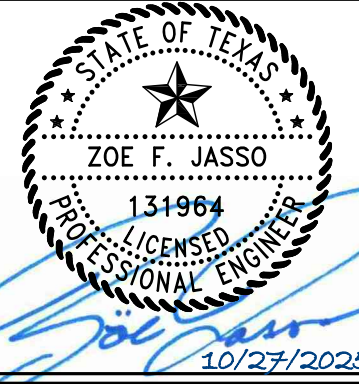
HMT PROJECT NO.: 337.102

**SHEET  
C3.0**

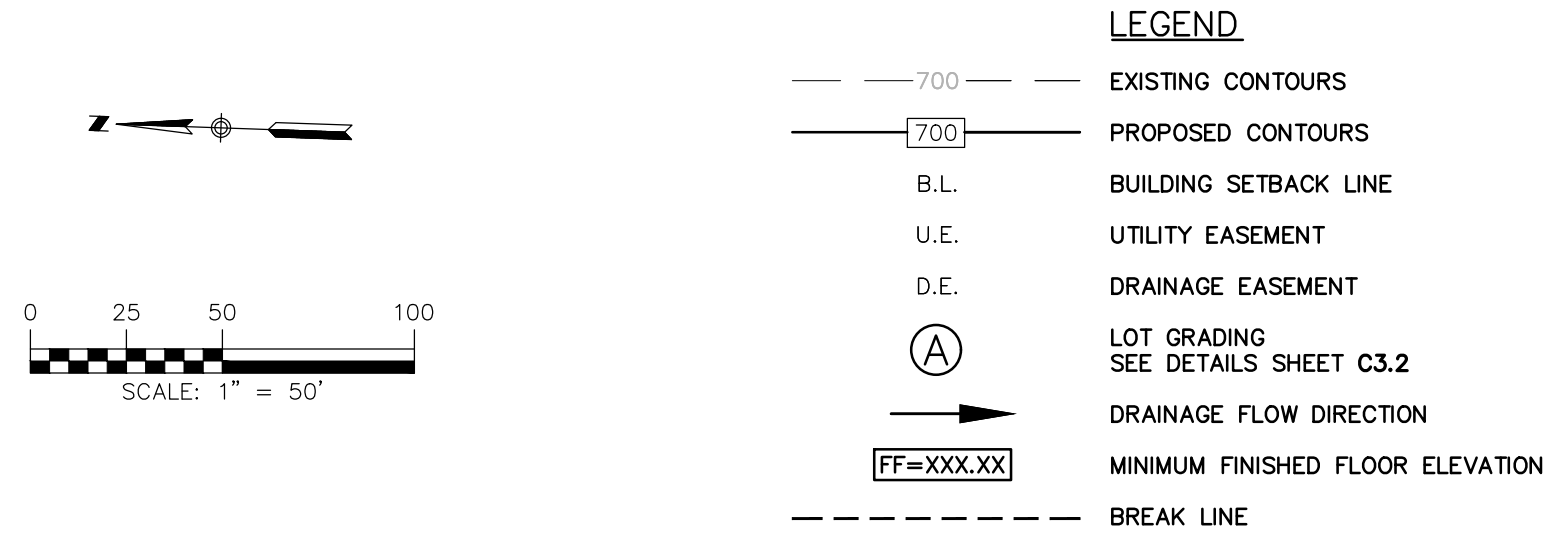
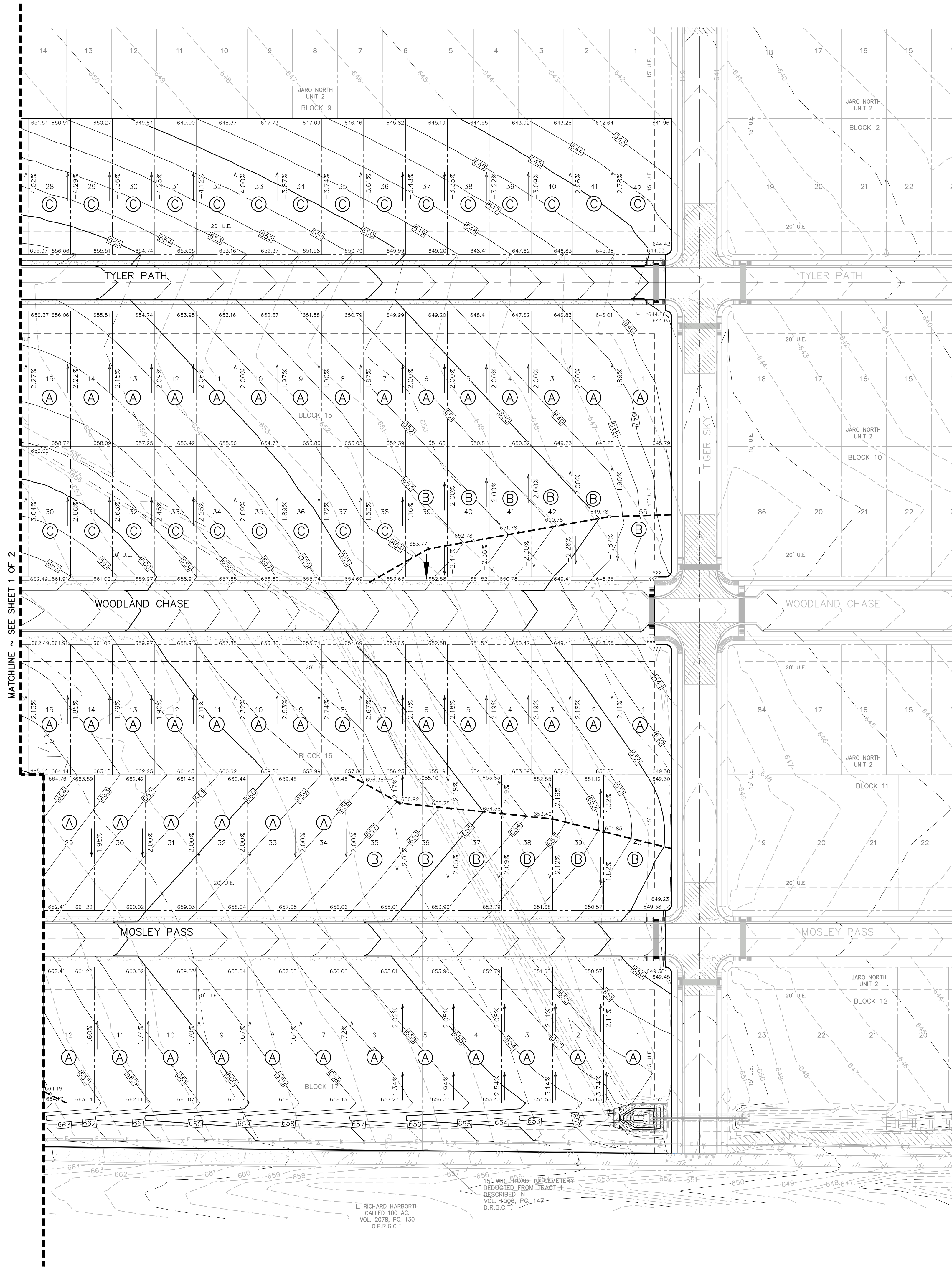
REFER TO THE COVER SHEET  
FOR BENCHMARK INFORMATION.

THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR WILL AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE INCURRED BY THEIR FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES, STRUCTURES OR FACILITIES. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES 24-HOURS PRIOR TO COMMENCING CONSTRUCTION.

290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPELS FIRM F-10961  
TBPELS FIRM 1053600







**NOTES:**

- DRAINAGE IMPROVEMENTS SUFFICIENT TO MITIGATE OFFSITE IMPACT OF CONSTRUCTION MUST BE COMPLETED AND IN PLACE PRIOR TO ADDING IMPERVIOUS COVER TO THE SITE.
- ALL FINISHED FLOOR ELEVATIONS SHALL MEET THE FOLLOWING REQUIREMENTS:
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  - HUD DETAILS SHOWN ON SHEET C3.2.
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- FOR ANY LOTS ADJACENT TO A DRAINAGE STRUCTURE, HOME BUILDER TO ENSURE FINISHED FLOOR HAS A MINIMUM ELEVATION AS LABELED OR AS PER NOTE 2 ABOVE, WHICHEVER IS GREATER.
- STRIPPING OF VEGETATION FROM PROJECT SITES SHALL BE PHASED SO AS TO EXPOSE THE MINIMUM AMOUNT OF AREA TO SOIL EROSION FOR THE SHORTEST POSSIBLE PERIOD OF TIME PER THE NEW BRAUNFELS DRAINAGE AND EROSION CONTROL DESIGN MANUAL SEC. 12.2(N).
- PER TPDES REQUIREMENTS, DISTURBED AREAS ON WHICH CONSTRUCTION ACTIVITIES HAVE CEASED (TEMPORARILY OR PERMANENTLY ) SHALL BE STABILIZED WITHIN 14 DAYS UNLESS ACTIVITY RESUMES WITHIN 21 DAYS. SEEDING AND/OR HYDROMULCH DOES NOT CONSTITUTE STABILIZATION, MINIMUM 70 PERCENT VEGETATIVE COVER OF DISTURBED AREAS IS REQUIRED.
- ALL SIDEWALKS SHALL HAVE A MAX RUNNING SLOPE OF 5%.
- ALL SIDEWALKS SHALL HAVE A MAX CROSS SLOPE OF 2%.
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290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPELS FIRM F-10961  
TBPELS FIRM 1053600



**GRADING PLAN  
(2 OF 2)**

JARO NORTH UNIT 3

NO.	REVISION	DESCRIPTION	REVISION DATE

DATE: October 25

DRAWN BY: RR

DESIGNED BY: JK

REVIEWED BY: ZJ

HMT PROJECT NO.: 337.102

**SHEET  
C3.1**



Drawing Name: M:\\_Projects\337 - Jaro North Unit 3\CD\337.102 GRAD DETAILS.dwg User: jashuak Oct 24, 2025 - 9:51am

GENERAL SPECIFICATIONS FOR SITE PREPARATION

GENERAL DESCRIPTION  
THIS ITEM SHALL CONSIST OF ALL CLEARING AND PREPARATION OF LAND TO BE FILLED, FILLING OF THE LAND, SPREADING, COMPACTION TESTING AND INSPECTION OF THE FILL, AND ALL SUBSIDIARY WORK NECESSARY TO COMPLETE THE GRADING OF THE CUT AND FILL AREAS TO CONFORM WITH THE LINES, GRADES AND SLOPES AS SHOWN ON THE APPROVED PLANS.

SCARIFYING THE AREA TO BE FILLED  
ALL ORGANIC MATTER SHALL BE REMOVED FROM THE SURFACE UPON WHICH THE FILL IS TO BE PLACED, AND SURFACE SHALL BE DISKED OR SCARIFIED TO A MINIMUM DEPTH OF SIX INCHES (6"). ALL SURFACE RUTS OR OTHER UNEVEN FEATURES WILL BE LEVELED PRIOR TO FIELD DENSITY TESTING.

COMPACTION THE AREA TO BE FILLED  
FOLLOWING THE CLEARING AND DISKING OR SCARIFYING OF THE FILL AREA, IT SHALL BE BLADED UNTIL IT IS UNIFORM AND FREE FROM LARGE CLODS. THE AREA SHALL BE BROUGHT TO ADEQUATE MOISTURE CONTENT AND COMPACTED (TYPICALLY) TO NOT LESS THAN NINETY PERCENT (90%) OF MAXIMUM DENSITY IN ACCORDANCE WITH THE CURRENT ASTM D 1557 COMPACTION PROCEDURE, OR 95% OF MAXIMUM DENSITY IN ACCORDANCE WITH THE TxDOT-113-E COMPACTION PROCEDURE. ALL AREAS EXCEEDING (6") SIX INCHES IN DEPTH, MUST MEET WITH FHWA/HUD HANDBOOK 4140.30 SPECIFICATIONS FOR LAND DEVELOPMENTS ON CONTROLLED EARTHWORK, DATASHEET 79G.

FILL MATERIALS  
THE MATERIALS USED SHALL BE FREE FROM ORGANIC MATTER AND OTHER DELETERIOUS SUBSTANCES, SUCH AS TREES, BRUSH AND RUBBISH.

DEPTH AND MIXING OF FILL LAYERS

THE SELECTED FILL MATERIAL SHALL BE PLACED IN LEVEL, UNIFORM LAYERS WHICH, WHEN COMPACTED, SHALL HAVE A DENSITY CONFORMING TO THE STIPULATED ABOVE. EACH LAYER SHALL BE THOROUGHLY MIXED DURING THE SPREADING TO ENSURE UNIFORMITY OF MATERIAL IN EACH LAYER. COMPACTED LAYER THICKNESS MAY VARY DEPENDING ON THE COMPACTION EQUIPMENT OF THE DEMONSTRATED CAPABILITY.

ROCK  
WHEN FILL MATERIAL INCLUDES ROCK, THE MAXIMUM ROCK SIZE SHALL BE AS APPROVED BY THE GEOTECHNICAL ENGINEER. NO LARGE ROCKS SHALL BE ALLOWED TO NEST AND ALL VOIDS MUST BE FILLED WITH SMALL STONES OR SOIL AND ADEQUATELY COMPACTED.

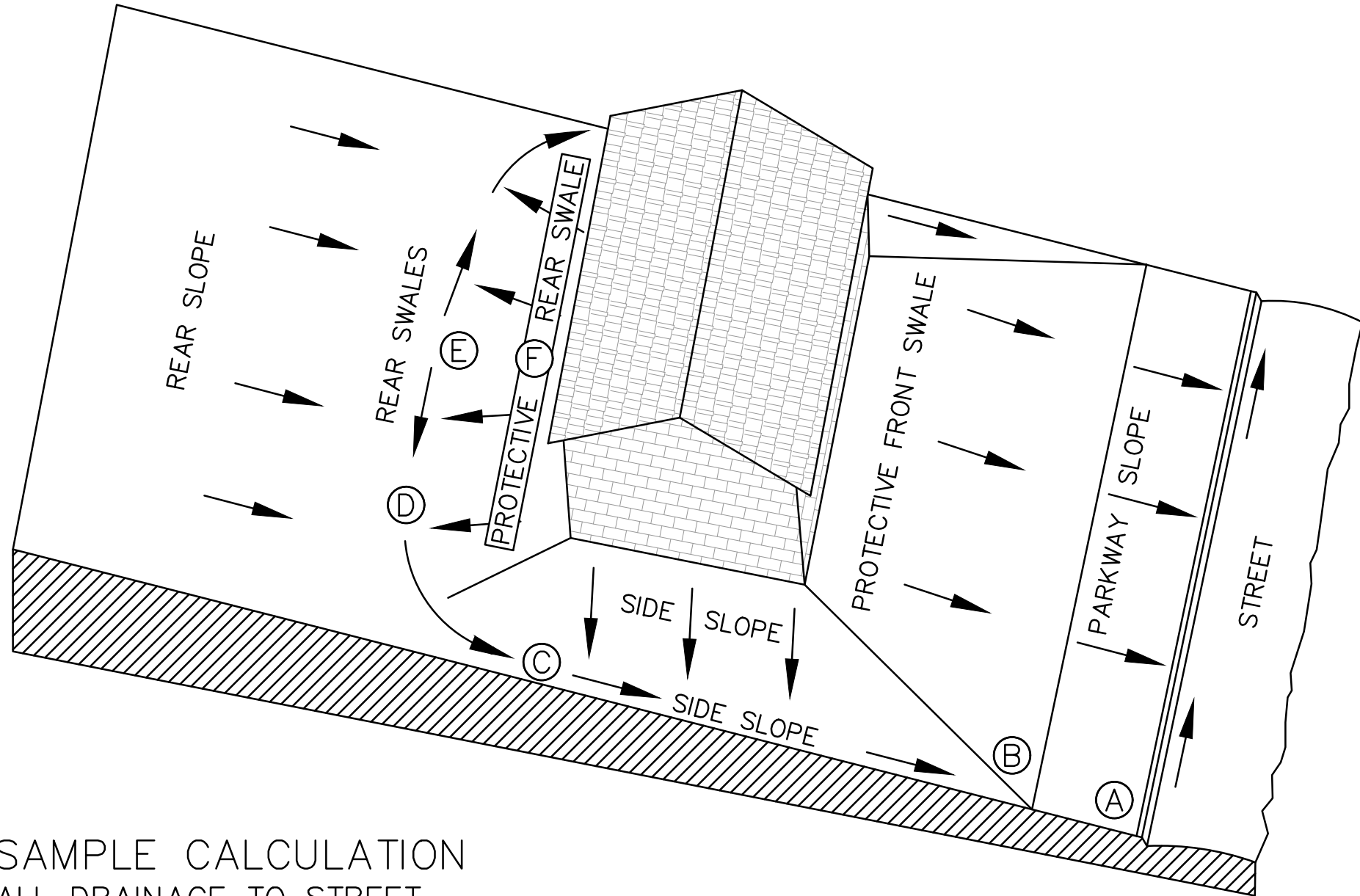
COMPACTION OF FILL LAYER  
COMPACTION EQUIPMENT SHALL BE CAPABLE OF COMPACTING THE FILL TO THE SPECIFIED DENSITY. COMPACTION SHALL BE ACCOMPLISHED WHILE THE FILL MATERIAL IS AT OR NEAR THE APPROPRIATE MOISTURE CONTENT. COMPACTION OF EACH LAYER SHALL BE CONTINUOUS OVER THE ENTIRE STRUCTURAL AREA (BENEATH PROPOSED STRUCTURES).

COMPACTION OF SLOPES  
THE FACES OF FILL SLOPES SHALL BE COMPACTED. COMPACTION OPERATIONS SHALL BE CONTINUED UNTIL THE SLOPE FACES ARE STABLE BUT NOT TO DENSE FOR PLANTING ON THE SLOPES. COMPACTION OF THE SLOPE FACE MAY BE DONE PROGRESSIVELY IN INCREMENTS OF THREE TO FIVE FEET (3' TO 5') IN FILL HEIGHT AS THIS FILL PROGRESSES OR AFTER THE FILL HAS BEEN BROUGHT TO ITS TOTAL HEIGHT.

DENSITY TEST  
FIELD DENSITY TESTS SHALL BE PERFORMED ON ALL LAYERS OF FILL WHEN THE FILL IS BEING PLACED AS DIRECTED BY THE GEOTECHNICAL ENGINEER. THE MAXIMUM FILL HEIGHT BETWEEN DENSITY TESTING SHALL BE TWELVE INCHES (12"). ALL TESTING SHALL BE REQUESTED BY THE CONTRACTOR TO MEET THE CONTRACTOR'S CONSTRUCTION SCHEDULE. NOTIFICATION BY THE CONTRACTOR TO CONDUCT TESTS SHALL BE AT LEAST THE DAY BEFORE. THIS NOTIFICATION SHALL INCLUDE THE FILL AREA LOCATION (LOT AND BLOCK), THE LIFT OR HEIGHT OF FILL AND APPROXIMATED DESIRED TIME OF TESTING. WHEN THESE TEST INDICATE THAT THE DENSITY OF ANY LAYER OF FILL OR PORTION THEREOF IS BELOW THE REQUIRED DENSITY, THE PARTICULAR LAYER OR PORTION SHALL BE REWORKED AND RETESTED AT THE EXPENSE OF THE CONTRACTOR UNLESS THE CONTRACTOR CAN SHOW EVIDENCE THAT CIRCUMSTANCES BEYOND HIS CONTROL REQUIRED THE RETESTING. GENERALLY, THE SPECIFIC TESTING WILL BE AS FOLLOWS AND CONDUCTED BY A GEO-TECHNICAL ENGINEER OR STAFF.

1. THE LAND TO BE FILLED (PREPARED SUBGRADE) SHALL BE PREPARED AND TESTED AT A FREQUENCY AS DETERMINED BY THE GEOTECHNICAL ENGINEER.
  2. THE FIRST LIFT OF COMPACTED FILL (GENERALLY 8-12 IN.) SHALL BE TESTED AS DETERMINED BY THE GEOTECHNICAL ENGINEER. ANY AREAS SUPPORTING THE PROPOSED STRUCTURES REQUIRING FILL SHALL BE TESTED FOR DENSITY COMPLIANCE.
  3. FILLS SHALL BE TESTED AT A MAXIMUM OF EACH TWELVE INCHES (12") OF FILL.
  4. TEST RESULTS WILL BE PROVIDED BY THE FIELD TECHNICIAN TO THE CONTRACTOR WHEN POSSIBLE; HOWEVER, ALL TEST RESULTS ARE TO BE REVIEWED BY THE GEOTECHNICAL ENGINEER FOR COMPLIANCE. THE ENGINEER WILL NOTIFY THE CONTRACTOR OF ALL TEST RESULTS.
- CUT/FILL LOTS  
AREAS INVOLVING CUT ON THE PORTION AND FILL ON ANOTHER PORTION OF A SPECIFIC LOT SHALL BE PREPARED TO A MINIMUM DEPTH OF 6 IN., AND WILL BE THE SAME MATERIAL CLASSIFICATION AT THE SAME COMPACTION AND MOISTURE CONTENT. FIELD DENSITY TESTS SHALL BE REQUIRED ON EACH CUT/FILL LOT FOR THE PURPOSE OF DETERMINING UNIFORMITY OF THE AREA SUPPORTING THE PROPOSED STRUCTURES.
- HUD 79-G  
HUD 79-G REQUIREMENT FOR FILL MATERIAL OF 6 INCHES AND MORE WILL BE CONDUCTED. ALL CUT AREAS WILL ALSO MEET THE REQUIREMENTS FOR HUD 79-G COMPACTION TESTING. IN ADDITION, ENGINEERS MUST PROVIDE VERIFICATION OF ALL AREAS WHICH DO NOT REQUIRE HUD 79-G. AFTER SITE GRADING IS COMPLETED, GEO-TECHNICAL ENGINEER SHALL PROVIDE THE CONTRACTOR AND OWNER A 79-G LETTER.

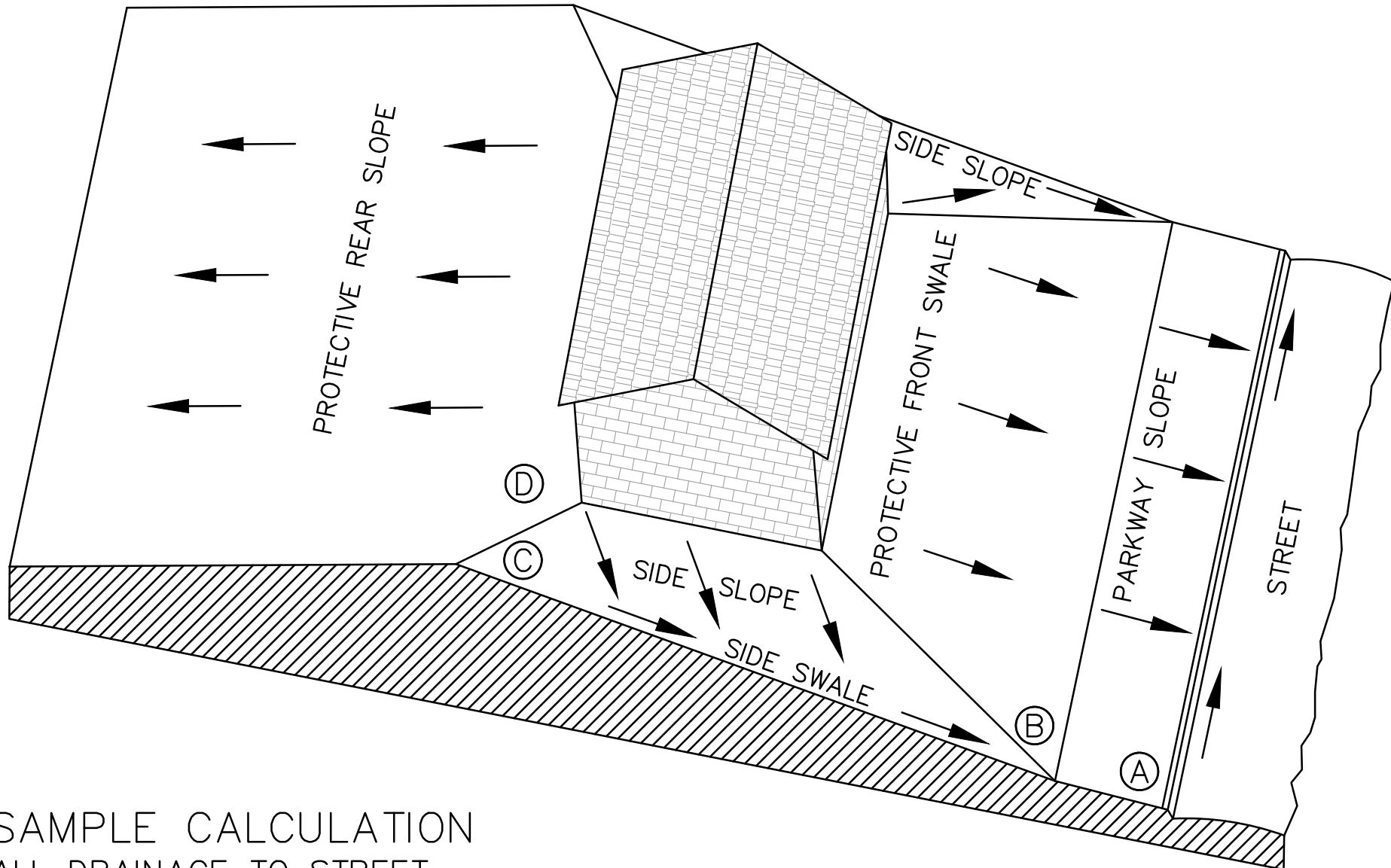
DRAINAGE NOTE  
FINISHED FLOOR ELEVATIONS  
THE ELEVATION OF THE LOWEST FLOOR SHALL BE AT LEAST 10 INCHES ABOVE THE FINISHED GRADE OF THE SURROUNDING GROUND, WHICH SHALL BE SLOPED IN A FASHION SO AS TO DIRECT STORMWATER AWAY FROM THE STRUCTURE. PROPERTIES ADJACENT TO STORMWATER CONVEYANCE STRUCTURES MUST HAVE FLOOR SLAB ELEVATION OR BOTTOM OF FLOOR JOISTS A MINIMUM OF ONE FOOT ABOVE THE 100-YEAR WATER FLOW ELEVATION IN THE STRUCTURE. DRIVEWAYS SERVING HOUSES ON THE DOWNHILL SIDE OF THE STREET SHALL HAVE A PROPERLY SIZED CROSS SWALE PREVENTING RUNOFF FROM ENTERING THE GARAGE.



SAMPLE CALCULATION  
ALL DRAINAGE TO STREET

SAMPLE COMPUTATION OF GRADING CONTROL LINE AF FOR A 60' WIDE LOT WITH A 25' BUILDING LINE, 0.5% STREET, WITH 60' BUILDING DEPTH AND 2% SWALES.					RESULTS OF 1% SWALES		
A	CURB-TOP ON LOT LINE EXTENSION AT HIGH LOT CORNER						<u>CALCULATIONS FOR 2% SWALES</u>  15 x 0.25' = 3½"  85 x 0.25' = 21½"  16 x 0.25' = 4"  13 x 0.25' = 3½"  10 x 0.25' = 2½" <hr/> 34½"
AB	PARKWAY SLOPE: 15' GRASS AND WALK AT 1/4"/FT. (2%)	4"	(0.3')	2"	(0.2')		
BC	SIDE SWALE: 85' GRASS AT 1/4"/FT. (2%)	21"	(1.8')	11"	(0.9')		
CD	SWALE TURN WITH 10' RADIUS:16' GRASS AT 1/4"/FT. (2%)	4"	(0.3')	2"	(0.2')		
DE**	REAR SWALE: 13' GRASS AT 1/4"/FT. (2%)	3"	(0.3')	2"	(0.2')		
EF*	PROTECTIVE REAR SLOPE UP FROM HIGH POINT OF SWALES	3"	(0.3')	3"	(0.3')		
SUB-TOTAL AF FROM CURB TOP TO GROUND AT REAL BLDG WALL		35"	(3.0')	20"	(1.7')	34½"	
MINIMUM RISE FROM CURB TOP TO SLAB FLOOR: 35" + 8"		43"	(3.6')	28"	(2.3')	CALCULATIONS USE 0.25" PER FOOT GRADIENT FOR A 2% SWALE.	
MINIMUM RISE FOR WOOD FLOOR USING 8" JOISTS: 35" + 9"		54"	(4.5')	39"	(3.3')		
* WHERE THERE IS A HIGH BANK NEARBY OR A LONG SLOPE TOWARD HOUSE, A MINIMUM 6" PROTECTIVE SLOPE IS REQUIRED.							
** LENGTH DE' = [1/2(LOT WIDTH - (2x SWALE TURN RADIUS))] - [LOT WIDTH x (STREET GRADIENT x SWALE GRADIENT)]							

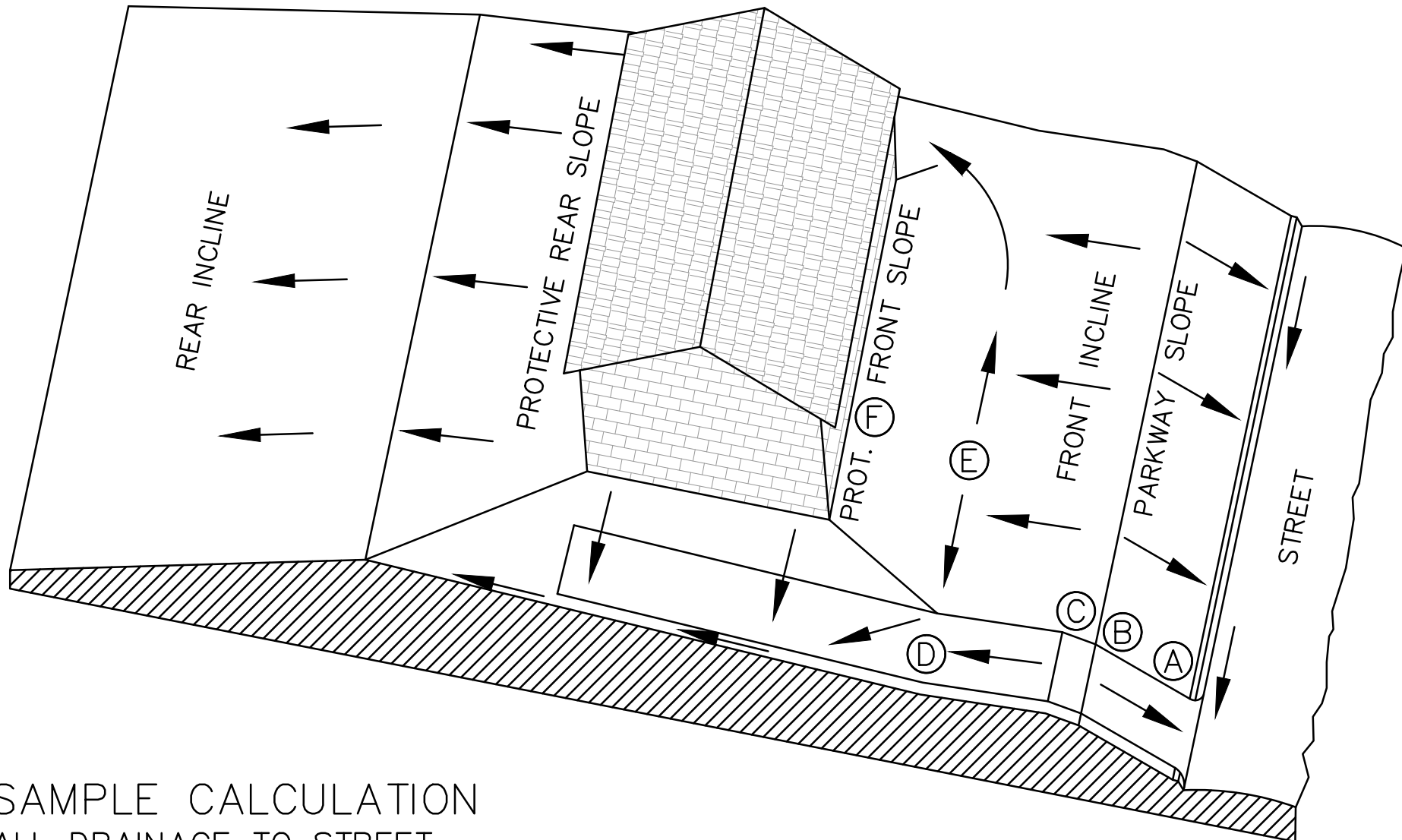
LOT TYPE A



SAMPLE CALCULATION  
ALL DRAINAGE TO STREET

SAMPLE COMPUTATION OF GRADING CONTROL LINE AF FOR A 60' WIDE LOT WITH A 25' BUILDING LINE, 0.5% STREET, WITH 60' BUILDING DEPTH AND 2% SWALES.				RESULTS OF 1% SWALES		<div>CALCULATIONS FOR 2% SWALES</div> <div>15 x 0.25' = 3½"</div> <div>85 x 0.25' = 21¾"</div> <div>6 x 0.25' = 1½"</div> <div>26½"</div> <div>CALCULATIONS USE 0.25" PER FOOT GRADIENT FOR A 2% SWALE.</div>
A	CURB-TOP ON LOT LINE EXTENSION AT HIGH LOT CORNER					
AB	PARKWAY SLOPE: 15' GRASS AND WALK AT 1/4"/FT. (2%)	4"	(0.3')	2"	(0.2')	
BC	SIDE SWALE: 85' GRASS AT 1/4"/FT. (2%)	21"	(1.8')	11"	(0.9')	
CD*	PROTECTIVE SIDE SLOPE @ REAR BLDG. WALL EXTENSION	3"	(0.3')	3"	(0.3')	
SUB-TOTAL AD FROM CURB TOP TO GROUND AT REAL BLDG WALL		27"	(2.4')	16"	(1.4')	
MINIMUM RISE FROM CURB TOP TO SLAB FLOOR: 27" + 8"		35"	(2.9')	24"	(2.0')	
MINIMUM RISE FOR WOOD FLOOR USING 8" JOISTS: 35" + 9"		46"	(3.8')	35"	(2.9')	
* WHERE THERE IS A HIGH BANK NEARBY OR A LONG SLOPE TOWARD HOUSE, A MINIMUM 6" PROTECTIVE SLOPE IS REQUIRED.						

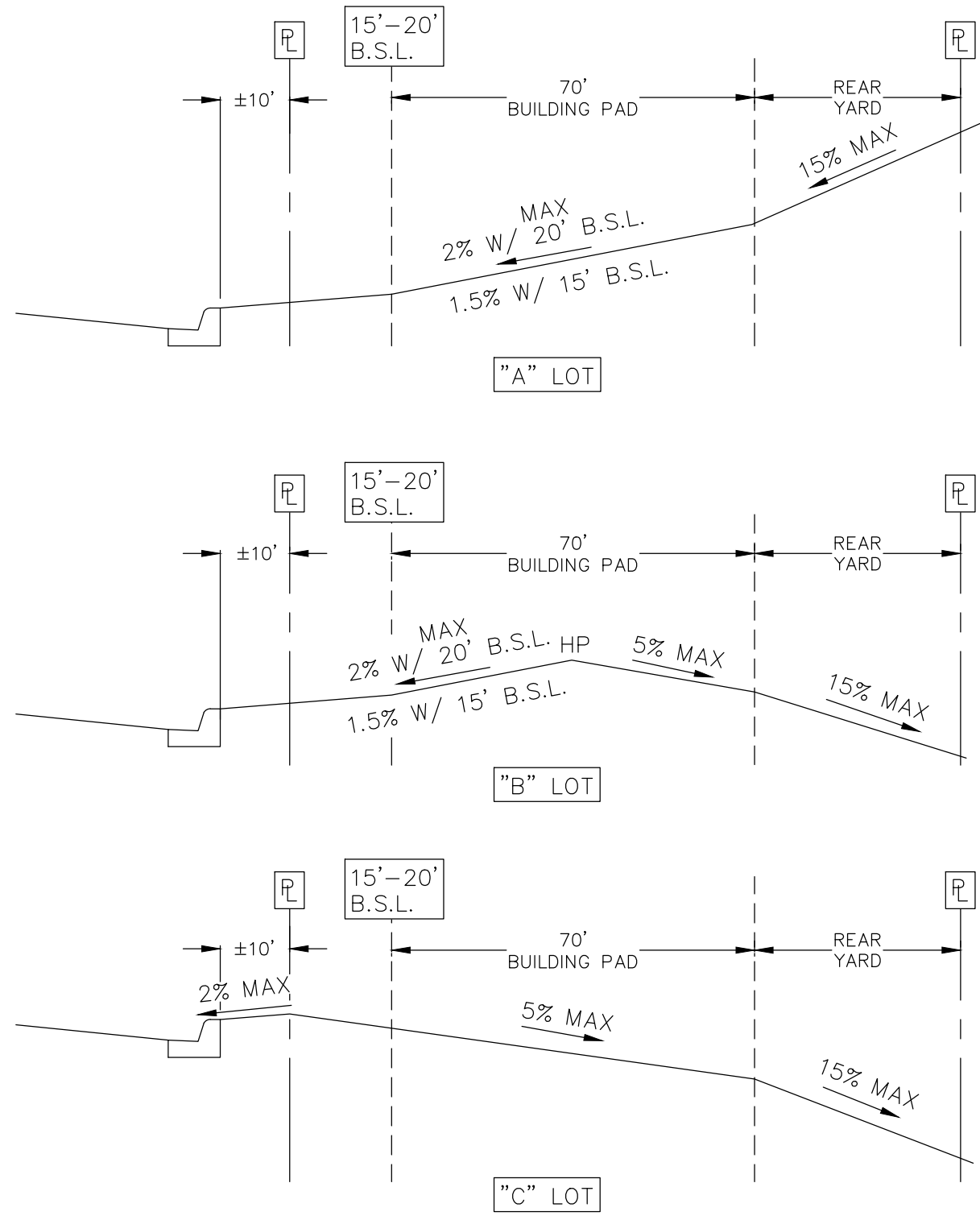
LOT TYPE B



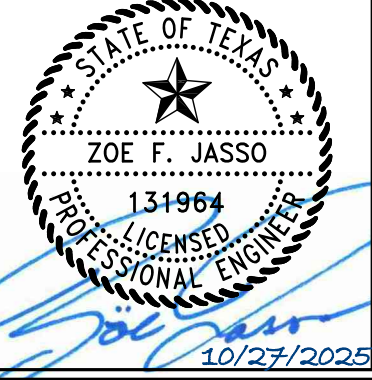
SAMPLE CALCULATION  
ALL DRAINAGE TO STREET

SAMPLE COMPUTATION OF GRADING CONTROL LINE $\overline{AF}$ FOR A 60' WIDE LOT WITH A 25' BUILDING LINE, 13.5% DRIVEWAY, AND 16' FRONT SWALE $\overline{DE}$ AT 2.0%.				RESULTS OF 1% SWALES		CALCULATIONS FOR SWALES
A	CURB—TOP HIGH SIDE OF DRIVE NEAR LOW LOT CORNER					$15 \times 0.25' = 3\frac{3}{4}"$
$\overline{AB}$	PARKWAY SLOPE: 15' GRASS AND WALK AT $1/4''/\text{FT.}$ (2%)	4" (0.3')	2" (0.2')			$0 \times 0.25' = 0"$
$\overline{BC}$	DRIVEWAY GRADE CHANGE: 4' VERTICAL CURVE FROM UP—GRADE DRIVE IN STREET TO DOWN—GRADE DRIVE ON LOT	0" (0.0')	0" (0.0')			$-11 \times 1.625' = -17\frac{3}{4}"$
$\overline{CD}$	DRIVEWAY DOWN—GRADE TO POINT 10 FEET OUT FROM FRONT OF BUILDING: $-11'$ AT $1\frac{1}{8}''/\text{FT}$ (13.5%)	$-18''$ $(-1.5')$	$-18''$ $(-1.5')$			$16 \times 0.25' = 4"$
$\overline{DE}$	FRONT SWALE: 16' GRASS AT $1/4''/\text{FT.}$ (2%)	4" (0.3')	2" (0.2')			$10 \times 0.25' = 2\frac{1}{2}"$
$\overline{EF}^*$	PROT. FRONT SLOPE UP FROM HIGH POINT OF SWALES	3" (0.3')	3" (0.3')			$-7\frac{1}{2}"$
SUB—TOTAL $\overline{AF}$ FROM CURB TOP TO GROUND AT FRONT BLDG WALL		$-7''$ $(-1.0')$	$-11''$ $(1.3')$			
MINIMUM RISE FROM CURB TOP TO SLAB FLOOR: $-7'' + 8''$		1" $(-0.3')$	$-3''$ $(0.7')$			
MINIMUM RISE FOR WOOD FLOOR USING 8" JOISTS: $-7'' + 19''$		12" $(-0.6')$	8" (0.3')			
* WHERE THERE IS A HIGH BANK NEARBY OR A LONG SLOPE TOWARD HOUSE, A MINIMUM 6" PROTECTIVE SLOPE IS REQUIRED.						

LOT TYPE C



LENNAR LOT GRADING STANDARDS



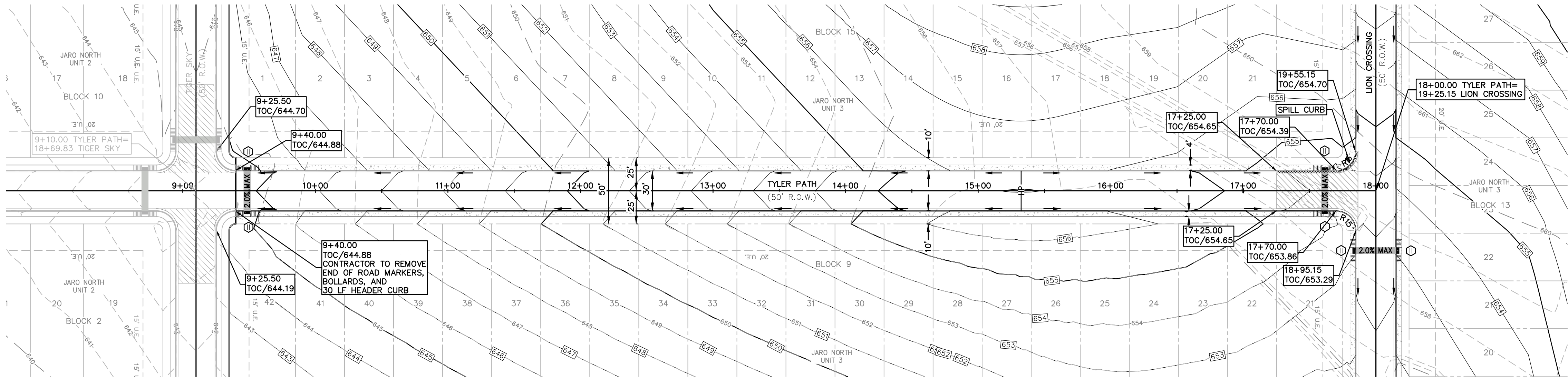
GRADING DETAILS

JARO NORTH UNIT 3

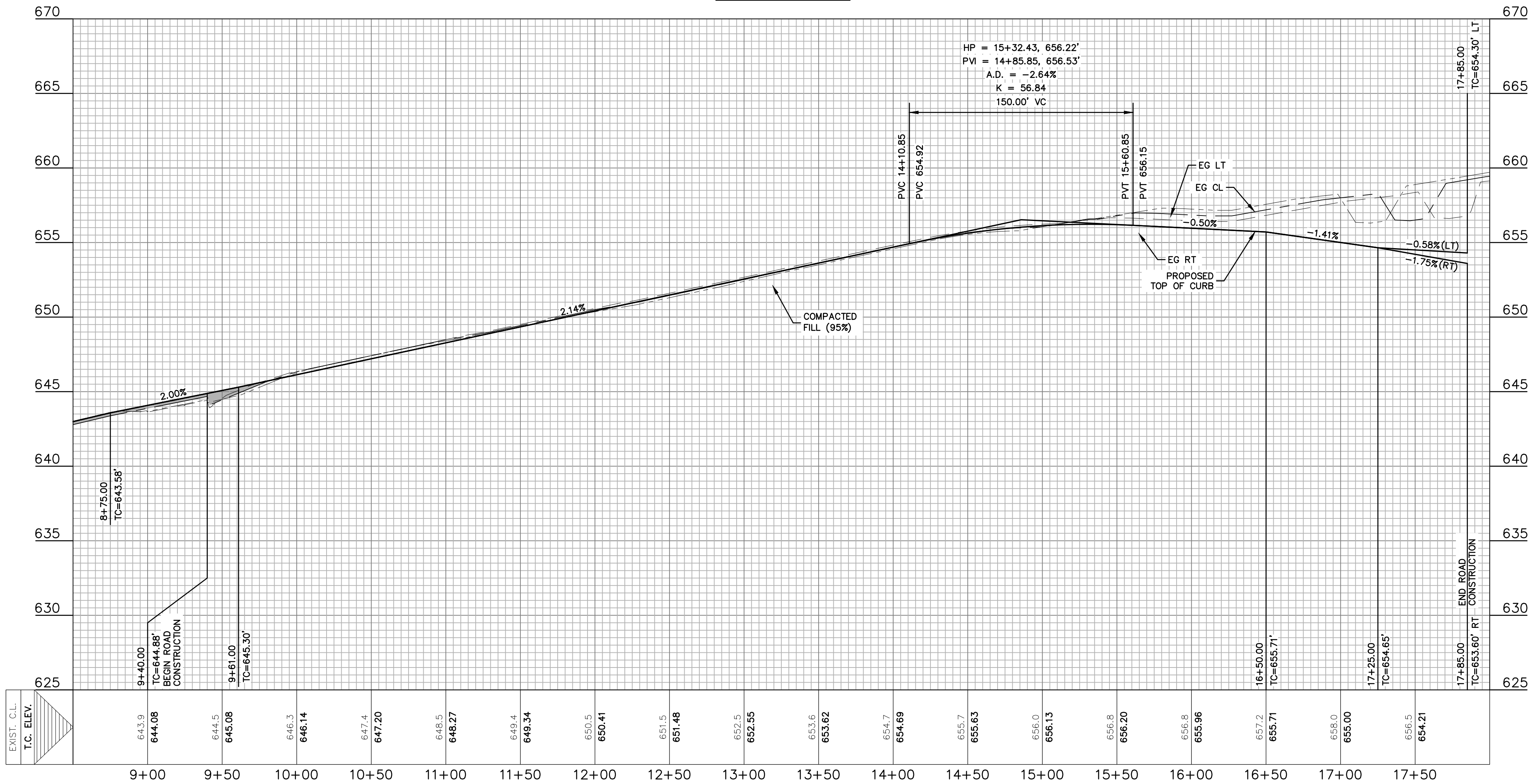
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DATE: October 25				
DRAWN BY: RR				
DESIGNED BY: JK				
REVIEWED BY: ZJ				
HMT PROJECT NO.: 337.102				

SHEET  
C3.2





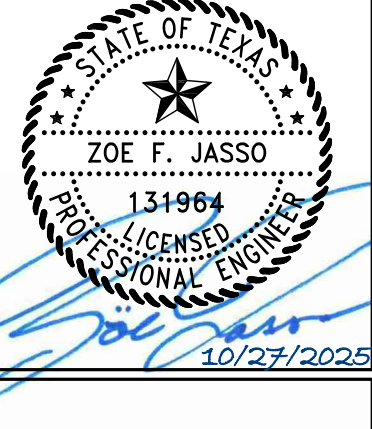
TYLER PATH  
8+50 - 18+00



NOTES

1. LOCAL STREETS WERE DESIGNED TO POSTED SPEED LIMIT OF 25 MPH.
2. IN WASHOUT CROWN AREAS, THE CURB ON THE HIGH SIDE OF THE STREET SHOULD BE SPILL CURB AS DESIGNATED ON THE PLANS.
3. SIDEWALKS SHALL BE INSTALLED IN FRONT OF ALL BUILDABLE LOTS AT THE TIME OF HOME CONSTRUCTION FOR LOTS WITH NO BUILDING IMPROVEMENTS SIDEWALKS SHALL BE CONSTRUCTED WITH STREETS.
4. CONTRACTOR TO ENSURE POSITIVE DRAINAGE AWAY FROM STREET STUB OUT ENDS SO THAT NO "PONDING" OF WATER OCCURS.
5. PER NEW BRAUNFELS ORDINANCE SEC. 114-98(c)(6) ALL DRIVEWAY LOCATED ON A SINGLE FAMILY RESIDENCE ON A LOCAL STREET SHALL HAVE A MINIMUM SPACING OF 20'

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TYLER PATH  
PLAN & PROFILE

JARO NORTH UNIT 3

NO.	REVISION DESCRIPTION	REVISION DATE

DATE: October 25

DRAWN BY: RR

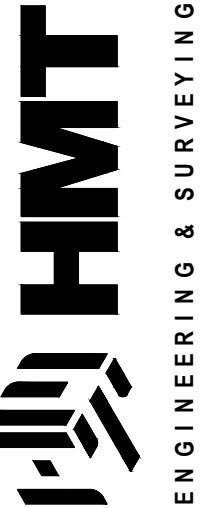
DESIGNED BY: JK

REVIEWED BY: ZJ

HMT PROJECT NO.: 337.102

SHEET  
C4.0

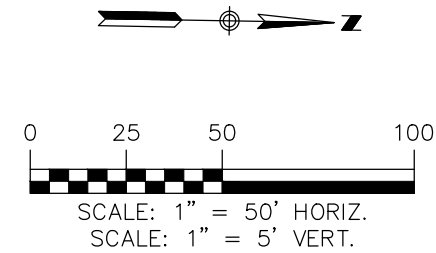
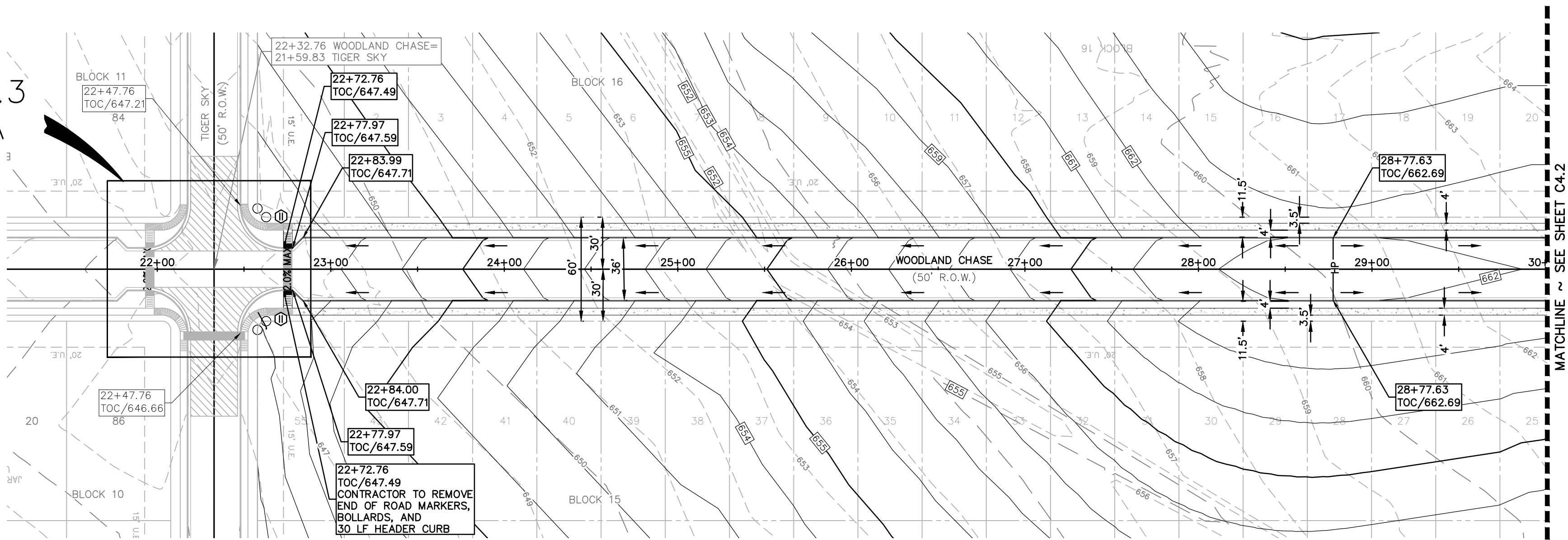
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NEW BRAUNFELS, TX 78130  
TBPELS FIRM F-10961  
TBPELS FIRM 1053600





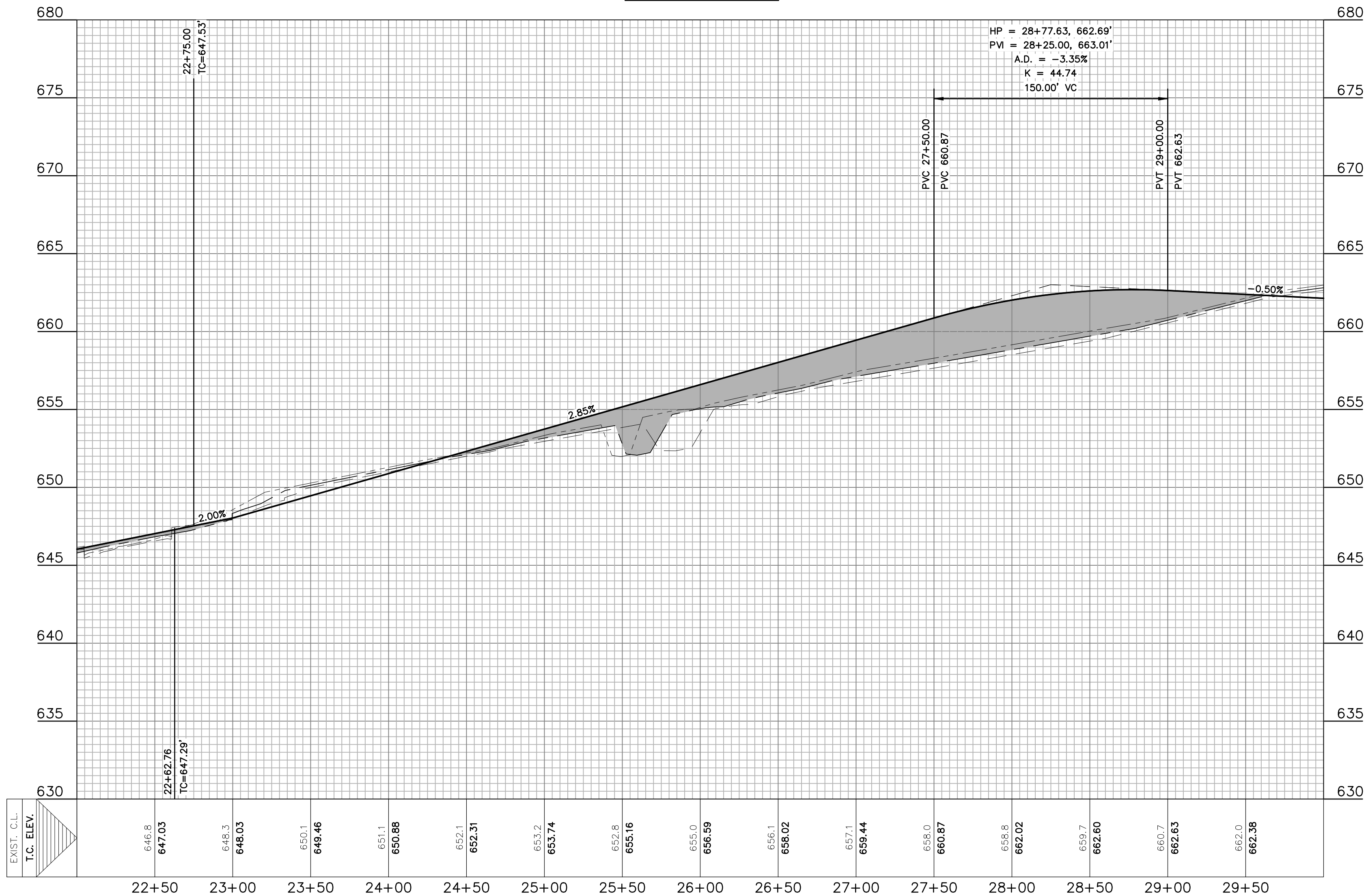
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REF C4.3  
INSET A



- LEGEND**
- 700--- EXISTING CONTOURS
  - [700] PROPOSED CONTOURS
  - U.E. UTILITY EASEMENT
  - [Symbol] A.D.A. RAMP
  - [Symbol] FLOW ARROW
  - [Symbol] WASHOUT CROWN AREAS
  - [Symbol] SPILL CURB
  - [Symbol] ACCESSIBLE CROSSING AREA CONTRACTOR TO ENSURE MAX 2% CROSS SLOPE IN THESE AREAS
  - [Symbol] SIDEWALK RAMP TYPE TO BE CONSTRUCTED AT TIME OF STREET CONSTRUCTION (SEE DETAIL SHEETS C4.9-C4.11)
  - [Symbol] SIDEWALK TO BE CONSTRUCTED BY SITE DEVELOPMENT CONTRACTOR
  - [Symbol] DRAINAGE ACCESS

WOODLAND CHASE  
22+00 - 30+00



**NOTES**

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**WOODLAND CHASE  
PLAN & PROFILE (1 OF 2)**

JARO NORTH UNIT 3

NO.	REVISION DESCRIPTION	REVISION DATE

DATE: October 25

DRAWN BY: RR

DESIGNED BY: JK

REVIEWED BY: ZJ

HMT PROJECT NO.:  
337.102

**SHEET**  
**C4.1**

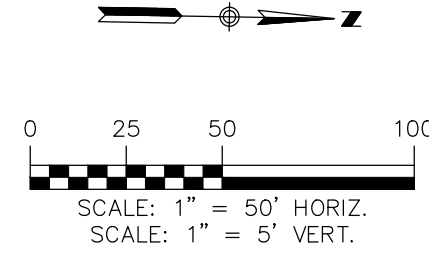
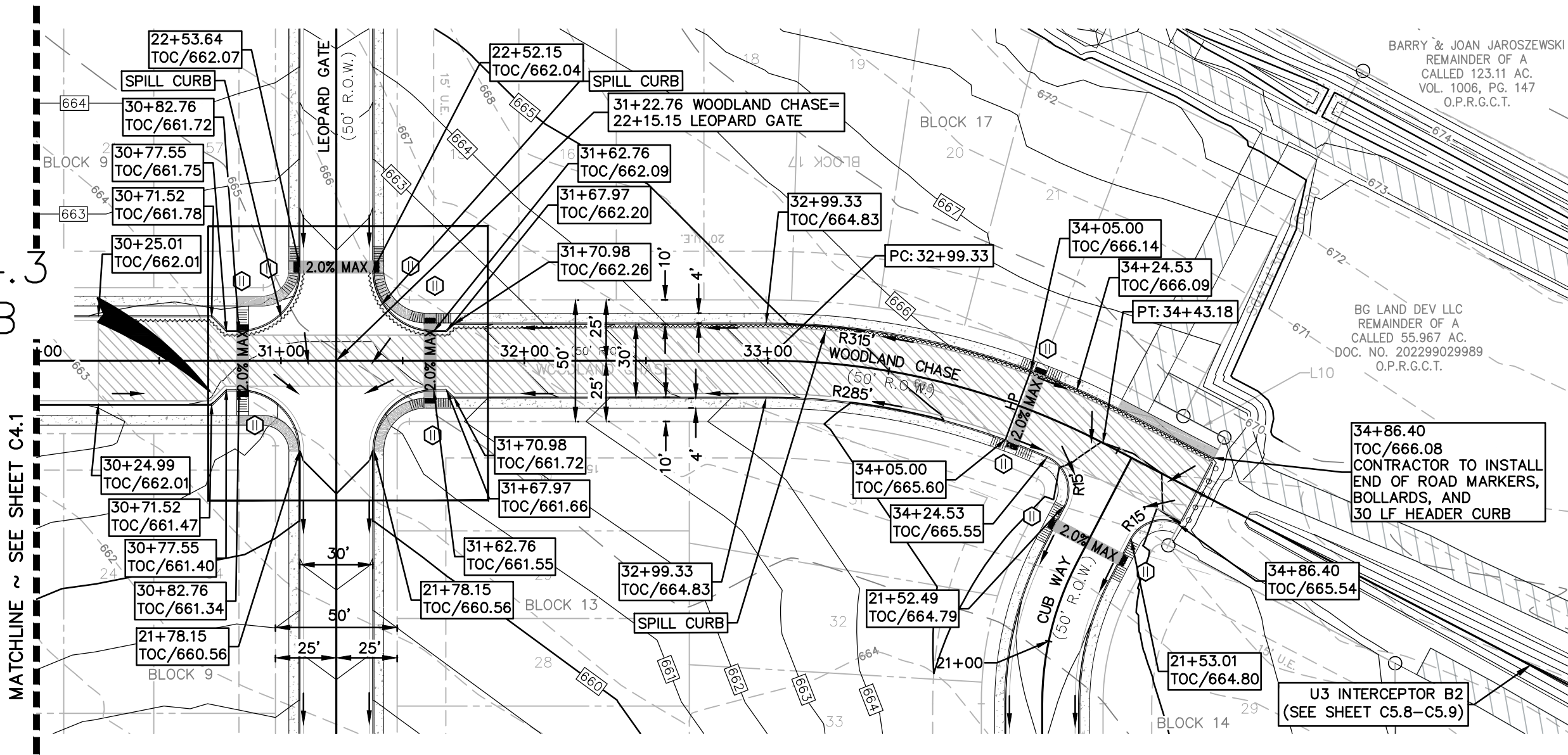
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NEW BRAUNFELS, TX 78130  
TBPELS FIRM F-10961  
TBPELS FIRM 1053600





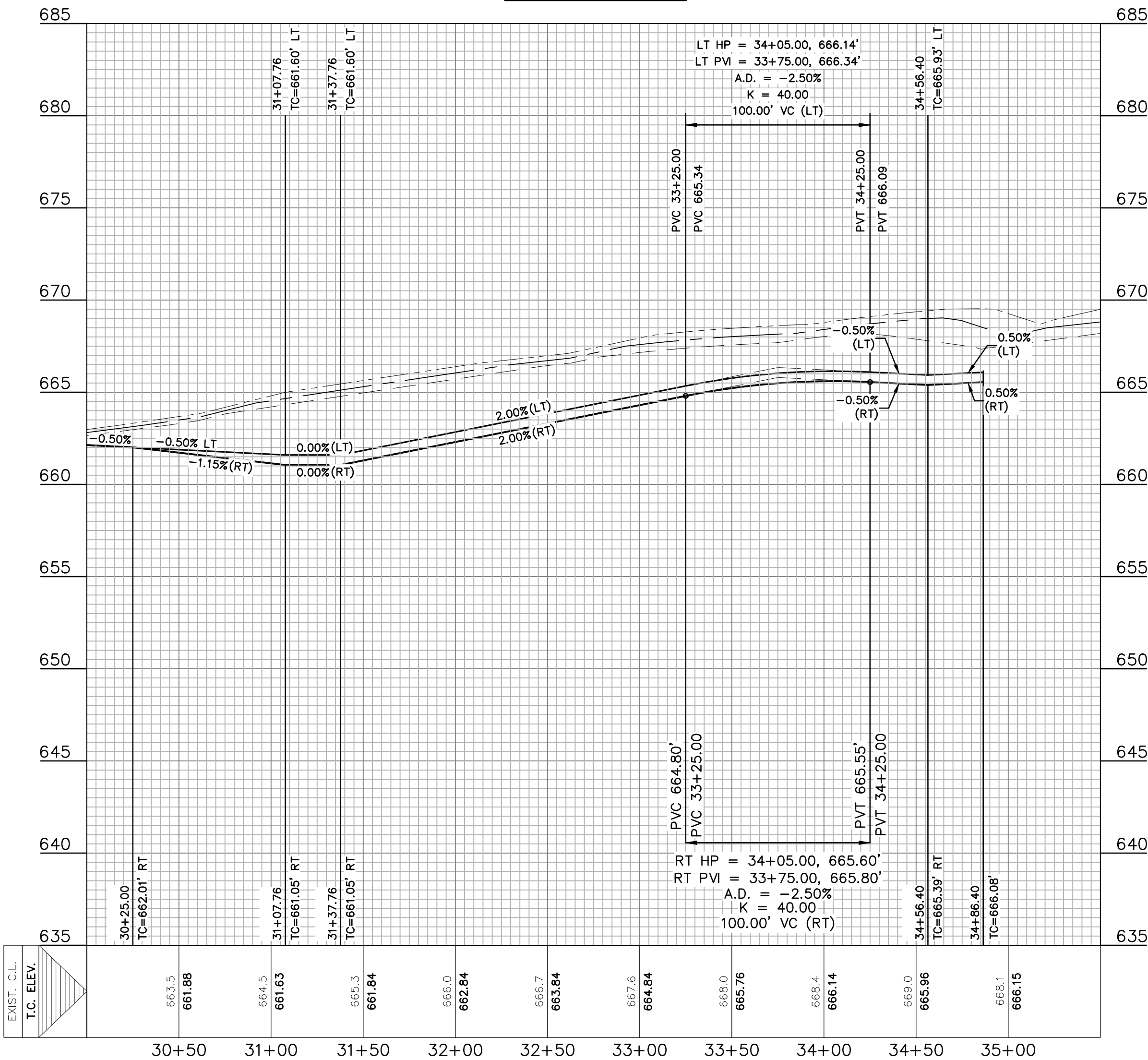
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REF C4.3  
INSET B



- LEGEND**
- 700--- EXISTING CONTOURS
  - 700--- PROPOSED CONTOURS
  - U.E. UTILITY EASEMENT
  - A.D.A. RAMP
  - FLOW ARROW
  - WASHOUT CROWN AREAS
  - SPILL CURB
  - ACCESSIBLE CROSSING AREA  
CONTRACTOR TO ENSURE MAX 2%  
CROSS SLOPE IN THESE AREAS
  - 2.0% MAX  
SIDEWALK RAMP TYPE TO BE  
CONSTRUCTED AT TIME OF  
STREET CONSTRUCTION  
(SEE DETAIL SHEETS C4.9-C4.11)
  - SIDEWALK TO BE CONSTRUCTED  
BY SITE DEVELOPMENT CONTRACTOR
  - DRAINAGE ACCESS

WOODLAND CHASE  
30+00 - 35+50

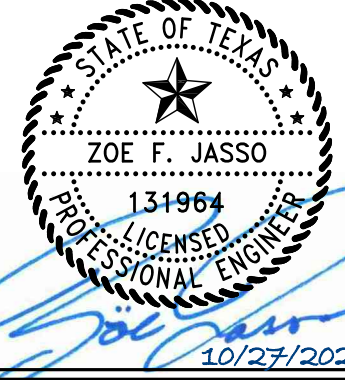


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NEW BRAINFELS, TX 78130  
TBP&S FIRM F-10961  
TBP&S FIRM 1053600



WOODLAND CHASE  
PLAN & PROFILE (2 OF 2)

JARO NORTH UNIT 3

NO.	REVISION DESCRIPTION	REVISION DATE

DATE: October 25

DRAWN BY: RR

DESIGNED BY: JK

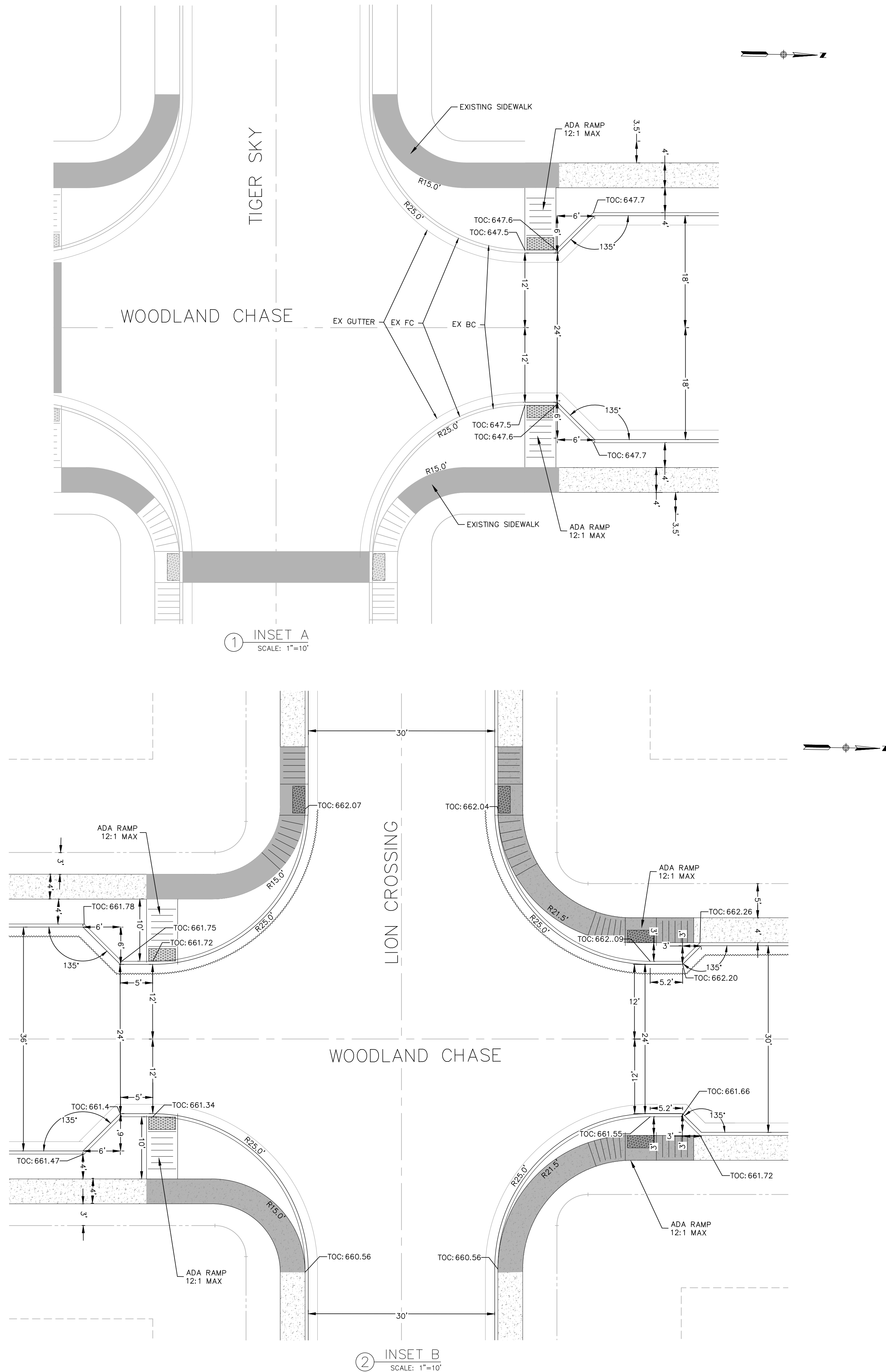
REVIEWED BY: ZJ

HMT PROJECT NO.:  
337.102

**SHEET**  
**C4.2**



Drawing Name: M:\\_Projects\337 - Jaro North Unit 3\CDs\337.102.WOODLAND CHASE.dwg User: jashuak Oct 24, 2025 - 9:52am



- LEGEND**
- 700--- EXISTING CONTOURS
  - [700] PROPOSED CONTOURS
  - U.E. UTILITY EASEMENT
  - [Symbol] A.D.A. RAMP
  - [Symbol] FLOW ARROW
  - [Symbol] WASHOUT CROWN AREAS
  - [Symbol] SPILL CURB
  - [Symbol] ACCESSIBLE CROSSING AREA  
CONTRACTOR TO ENSURE MAX 2%  
CROSS SLOPE IN THESE AREAS
  - [Symbol] SIDEWALK RAMP TYPE TO BE  
CONSTRUCTED AT TIME OF  
STREET CONSTRUCTION  
(SEE DETAIL SHEETS C4.9-C4.11)
  - [Symbol] SIDEWALK TO BE CONSTRUCTED  
BY SITE DEVELOPMENT CONTRACTOR
  - [Symbol] DRAINAGE ACCESS

- NOTES**
1. RESIDENTIAL COLLECTOR STREETS WERE DESIGNED TO POSTED SPEED LIMIT OF 30 MPH.
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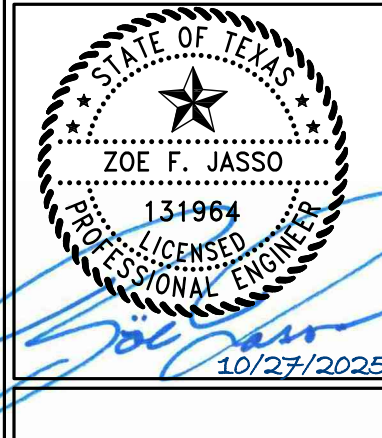
**WOODLAND CHASE  
BULBOUT DETAILS**

JARO NORTH UNIT 3

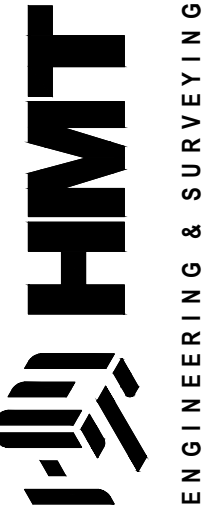
NO.	REVISION DESCRIPTION	REVISION DATE

DATE:	October 25
DRAWN BY:	RR
DESIGNED BY:	JK
REVIEWED BY:	ZJ
HMT PROJECT NO.:	337.102

**SHEET  
C4.3**

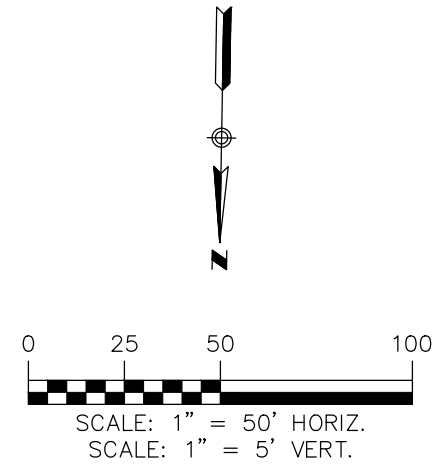
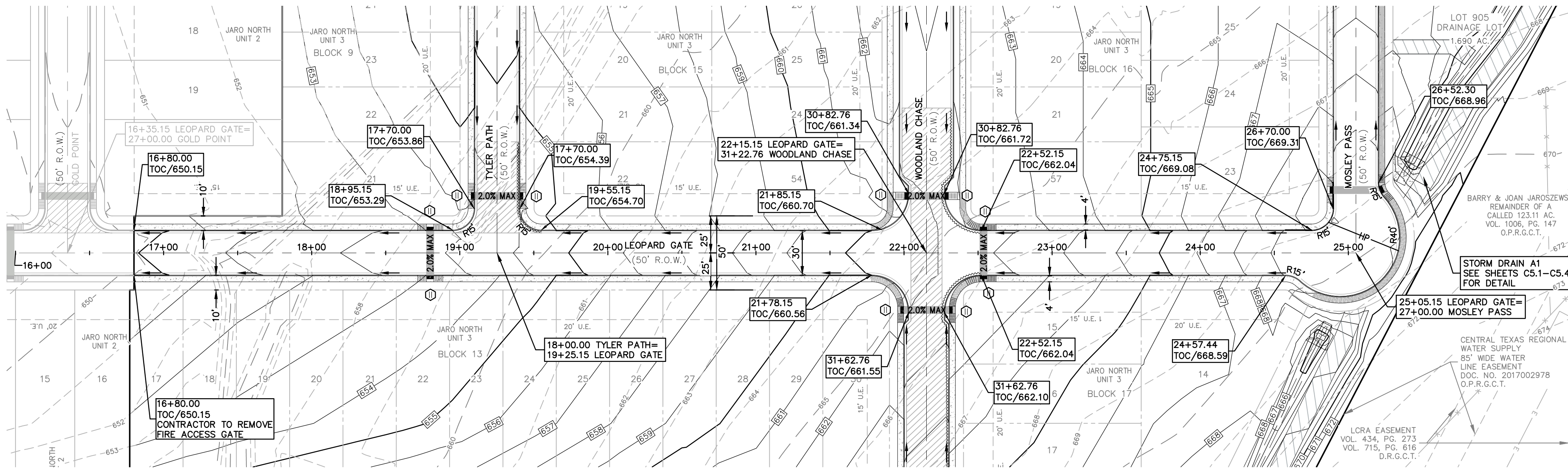


290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPELS FIRM F-10961  
TBPELS FIRM 1053600





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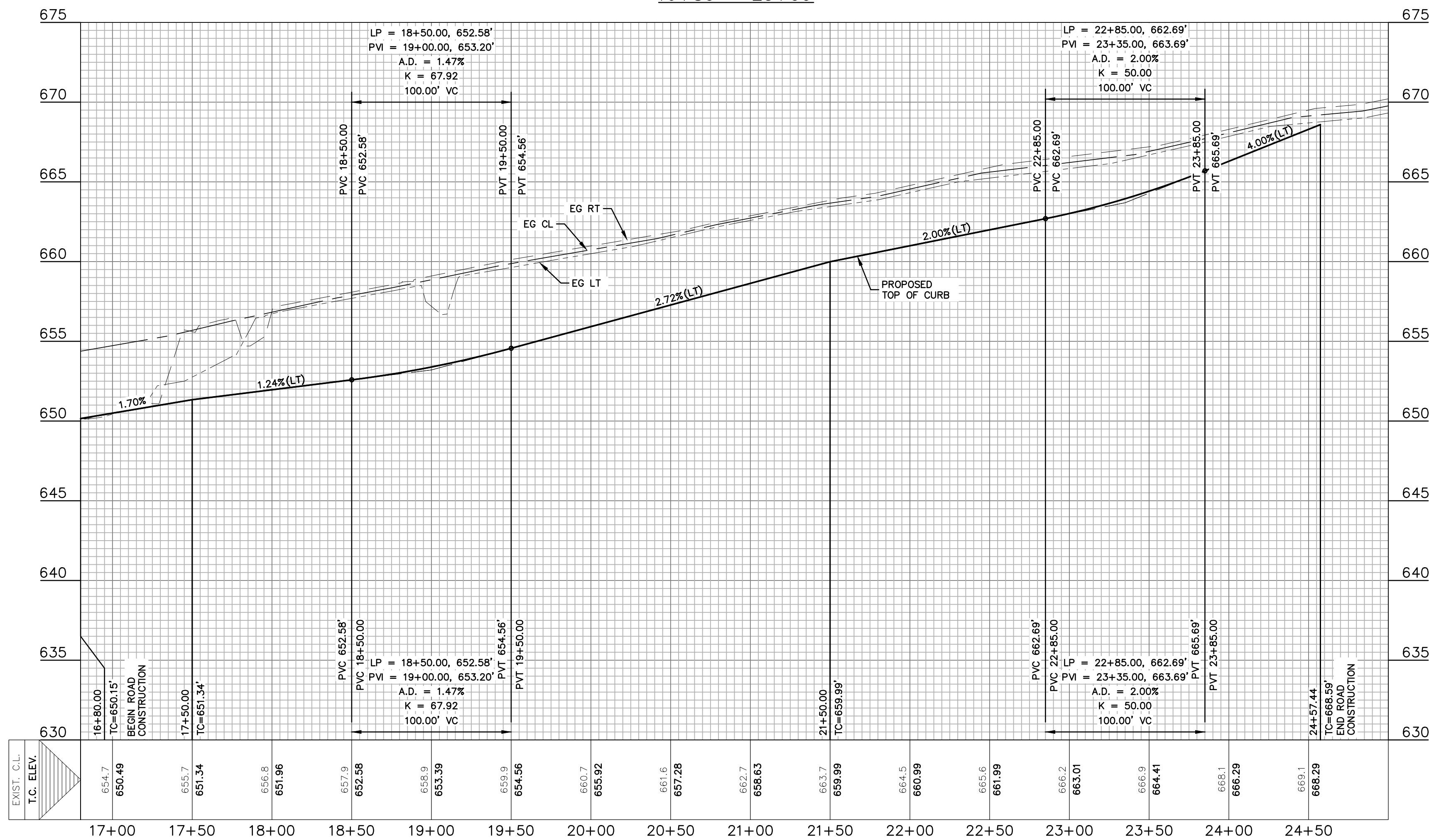


- LEGEND**
- 700--- EXISTING CONTOURS
  - 700--- PROPOSED CONTOURS
  - U.E. --- UTILITY EASEMENT
  - A.D.A. RAMP --- A.D.A. RAMP
  - FLOW ARROW --- FLOW ARROW
  - WASHOUT CROWN AREAS --- WASHOUT CROWN AREAS
  - SPILL CURB --- SPILL CURB
  - 2.0% MAX --- ACCESSIBLE CROSSING AREA CONTRACTOR TO ENSURE MAX 2% CROSS SLOPE IN THESE AREAS
  - SIDEWALK RAMP TYPE TO BE CONSTRUCTED AT TIME OF STREET CONSTRUCTION (SEE DETAIL SHEETS C4.9-C4.11) --- SIDEWALK RAMP TYPE TO BE CONSTRUCTED AT TIME OF STREET CONSTRUCTION (SEE DETAIL SHEETS C4.9-C4.11)
  - SIDEWALK TO BE CONSTRUCTED BY SITE DEVELOPMENT CONTRACTOR --- SIDEWALK TO BE CONSTRUCTED BY SITE DEVELOPMENT CONTRACTOR
  - DRAINAGE ACCESS --- DRAINAGE ACCESS

**NOTES**

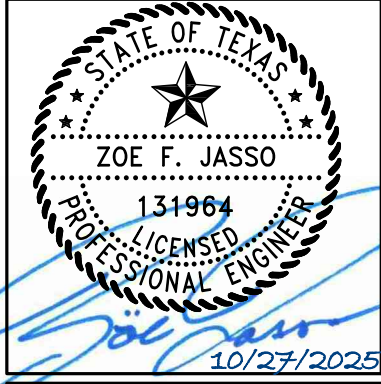
1. LOCAL STREETS WERE DESIGNED TO POSTED SPEED LIMIT OF 25 MPH.
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**LEOPARD GATE  
16+80 - 25+00**



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290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPELS FIRM F-10961  
TBPELS FIRM 1053600



**LEOPARD GATE  
PLAN & PROFILE**

JARO NORTH UNIT 3

NO.	REVISION DESCRIPTION	REVISION DATE

DATE: October 25

DRAWN BY: RR

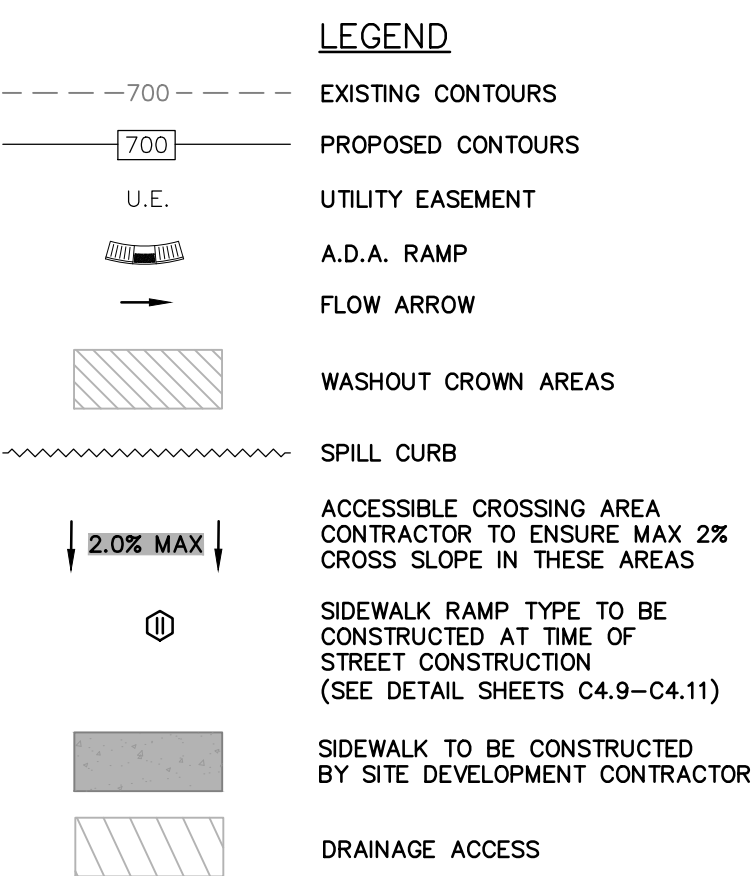
DESIGNED BY: JK

REVIEWED BY: ZJ

HMT PROJECT NO.:  
337.102

**SHEET  
C4.4**





THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR WILL AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE INCURRED BY THEIR FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES, STRUCTURES OR FACILITIES. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES 24-HOURS PRIOR TO COMMENCING CONSTRUCTION.

[illegible]

DATE: **October 25**

DRAWN BY: RR

DESIGNED BY: JK

REVIEWED BY: ZJ

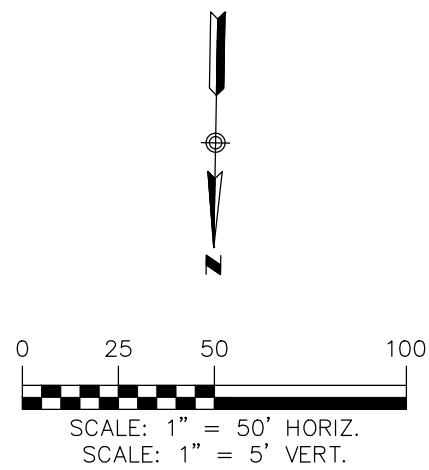
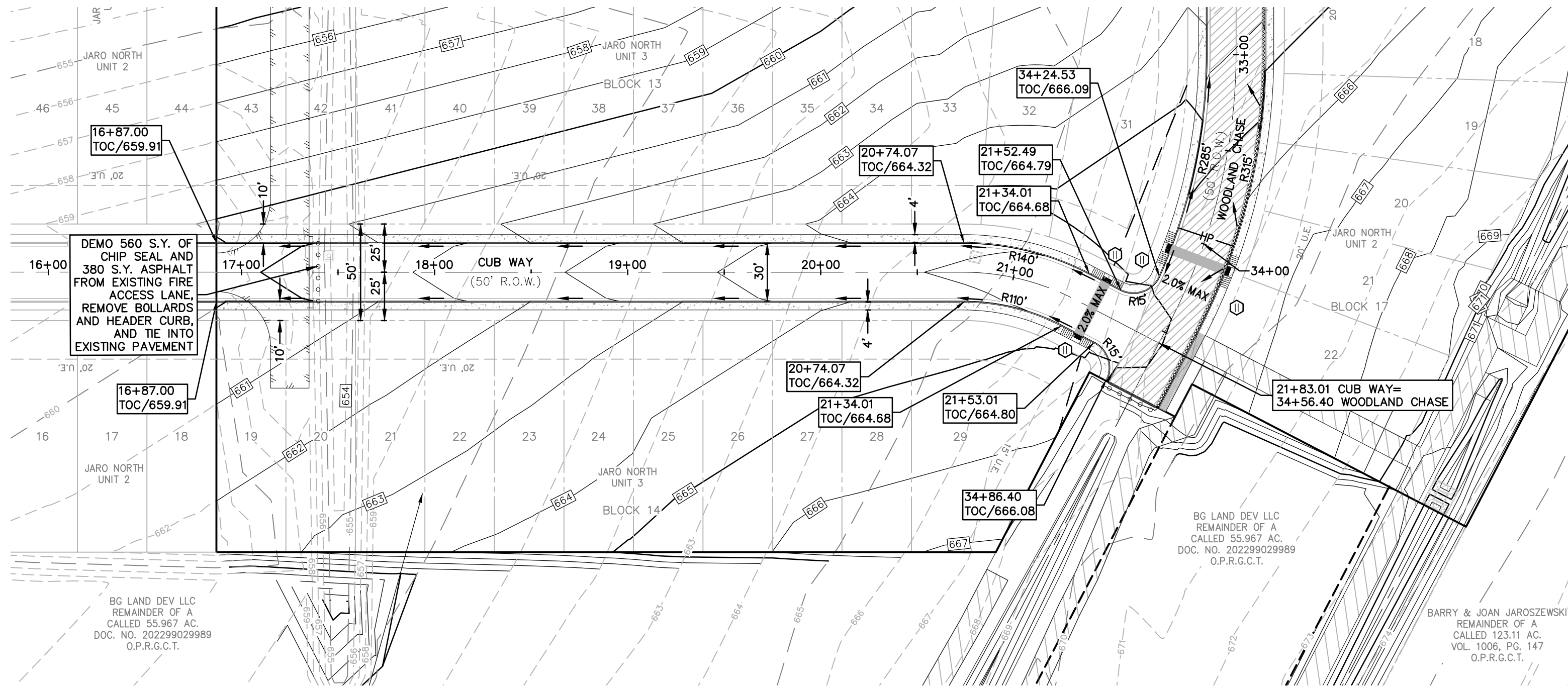
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337.102

**SHEET**  
**C4.5**

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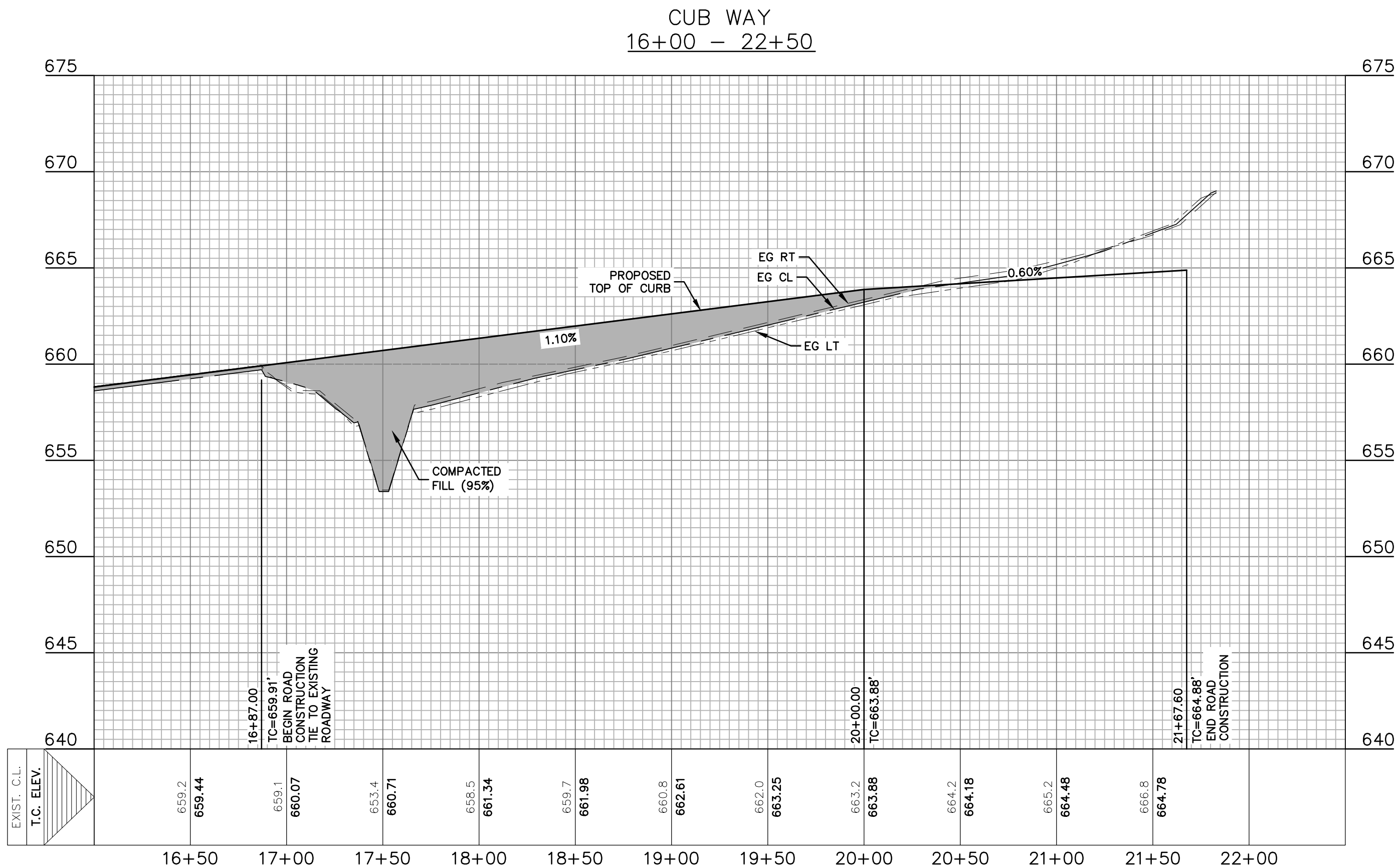
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- LEGEND**
- EXISTING CONTOURS
  - PROPOSED CONTOURS
  - U.E.
  - A.D.A. RAMP
  - FLOW ARROW
  - WASHOUT CROWN AREAS
  - SPILL CURB
  - ACCESSIBLE CROSSING AREA CONTRACTOR TO ENSURE MAX 2% CROSS SLOPE IN THESE AREAS
  - SIDEWALK RAMP TYPE TO BE CONSTRUCTED AT TIME OF STREET CONSTRUCTION (SEE DETAIL SHEETS C4.9-C4.11)
  - SIDEWALK TO BE CONSTRUCTED BY SITE DEVELOPMENT CONTRACTOR
  - DRAINAGE ACCESS

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- CONTRACTOR TO ENSURE POSITIVE DRAINAGE AWAY FROM STREET STUB OUT ENDS SO THAT NO "PONDING" OF WATER OCCURS.
- PER NEW BRAUNFELS ORDINANCE SEC. 114-98(c)(6) ALL DRIVEWAY LOCATED ON A SINGLE FAMILY RESIDENCE ON A LOCAL STREET SHALL HAVE A MINIMUM SPACING OF 20'



**CUB WAY PLAN & PROFILE**

JARO NORTH UNIT 3

NO.	REVISION	DESCRIPTION	REVISION DATE

DATE: **October 25**

DRAWN BY: **RR**

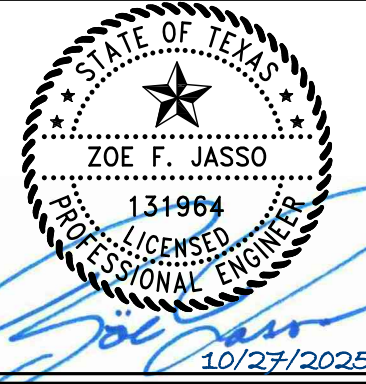
DESIGNED BY: **JK**

REVIEWED BY: **ZJ**

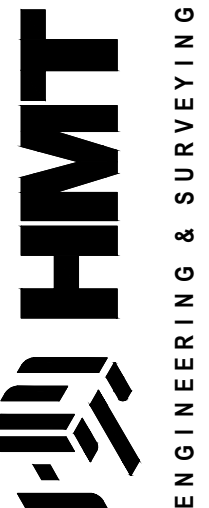
HMT PROJECT NO.:  
**337.102**

**SHEET**  
**C4.6**

THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR WILL AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE INCURRED BY THEIR FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES, STRUCTURES OR FACILITIES. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES 24-HOURS PRIOR TO COMMENCING CONSTRUCTION.

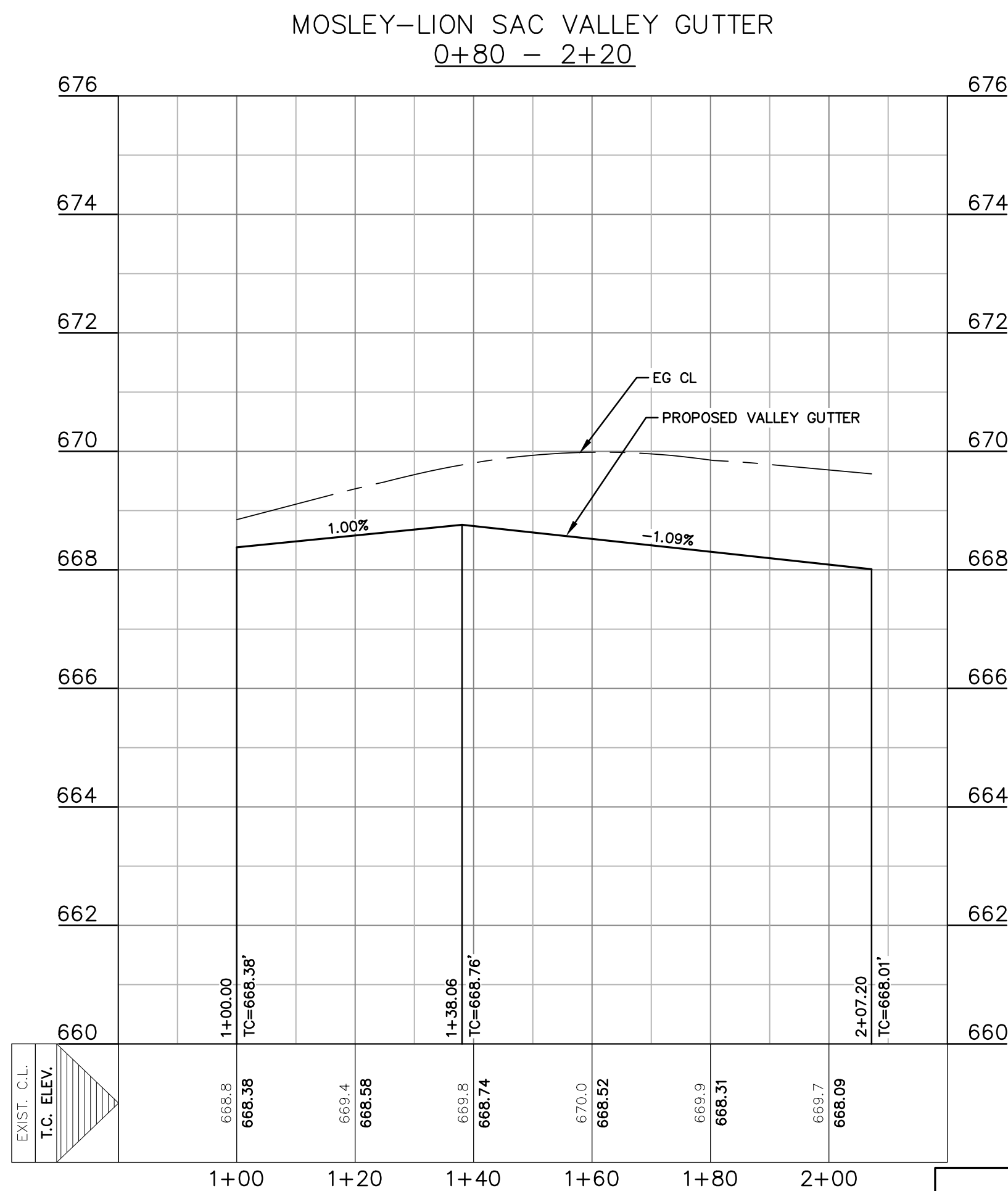
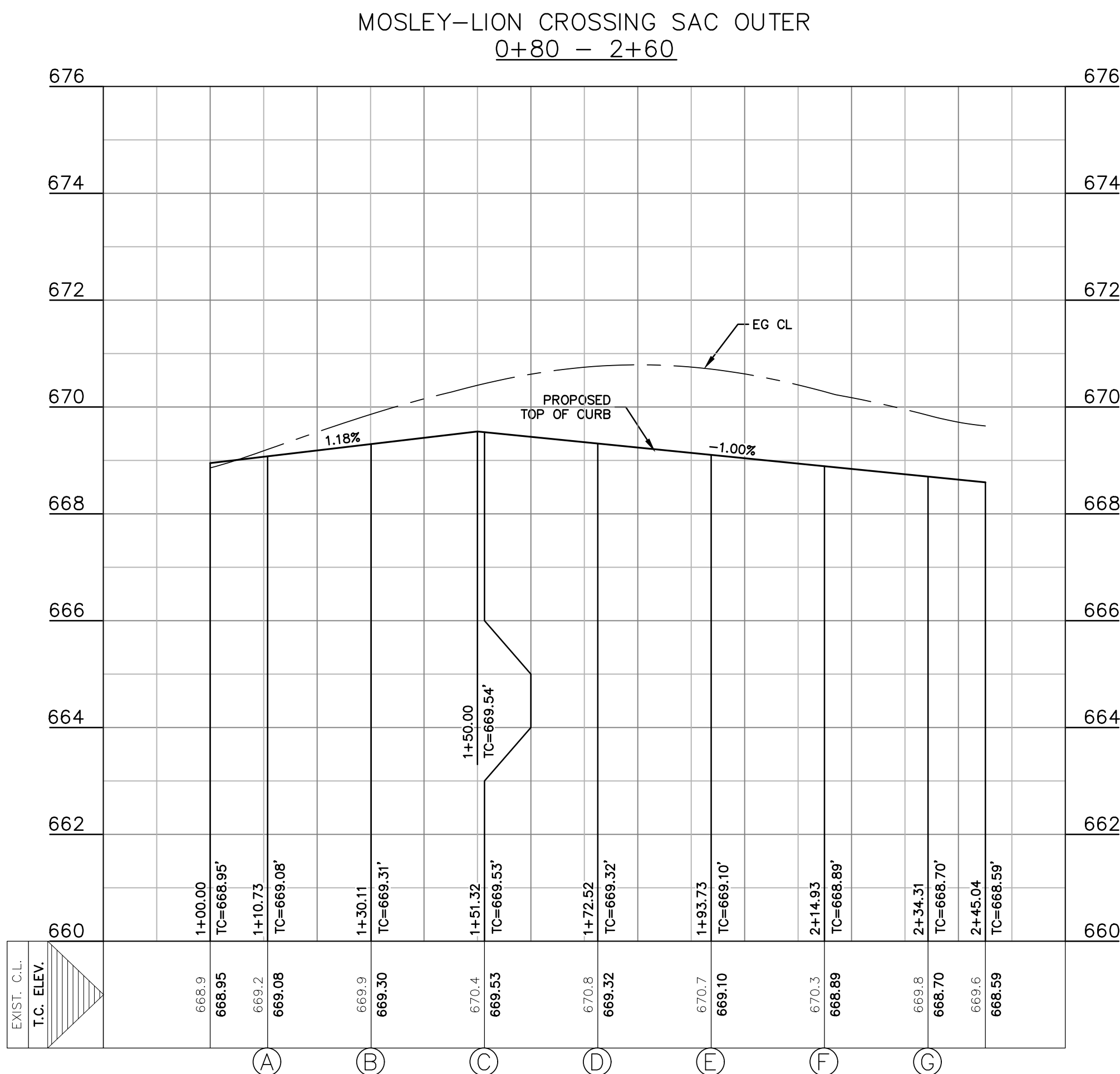
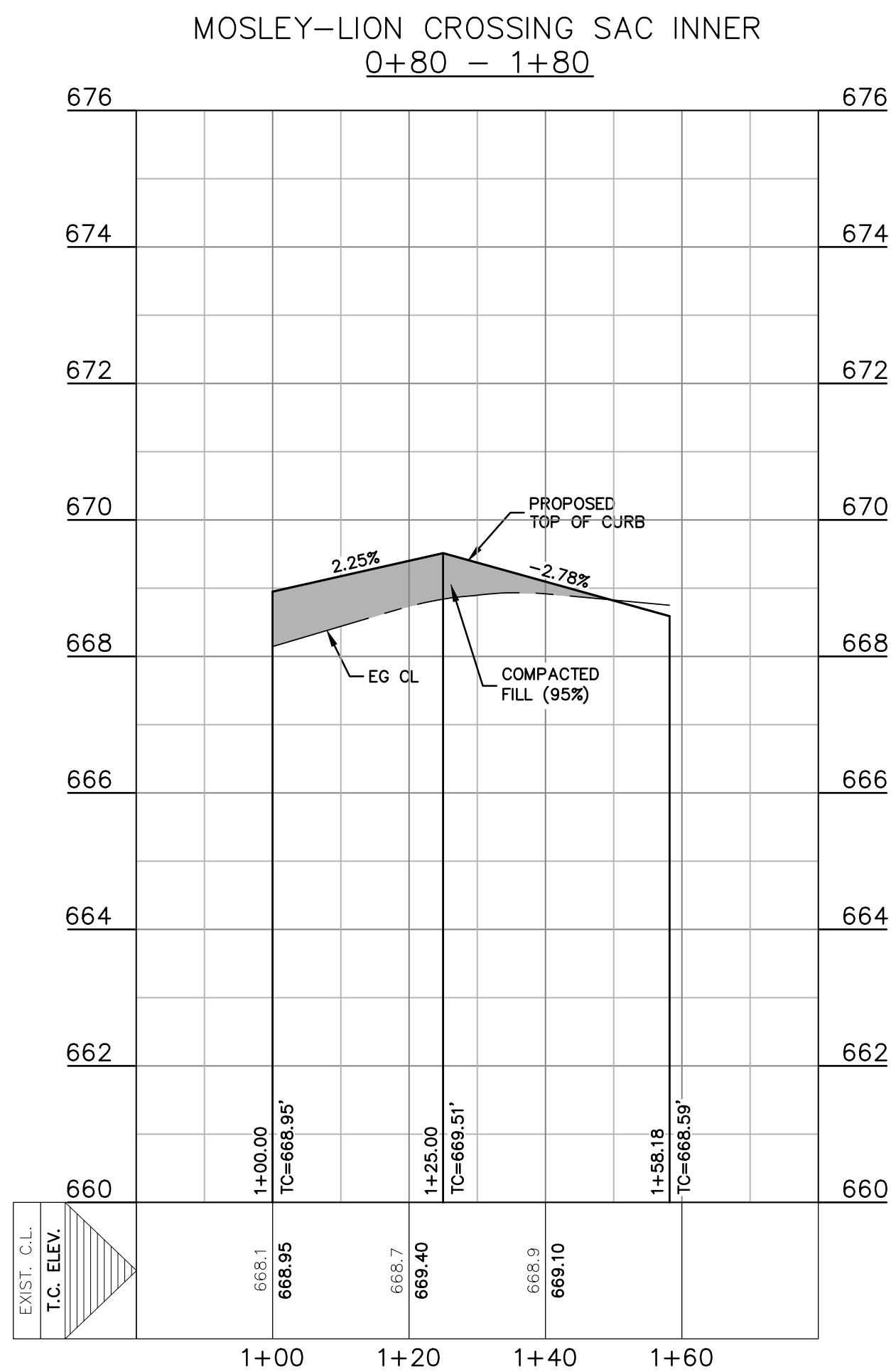


290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPELS FIRM F-10961  
TBPELS FIRM 1053600

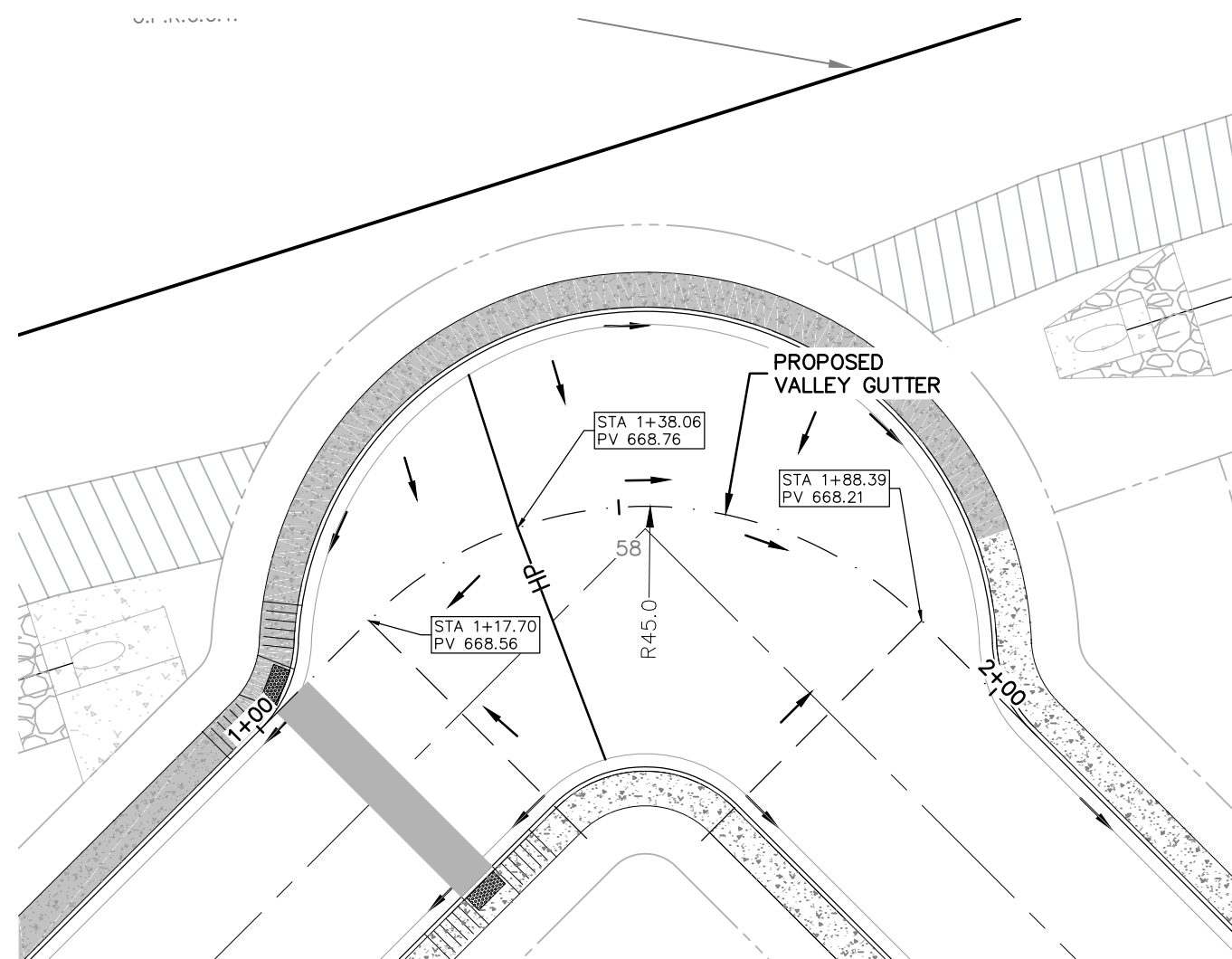
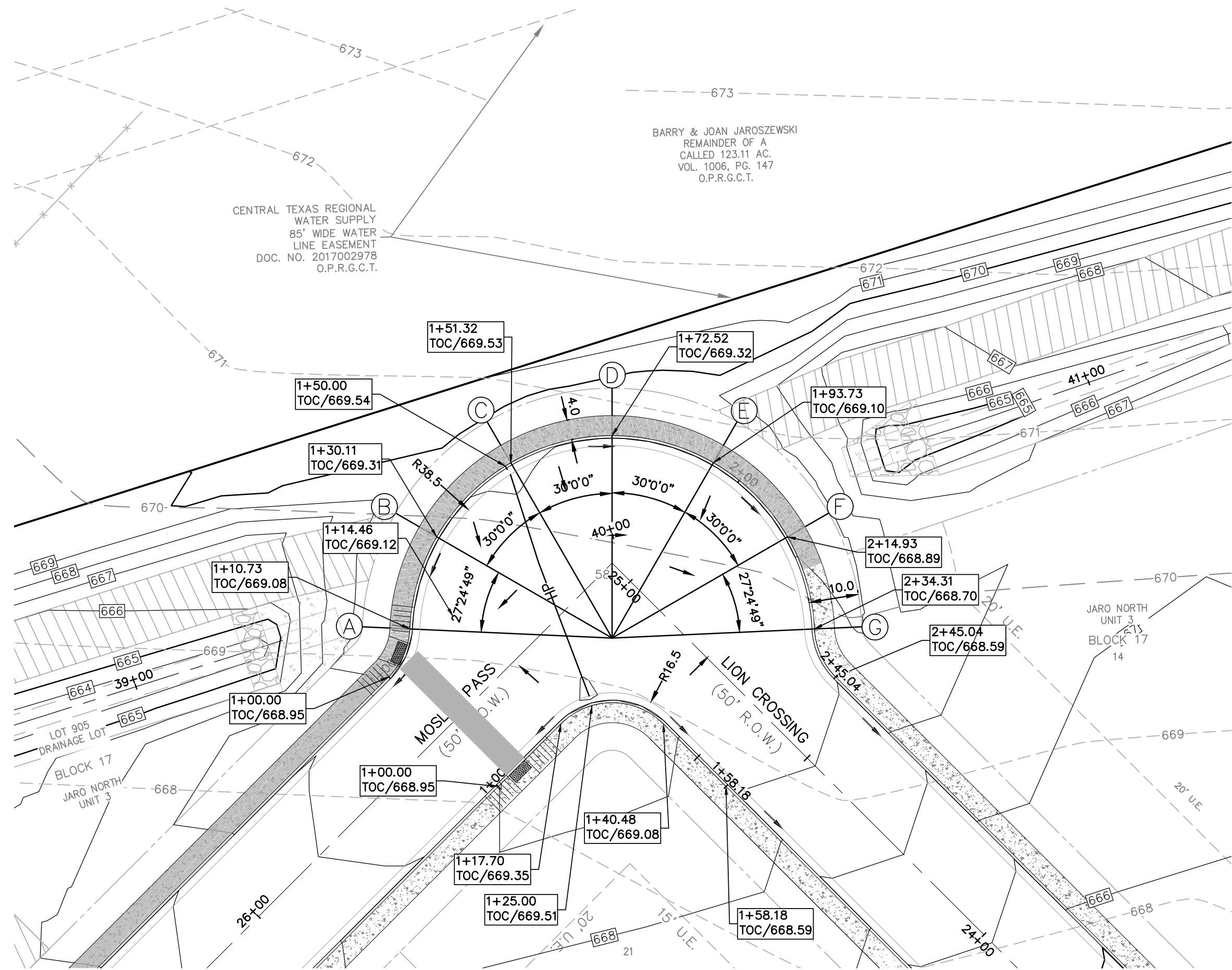




Drawing Name: M:\\_Projects\337 - Jaro North Unit 3\CD\337.102\_KNUCKLE SAC.dwg User: joshuak Oct 24, 2025 - 9:53am



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#### NOTES

1. LOCAL STREETS WERE DESIGNED TO POSTED SPEED LIMIT OF 25 MPH.
2. IN WASHOUT CROWN AREAS, THE CURB ON THE HIGH SIDE OF THE STREET SHOULD BE SPILL CURB AS DESIGNATED ON THE PLANS.
3. SIDEWALKS SHALL BE INSTALLED IN FRONT OF ALL BUILDABLE LOTS AT THE TIME OF HOME CONSTRUCTION FOR LOTS WITH NO BUILDING IMPROVEMENTS SIDEWALKS SHALL BE CONSTRUCTED WITH STREETS.
4. CONTRACTOR TO ENSURE POSITIVE DRAINAGE AWAY FROM STREET STUB OUT ENDS SO THAT NO "PONDING" OF WATER OCCURS.
5. PER NEW BRAUNFELS ORDINANCE SEC. 114-98(c)(6) ALL DRIVEWAY LOCATED ON A SINGLE FAMILY RESIDENCE ON A LOCAL STREET SHALL HAVE A MINIMUM SPACING OF 20'

#### KNUCKLE SAC PLAN & PROFILE

JARO NORTH UNIT 3

NO.	REVISION DESCRIPTION	REVISION DATE

DATE: October 25

DRAWN BY: RR

DESIGNED BY: JK

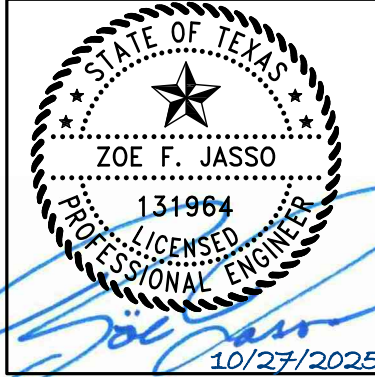
REVIEWED BY: ZJ

HMT PROJECT NO.:

337.102

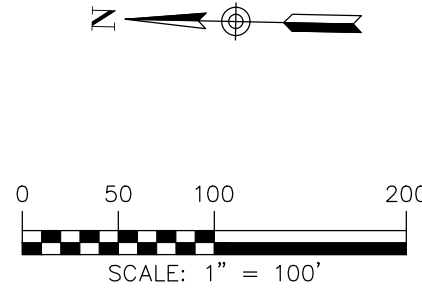
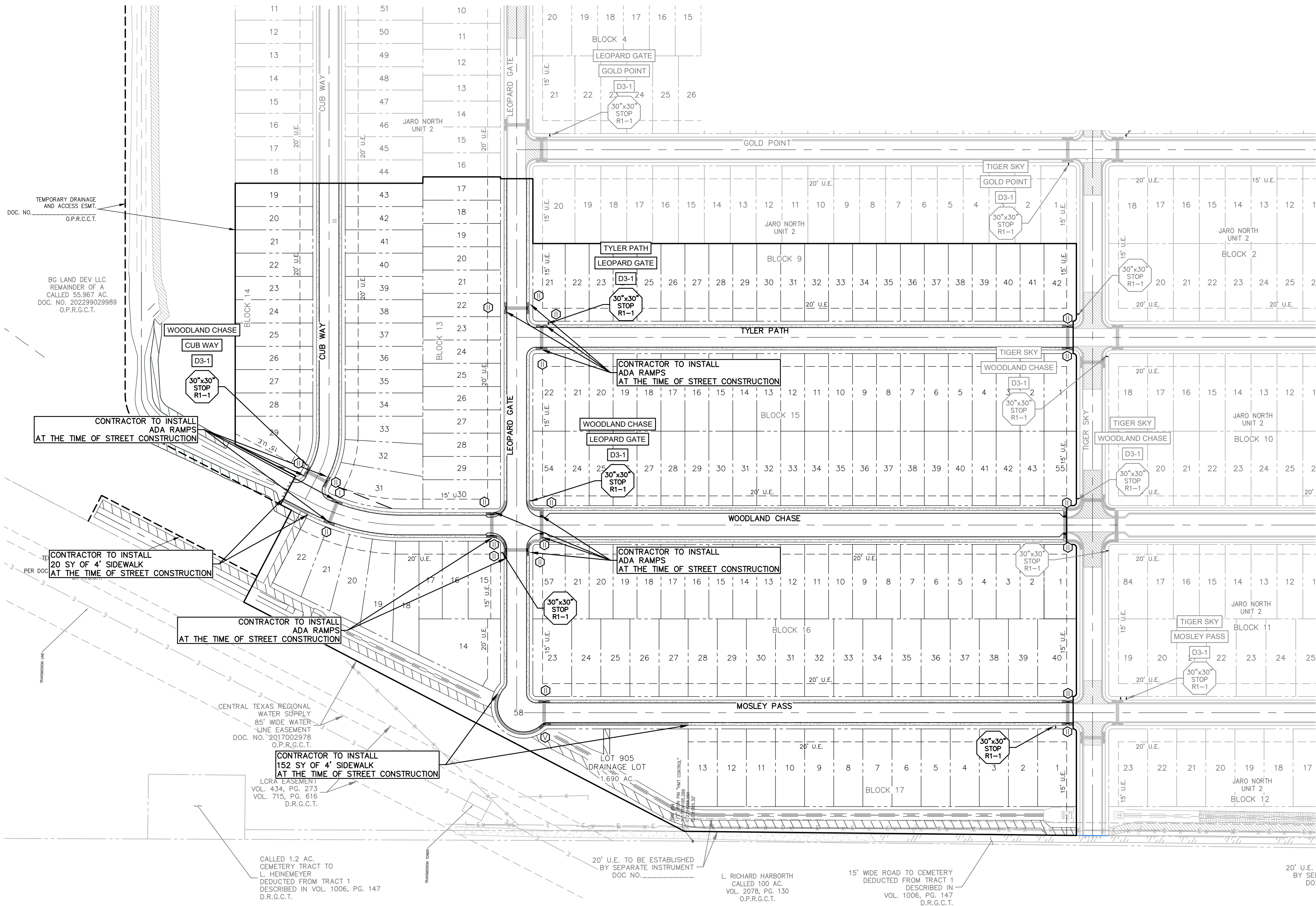
SHEET

C4.7



290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPELS FIRM F-10961  
TBPELS FIRM 1053600





- LEGEND**
- B.L. BUILDING SETBACK LINE
  - U.E. UTILITY EASEMENT
  - D.E. DRAINAGE EASEMENT
  - A.D.A. RAMP
  - ACCESSIBLE CROSSING AREA  
CONTRACTOR TO ENSURE MAX 2%  
CROSS SLOPE IN THESE AREAS
  - SIDEWALK RAMP TYPE  
TO BE CONSTRUCTED AT TIME OF  
STREET CONSTRUCTION  
(SEE DETAIL SHEET C4.14)
  - SIDEWALK TO BE CONSTRUCTED  
BY SITE DEVELOPMENT CONTRACTOR

- NOTES**
- LOCAL STREETS WERE DESIGNED TO POSTED SPEED LIMIT OF 25 MPH.
  - IN WASHOUT CROWN AREAS, THE CURB ON THE HIGH SIDE OF THE STREET SHOULD BE SPILL CURB AS DESIGNATED ON THE PLANS.
  - SIDEWALKS SHALL BE INSTALLED IN FRONT OF ALL BUILDABLE LOTS AT THE TIME OF HOME CONSTRUCTION FOR LOTS WITH NO BUILDING IMPROVEMENTS SIDEWALKS SHALL BE CONSTRUCTED WITH STREETS.
  - CONTRACTOR TO CONSTRUCT SIDEWALK RAMPS WITH STREETS.
  - CONTRACTOR TO ENSURE POSITIVE DRAINAGE AWAY FROM STREET STUB OUT ENDS SO THAT NO "PONDING" OF WATER OCCURS.
  - PER NEW BRAUNFELS ORDINANCE SEC. 114-98(a)(6) ALL DRIVEWAY LOCATED ON A SINGLE FAMILY RESIDENCE ON A LOCAL STREET SHALL HAVE A MINIMUM SPACING OF 20'

**SIGNAGE NOTES**

**INSTALLATION**

THE CONTRACTOR SHALL FURNISH AND INSTALL ALL REGULATORY, WARNING AND STREET NAME SIGNS AND SIGN MOUNTS IN ACCORDANCE WITH APPROVED ENGINEERING PLANS.

**MOUNTING**

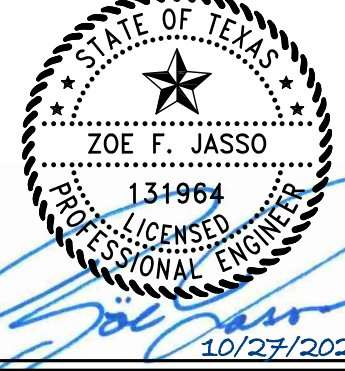
THE WEDGE ANCHOR STEEL SYSTEM AND THIN-WALLED TUBING POST SHALL BE USED FOR SIGNS WITH UP TO 10 SQUARE FEET OF SIGN AREA. MATERIALS AND INSTALLATION SHOULD FOLLOW THE TEXAS DEPARTMENT OF TRANSPORTATION (TXDOT) TRAFFIC STANDARDS SMD (GEN) - 08 AND SMD (TWT) - 08.

THE TRIANGULAR SLIP BASE SYSTEM AND 10 BWG TUBING POST SHALL BE USED FOR SIGNS THAT HAVE 10 TO 16 SQUARE FEET OF SIGN AREA. MATERIALS AND INSTALLATION SHOULD FOLLOW THE TXDOT TRAFFIC STANDARDS SMD (GEN) - 08 AND SMD (SLIP-1-3) - 08.

OBJECT MARKERS MATERIALS AND INSTALLATION SHOULD FOLLOW THE TXDOT TRAFFIC STANDARDS D & OM (1 - 5) - 10.

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290 S. CASTELL AVE., STE. 100  
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TBPELS FIRM F-10961  
TBPELS FIRM 1053600



**SIGNAGE PLAN**

JARO NORTH UNIT 3

NO.	REVISION	DESCRIPTION	REVISION DATE

DATE: October 25

DRAWN BY: RR

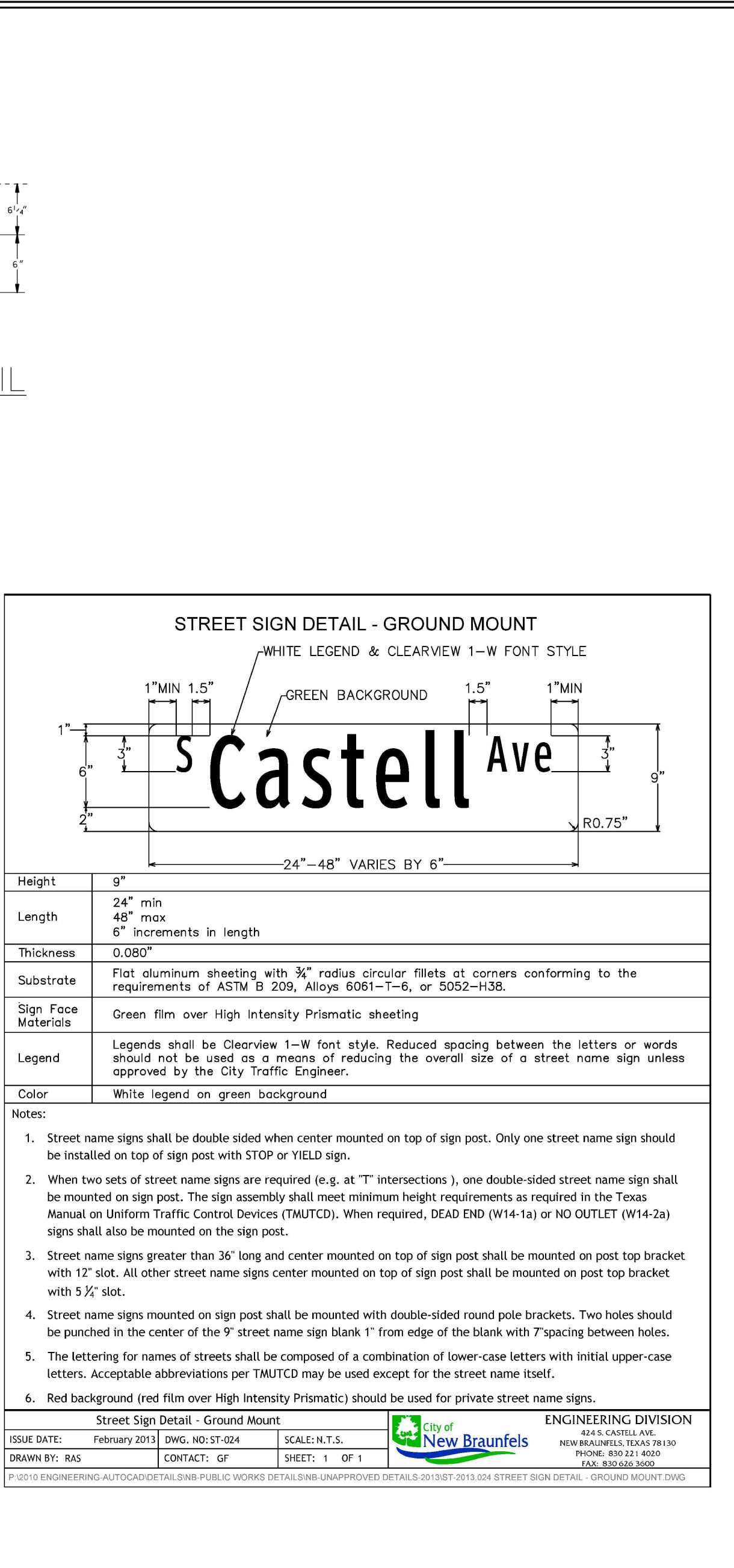
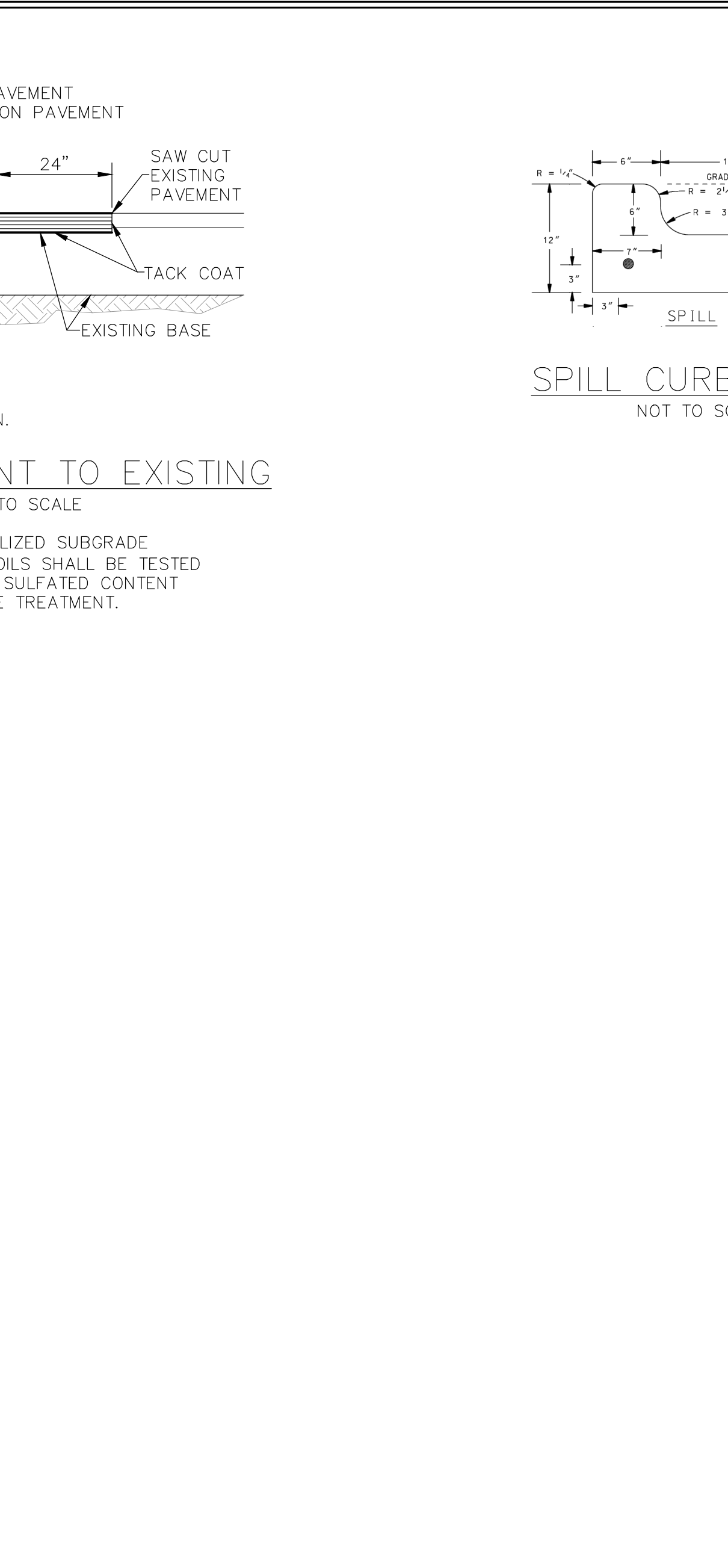
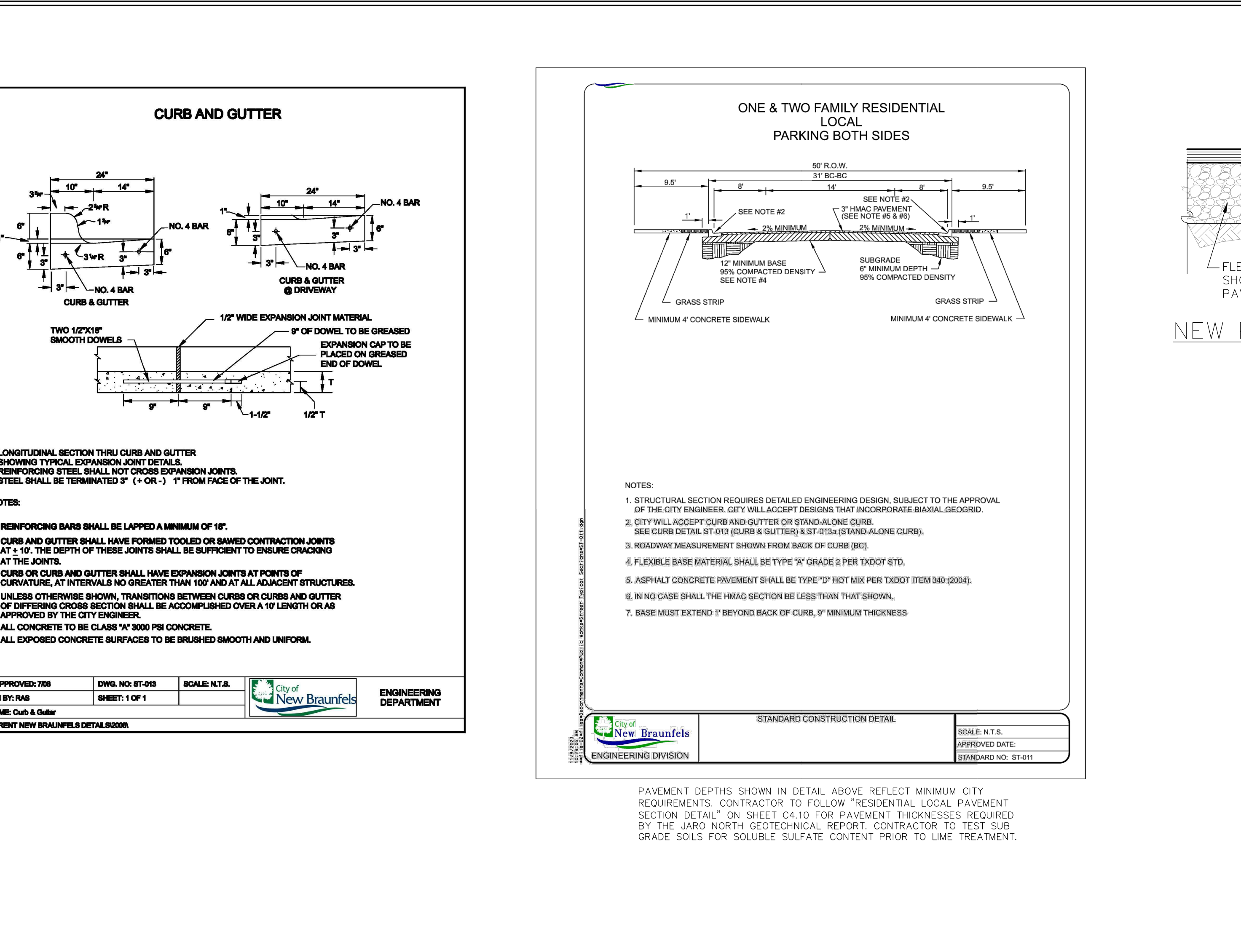
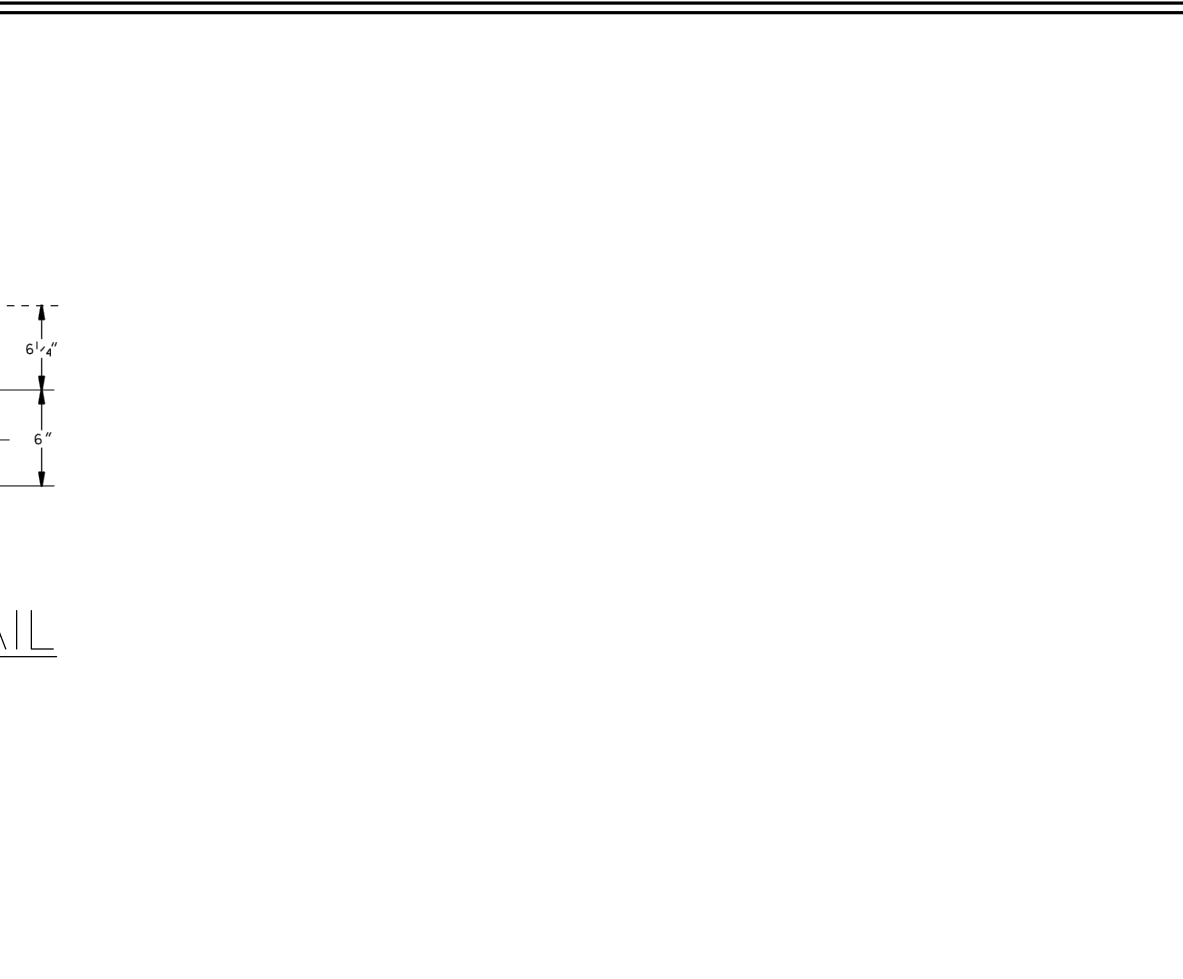
DESIGNED BY: JK

REVIEWED BY: ZJ

HMT PROJECT NO.: 337.102

**SHEET**  
**C4.8**





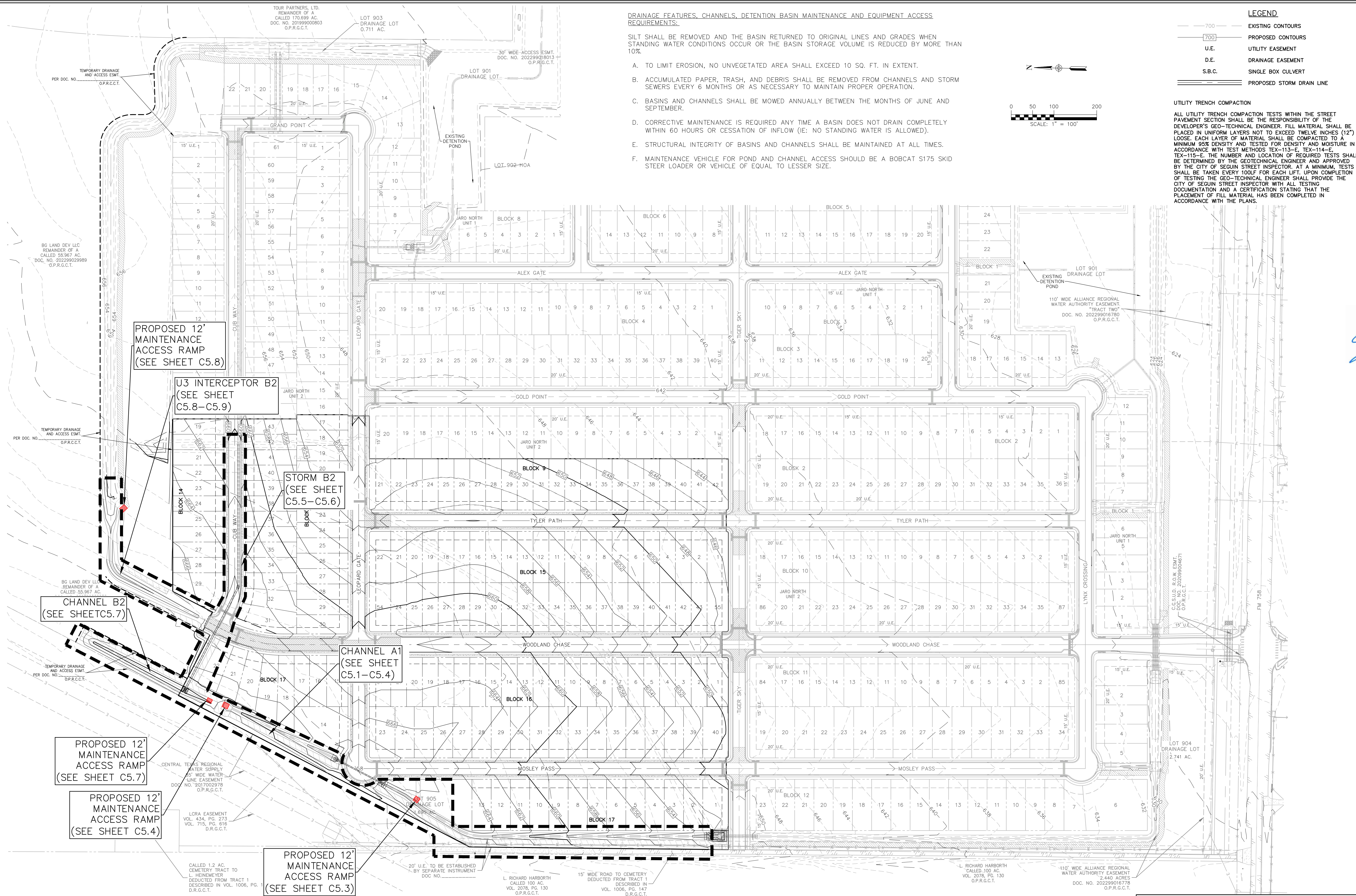












**DRAINAGE FEATURES, CHANNELS, DETENTION BASIN MAINTENANCE AND EQUIPMENT ACCESS REQUIREMENTS:**

- SILT SHALL BE REMOVED AND THE BASIN RETURNED TO ORIGINAL LINES AND GRADES WHEN STANDING WATER CONDITIONS OCCUR OR THE BASIN STORAGE VOLUME IS REDUCED BY MORE THAN 10%.
- TO LIMIT EROSION, NO UNVEGETATED AREA SHALL EXCEED 10 SQ. FT. IN EXTENT.
  - ACCUMULATED PAPER, TRASH, AND DEBRIS SHALL BE REMOVED FROM CHANNELS AND STORM SEWERS EVERY 6 MONTHS OR AS NECESSARY TO MAINTAIN PROPER OPERATION.
  - BASINS AND CHANNELS SHALL BE MOWED ANNUALLY BETWEEN THE MONTHS OF JUNE AND SEPTEMBER.
  - CORRECTIVE MAINTENANCE IS REQUIRED ANY TIME A BASIN DOES NOT DRAIN COMPLETELY WITHIN 60 HOURS OR CESSATION OF INFLOW (IE: NO STANDING WATER IS ALLOWED).
  - STRUCTURAL INTEGRITY OF BASINS AND CHANNELS SHALL BE MAINTAINED AT ALL TIMES.
  - MAINTENANCE VEHICLE FOR POND AND CHANNEL ACCESS SHOULD BE A BOBCAT S175 SKID STEER LOADER OR VEHICLE OF EQUAL TO LESSER SIZE.

**LEGEND**

- EXISTING CONTOURS
- PROPOSED CONTOURS
- UTILITY EASEMENT
- DRAINAGE EASEMENT
- SINGLE BOX CULVERT
- PROPOSED STORM DRAIN LINE

**UTILITY TRENCH COMPACTION**

ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET PAVEMENT SECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEO-TECHNICAL ENGINEER. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE INCHES (12") LOOSE. EACH LAYER OF MATERIAL SHALL BE COMPACTED TO A MINIMUM 95% DENSITY AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEST METHODS TEX-113-E, TEX-114-E, TEX-115-E. THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINED BY THE GEOTECHNICAL ENGINEER AND APPROVED BY THE CITY OF SEGUIN STREET INSPECTOR. AT A MINIMUM, TESTS SHALL BE TAKEN EVERY 100LF FOR EACH LIFT. UPON COMPLETION OF TESTING THE GEO-TECHNICAL ENGINEER SHALL PROVIDE THE CITY OF SEGUIN STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FILL MATERIAL HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS.

**OVERALL STORM**

**JARO NORTH UNIT 3**

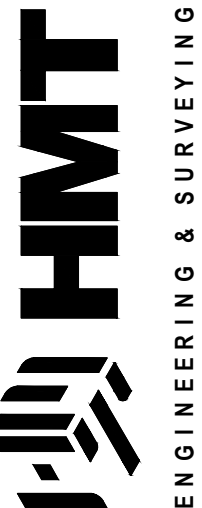
NO.	REVISION DESCRIPTION	REVISION DATE

DATE: **October 25**  
DRAWN BY: **RR**  
DESIGNED BY: **JK**  
REVIEWED BY: **ZJ**

HMT PROJECT NO.: **337.102**

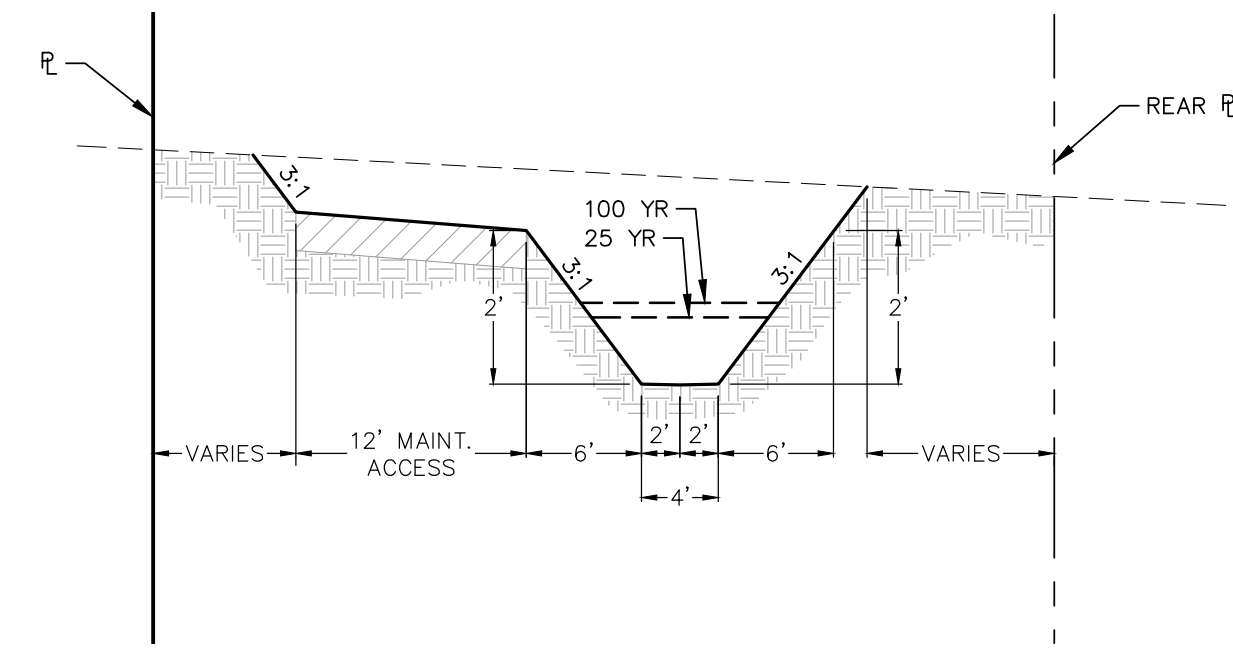
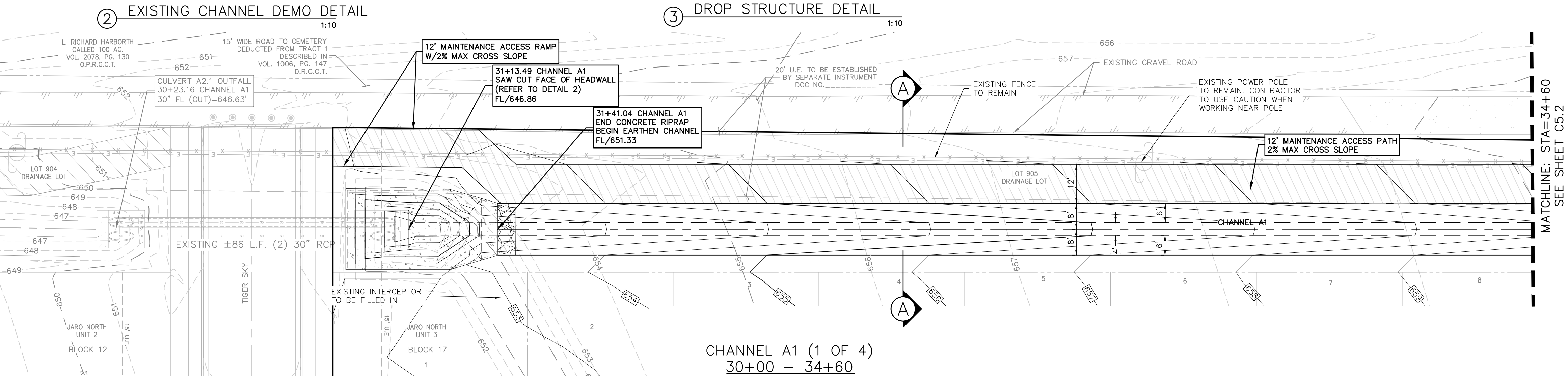
**SHEET**  
**C5.0**

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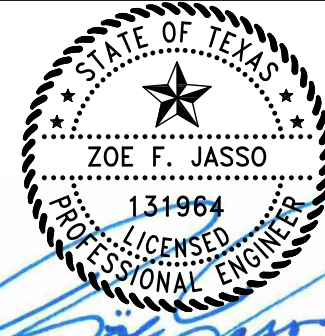
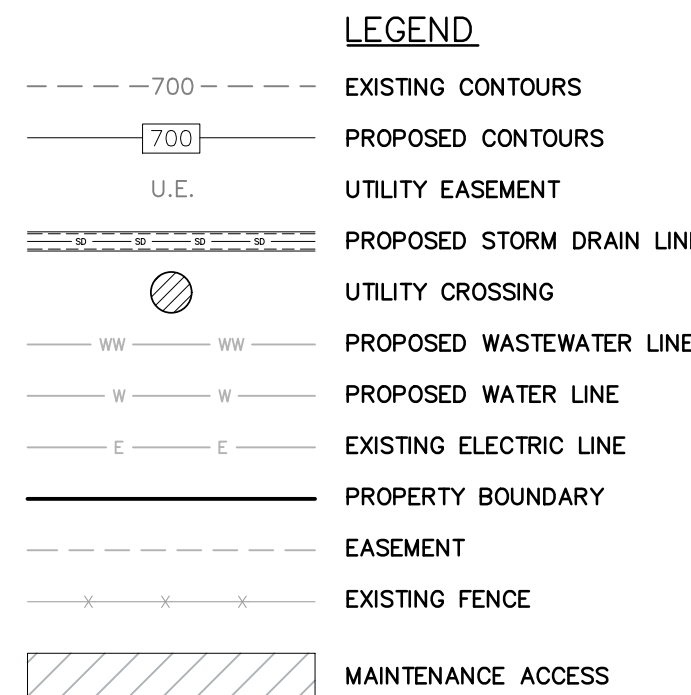
290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPELS FIRM F-10961  
TBPELS FIRM 1053600



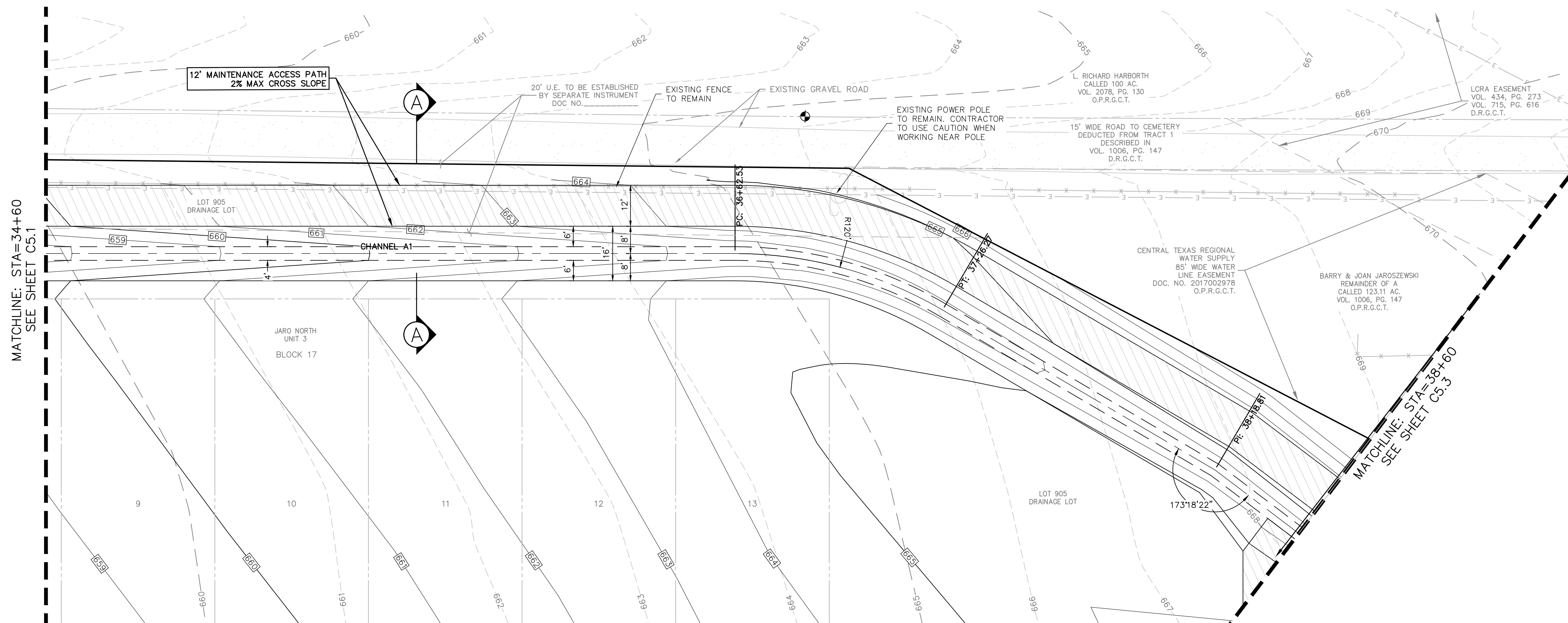


- A. TO LIMIT EROSION, NO UNVEGETATED AREA SHALL EXCEED 10 SQ. FT. IN EXTENT.
- B. ACCUMULATED PAPER, TRASH, AND DEBRIS SHALL BE REMOVED FROM CHANNELS AND STORM SEWERS EVERY 6 MONTHS OR AS NECESSARY TO MAINTAIN PROPER OPERATION.
- C. BASINS AND CHANNELS SHALL BE MOWED ANNUALLY BETWEEN THE MONTHS OF JUNE AND SEPTEMBER.
- D. CORRECTIVE MAINTENANCE IS REQUIRED ANY TIME A BASIN DOES NOT DRAIN COMPLETELY WITHIN 60 HOURS OR CESSATION OF INFLOW (IE: NO STANDING WATER IS ALLOWED).
- E. STRUCTURAL INTEGRITY OF BASINS AND CHANNELS SHALL BE MAINTAINED AT ALL TIMES.
- F. MAINTENANCE VEHICLE FOR POND AND CHANNEL ACCESS SHOULD BE A BOBCAT S175 SKID STEER LOADER OR VEHICLE OF EQUAL TO LESSER SIZE.

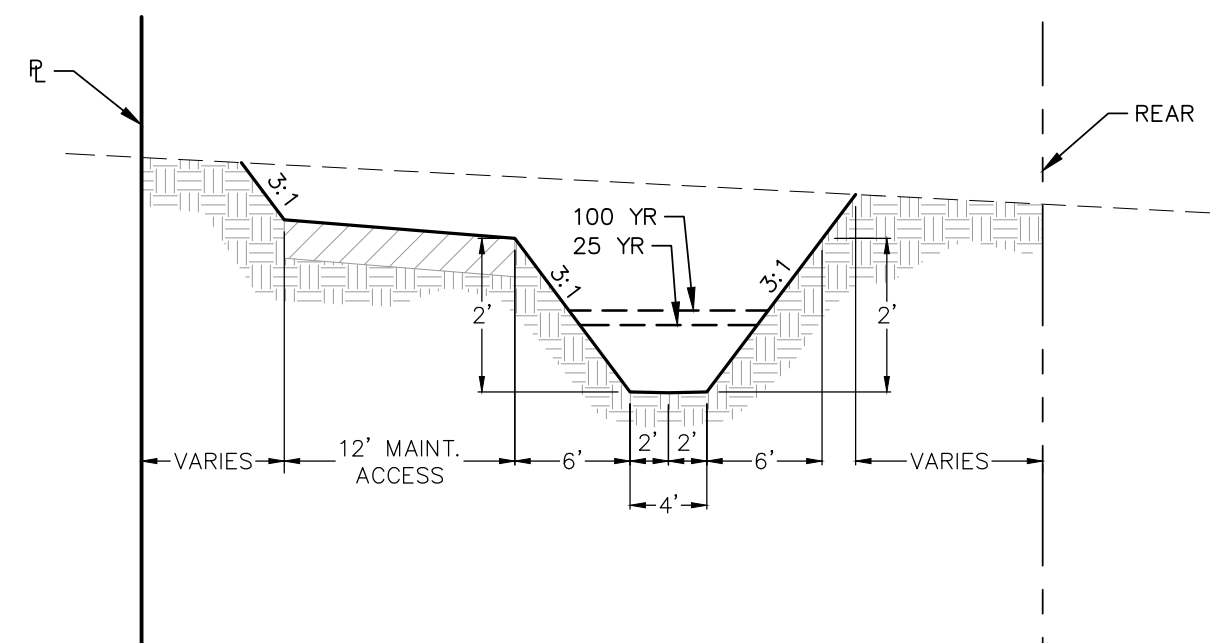
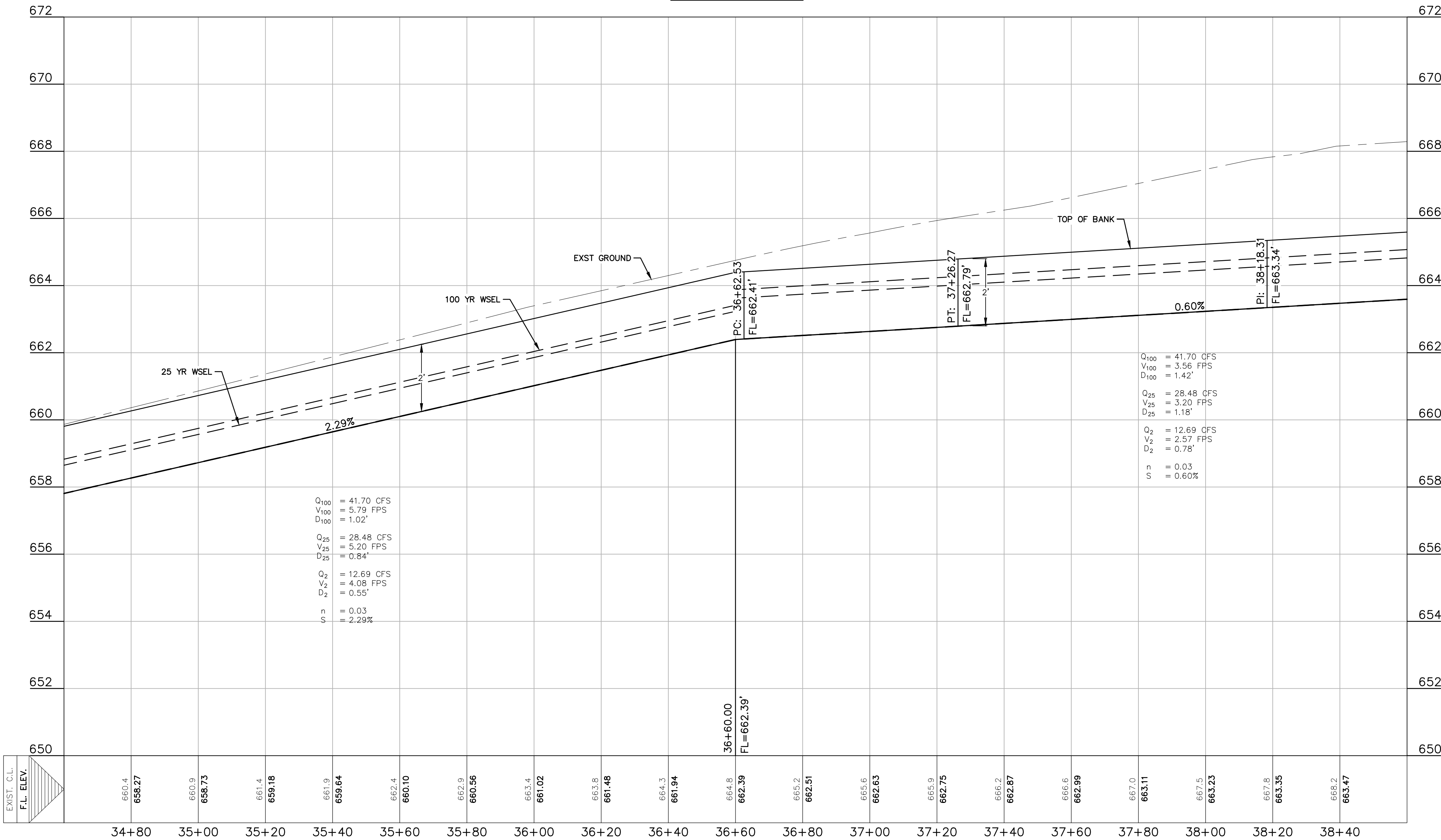
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CHANNEL A1 (2 OF 4)  
34+60 - 38+60



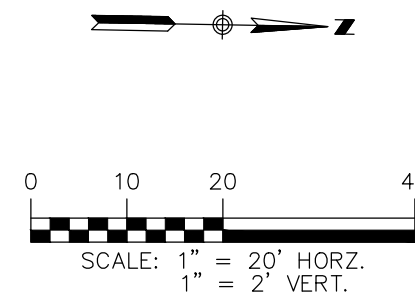
**DRAINAGE FEATURES, CHANNELS, DETENTION BASIN  
MAINTENANCE AND EQUIPMENT ACCESS REQUIREMENTS:**

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- LEGEND**
- EXISTING CONTOURS
  - PROPOSED CONTOURS
  - UTILITY EASEMENT
  - PROPOSED STORM DRAIN LINE
  - UTILITY CROSSING
  - PROPOSED WASTEWATER LINE
  - PROPOSED WATER LINE
  - EXISTING ELECTRIC LINE
  - PROPERTY BOUNDARY
  - EASEMENT
  - EXISTING FENCE
  - MAINTENANCE ACCESS

**CHANNEL A1 PLAN & PROFILE  
(2 OF 4)**

JARO NORTH UNIT 3

NO.	REVISION	DESCRIPTION	REVISION DATE

DATE: October 25

DRAWN BY: RR

DESIGNED BY: JK

REVIEWED BY: ZJ

HMT PROJECT NO.:

337.102

**SHEET**

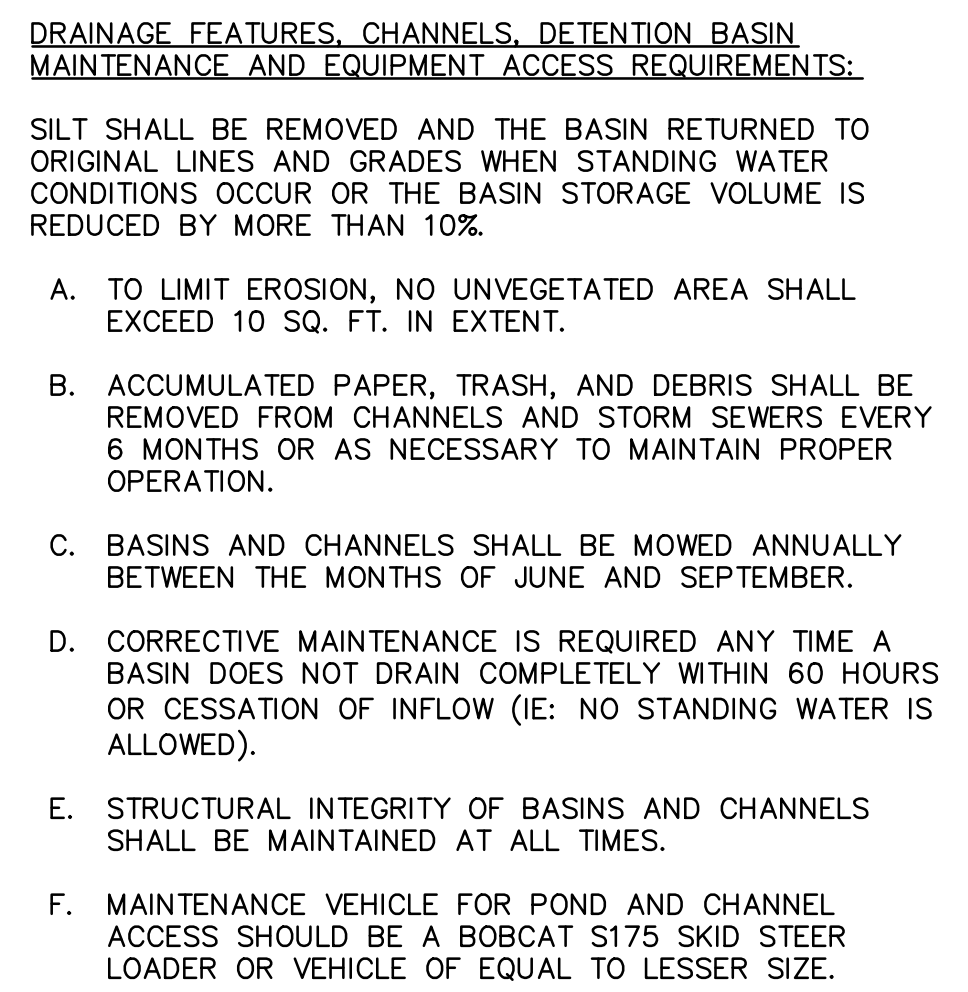
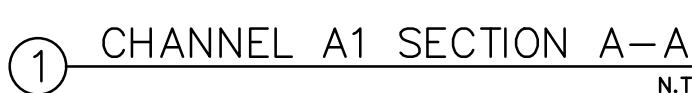
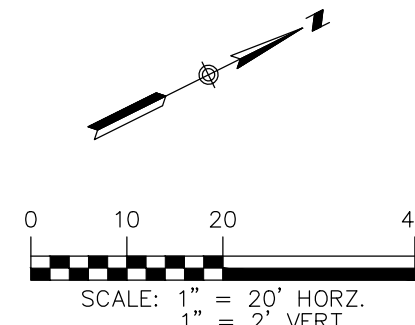
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NEW BRAUNFELS, TX 78130  
TBPELS FIRM F-10961  
TBPELS FIRM 1053600

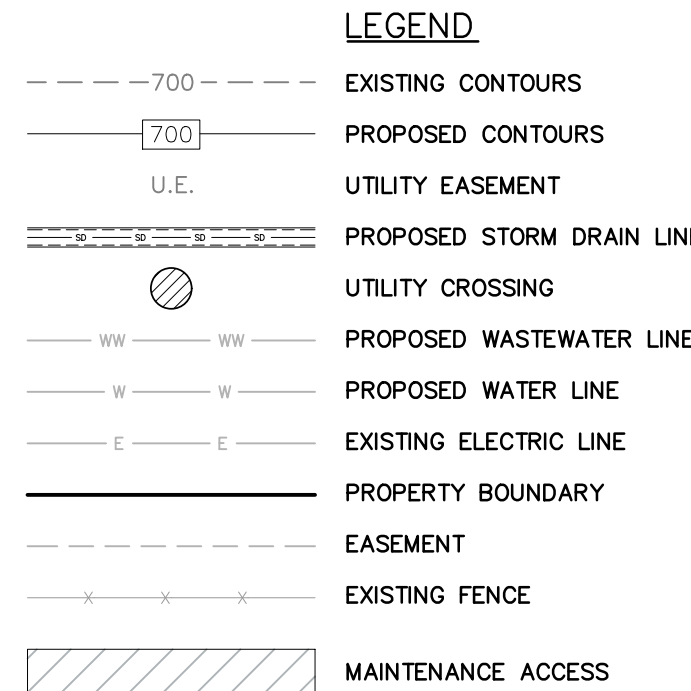
**HMT**  
ENGINEERING & SURVEYING







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**HMT**  
ENGINEERING & SURVEYING

IARC NORTH UNIT 3

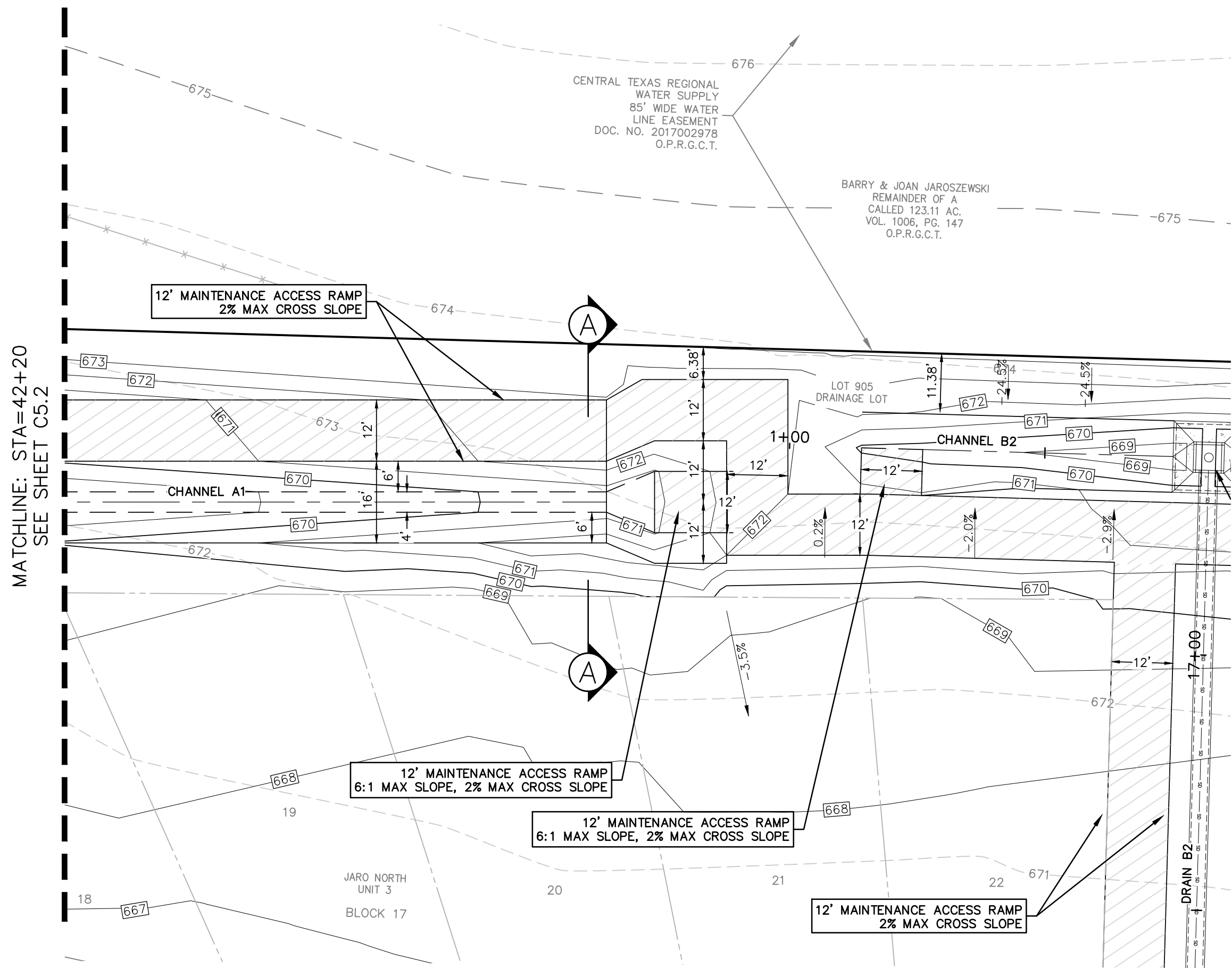
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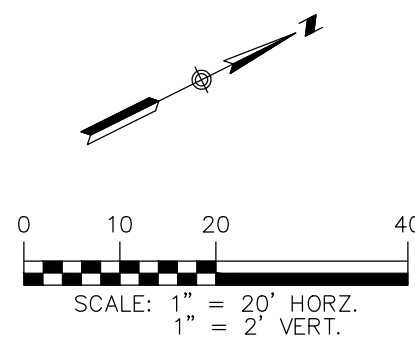
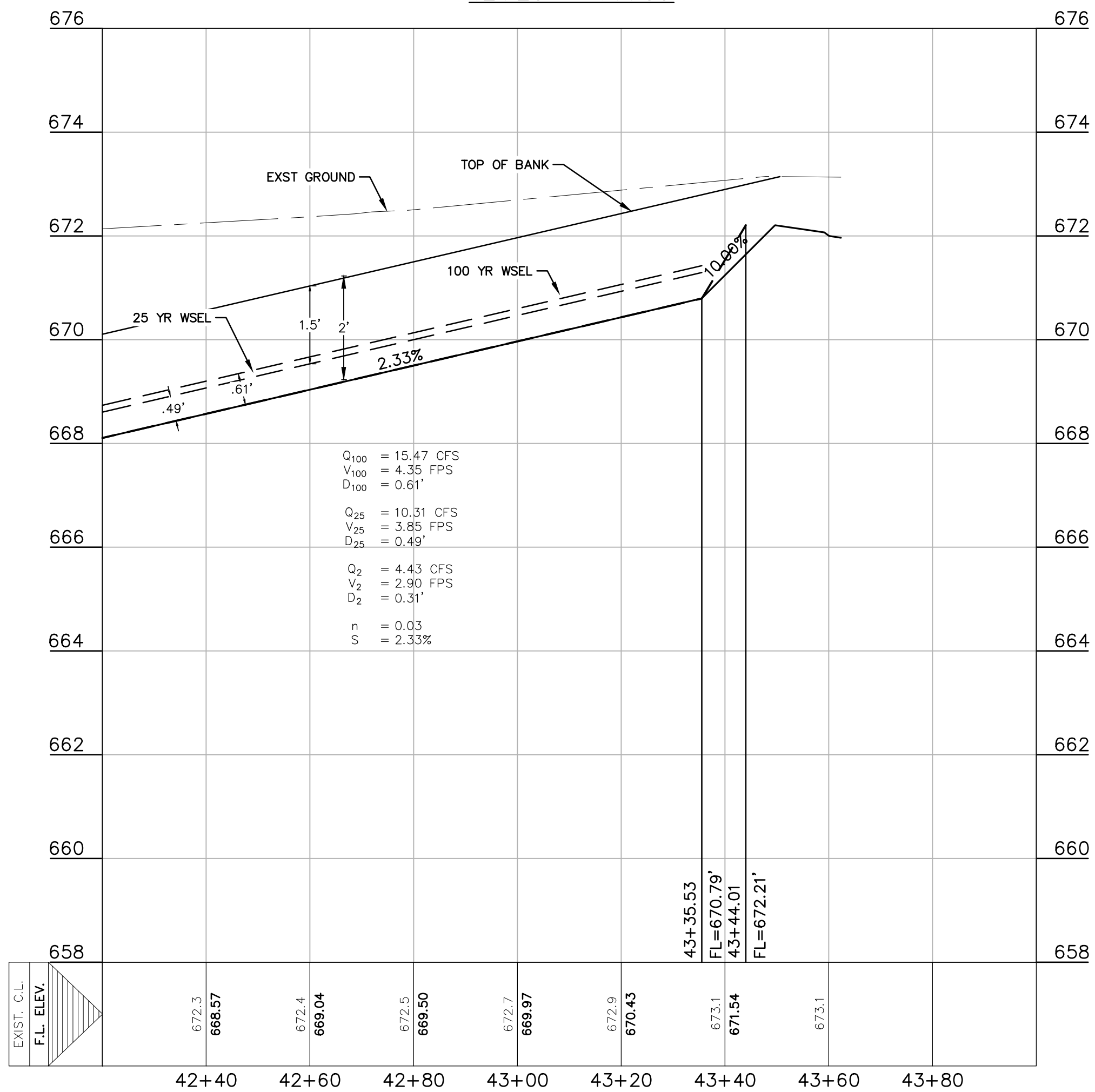
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**SHEET**  
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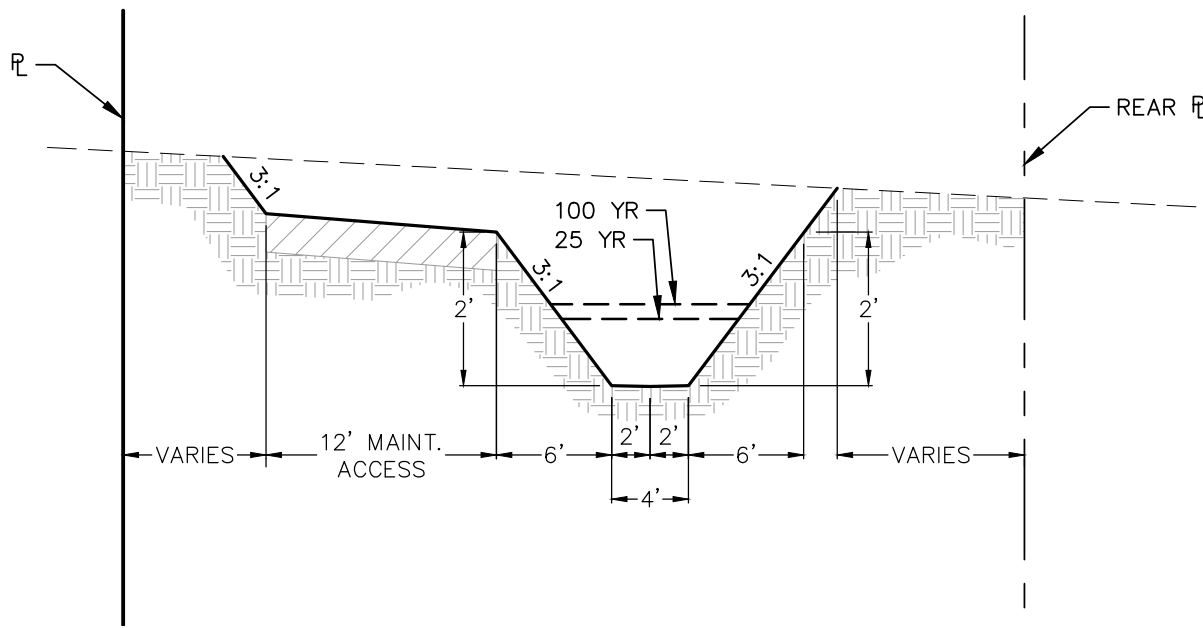




CHANNEL A1 (4 OF 4)  
42+20 - 44+00



- LEGEND**
- 700 --- EXISTING CONTOURS
  - 700 --- PROPOSED CONTOURS
  - U.E. UTILITY EASEMENT
  - PROPOSED STORM DRAIN LINE
  - UTILITY CROSSING
  - PROPOSED WASTEWATER LINE
  - PROPOSED WATER LINE
  - EXISTING ELECTRIC LINE
  - PROPERTY BOUNDARY
  - EASEMENT
  - EXISTING FENCE
  - MAINTENANCE ACCESS



1 CHANNEL A1 SECTION A-A  
N.T.S.

**DRAINAGE FEATURES, CHANNELS, DETENTION BASIN  
MAINTENANCE AND EQUIPMENT ACCESS REQUIREMENTS:**

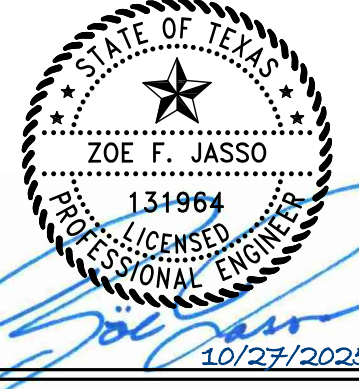
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290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
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**CHANNEL A1 PLAN & PROFILE  
(4 OF 4)**

JARO NORTH UNIT 3

NO.	REVISION	DESCRIPTION	REVISION DATE

DATE: October 25

DRAWN BY: RR

DESIGNED BY: JK

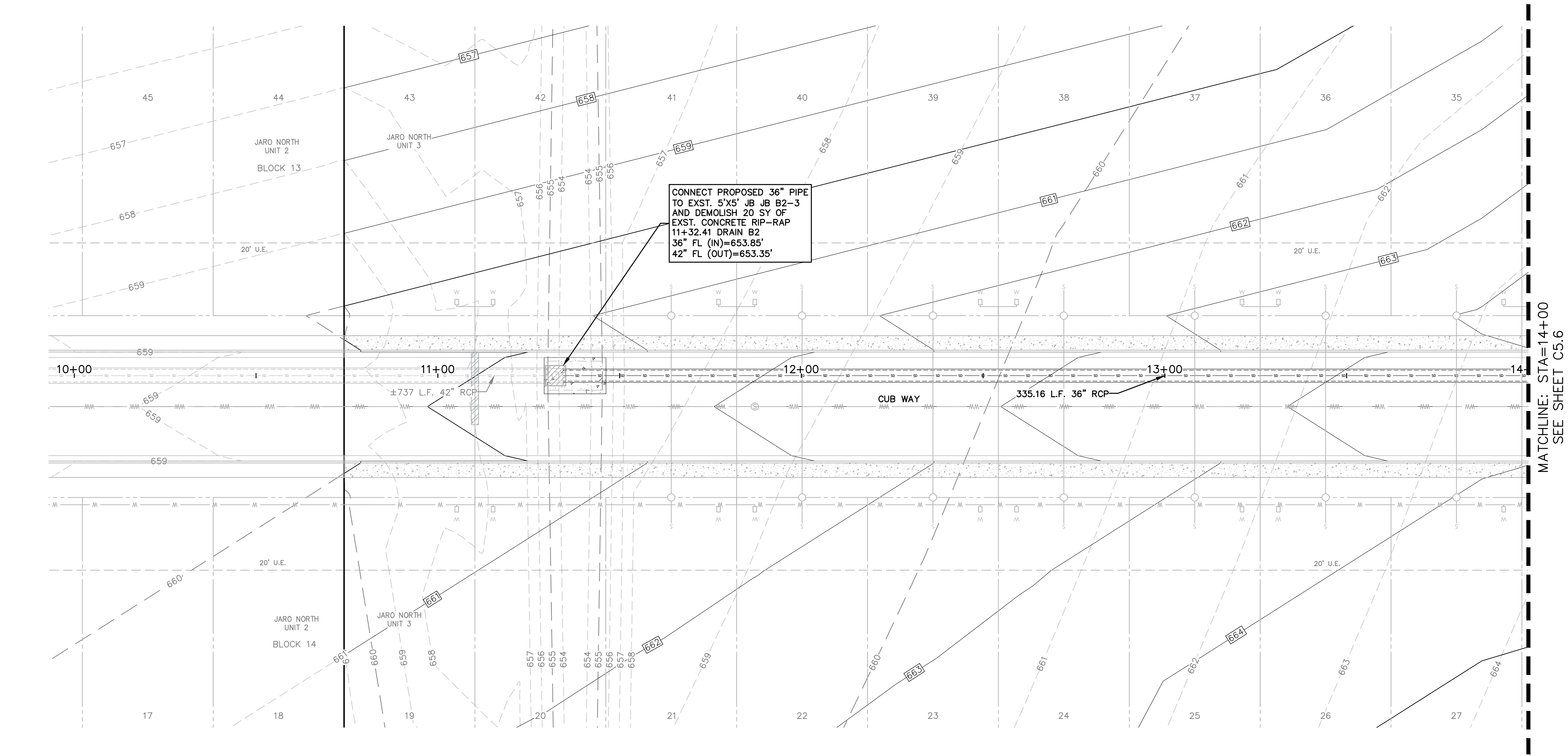
REVIEWED BY: ZJ

HMT PROJECT NO.: 337.102

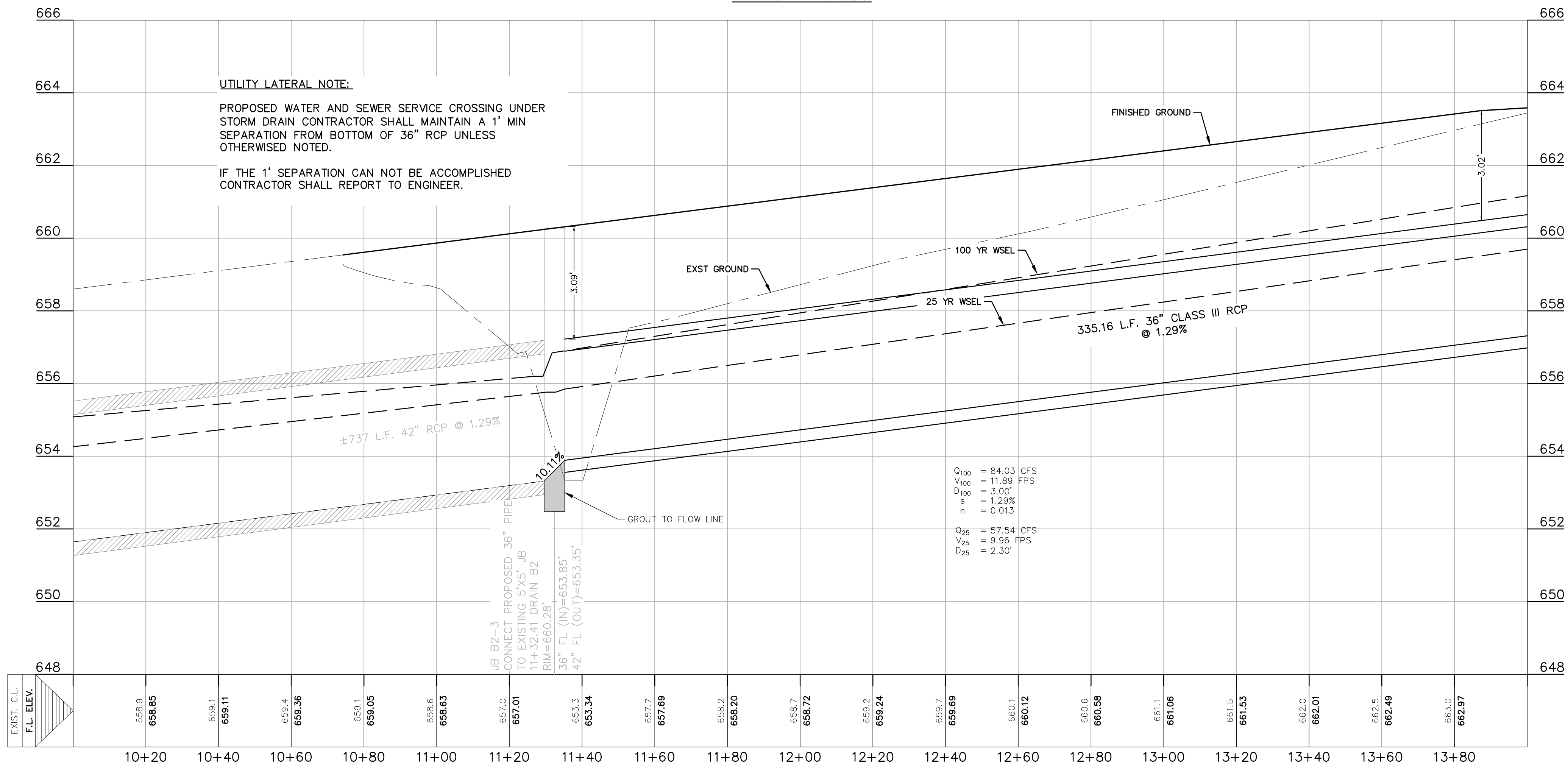
**SHEET  
C5.4**



Drawing Name: M:\\_Projects\337 - Jaro North Unit 3\CDs\337.102\_DRAIN B2.dwg User: joshuak Oct 24, 2025 - 9:55am



DRAIN B2 (1 OF 2)  
10+00 - 14+00



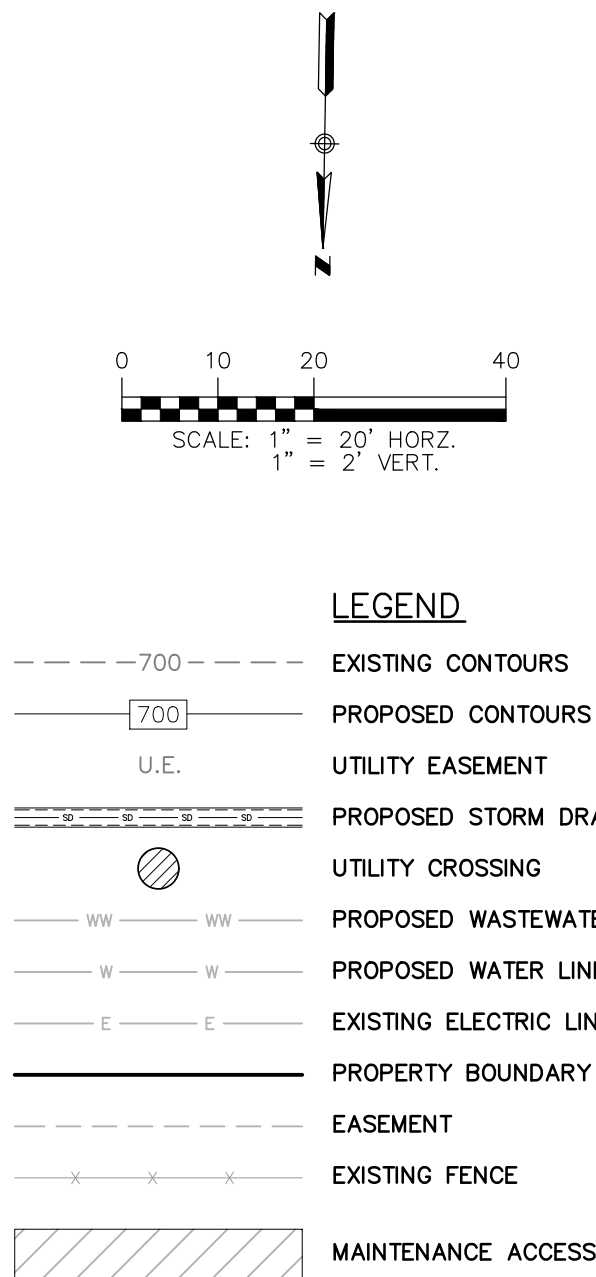
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MAINTENANCE AND EQUIPMENT ACCESS REQUIREMENTS:**

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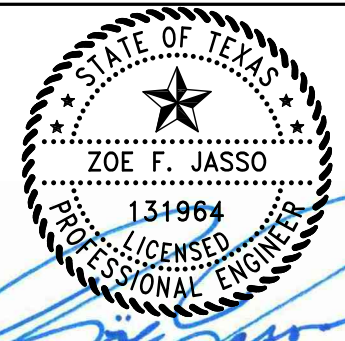
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290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPELS FIRM F-10961  
TBPELS FIRM 1053600



**STORM B2 PLAN & PROFILE  
(1 OF 2)**

JARO NORTH UNIT 3

NO.	REVISION	DESCRIPTION	DATE

DATE: October 25

DRAWN BY: RR

DESIGNED BY: JK

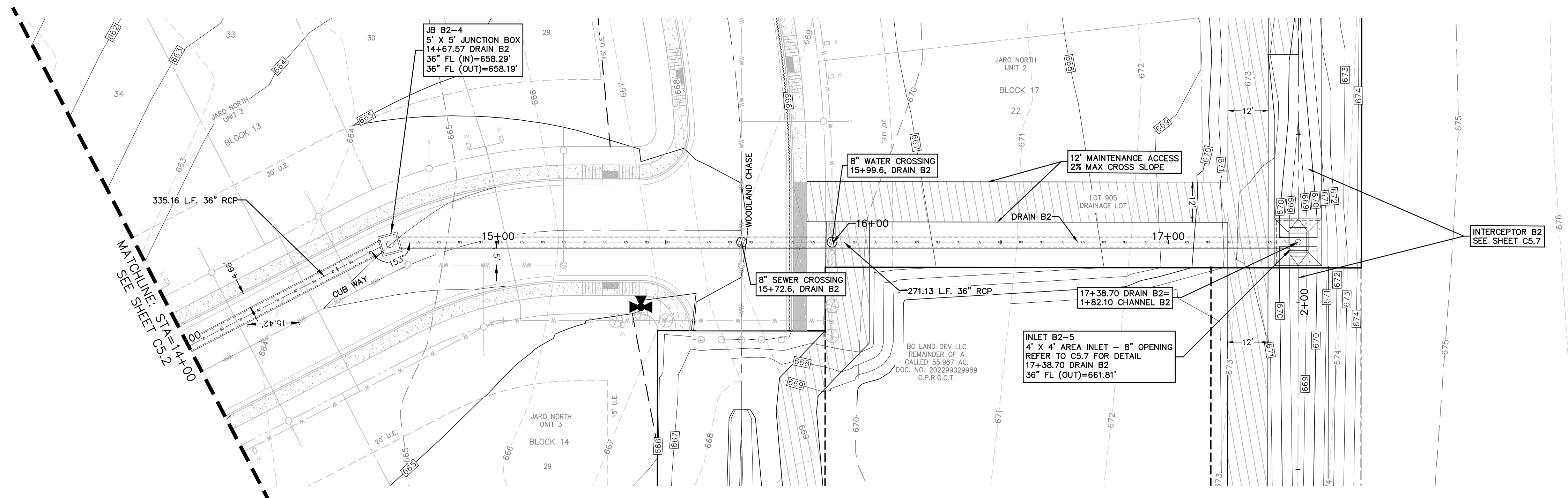
REVIEWED BY: ZJ

HMT PROJECT NO.:  
337.102

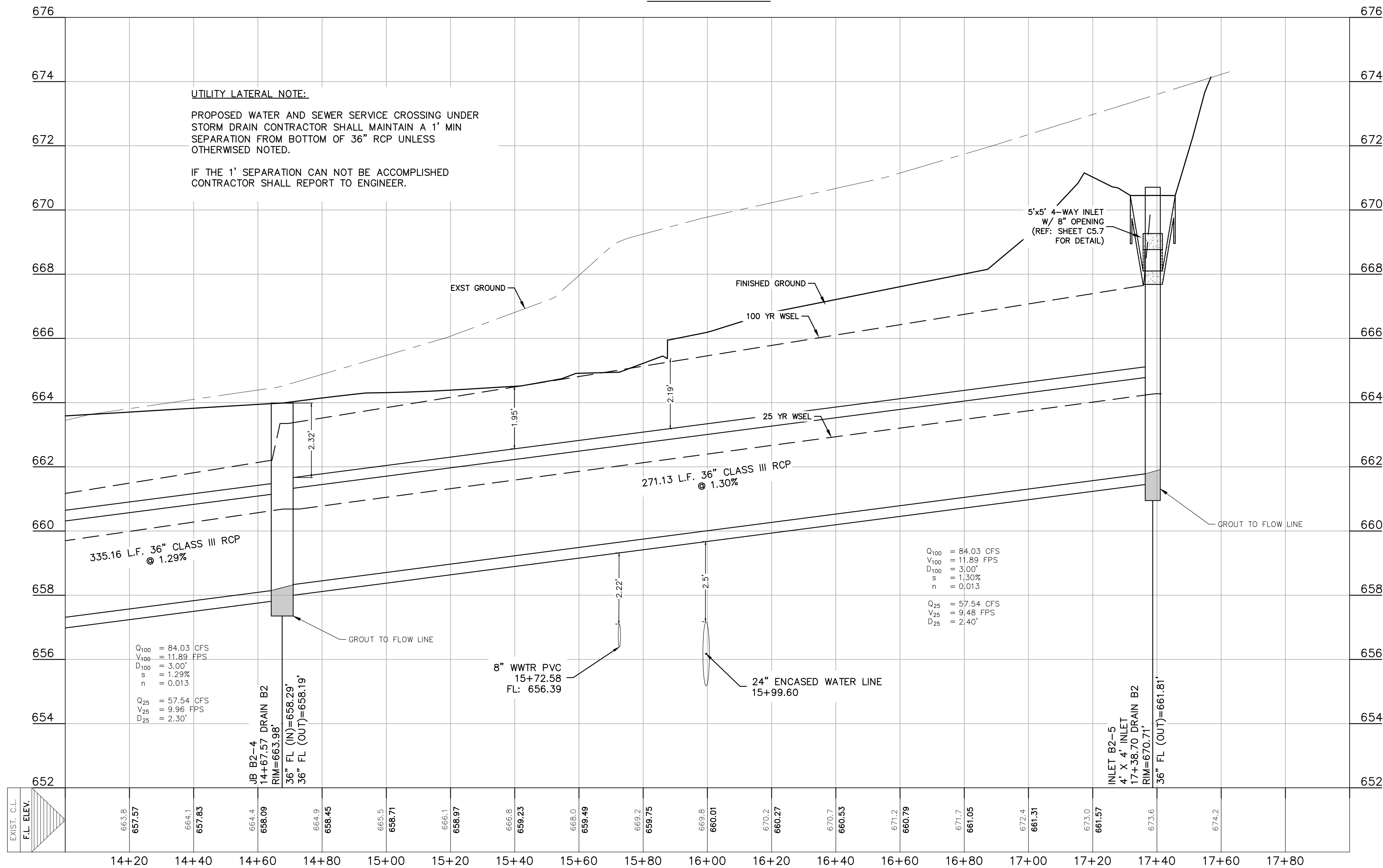
**SHEET  
C5.5**



Drawing Name: \\A:\Projects\337 - Jaro North Unit 3\CDs\337.102.DRAIN B2.dwg User: joshuak Oct 24, 2025 - 9:55am



DRAIN B2 (2 OF 2)  
14+00 - 18+00



**DRAINAGE FEATURES, CHANNELS, DETENTION BASIN  
MAINTENANCE AND EQUIPMENT ACCESS REQUIREMENTS:**

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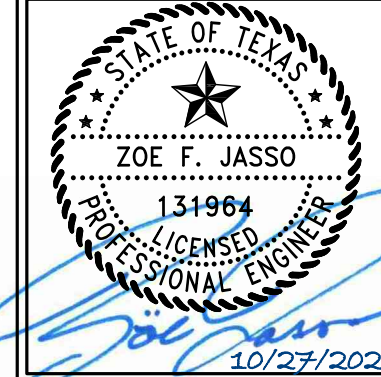
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LEGEND	
	EXISTING CONTOURS
	PROPOSED CONTOURS
	UTILITY EASEMENT
	PROPOSED STORM DRAIN LINE
	UTILITY CROSSING
	PROPOSED WASTEWATER LINE
	PROPOSED WATER LINE
	EXISTING ELECTRIC LINE
	PROPERTY BOUNDARY
	EASEMENT
	EXISTING FENCE
	MAINTENANCE ACCESS

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NEW BRAUNFELS, TX 78130  
TBPELS FIRM F-10961  
TBPELS FIRM 1053600



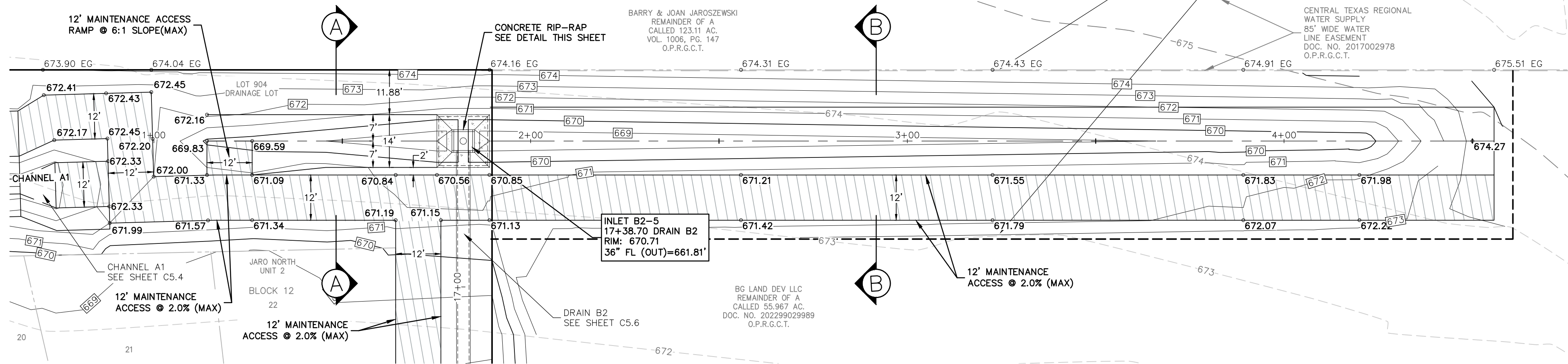
**STORM B2 PLAN & PROFILE  
(2 OF 2)**

JARO NORTH UNIT 3

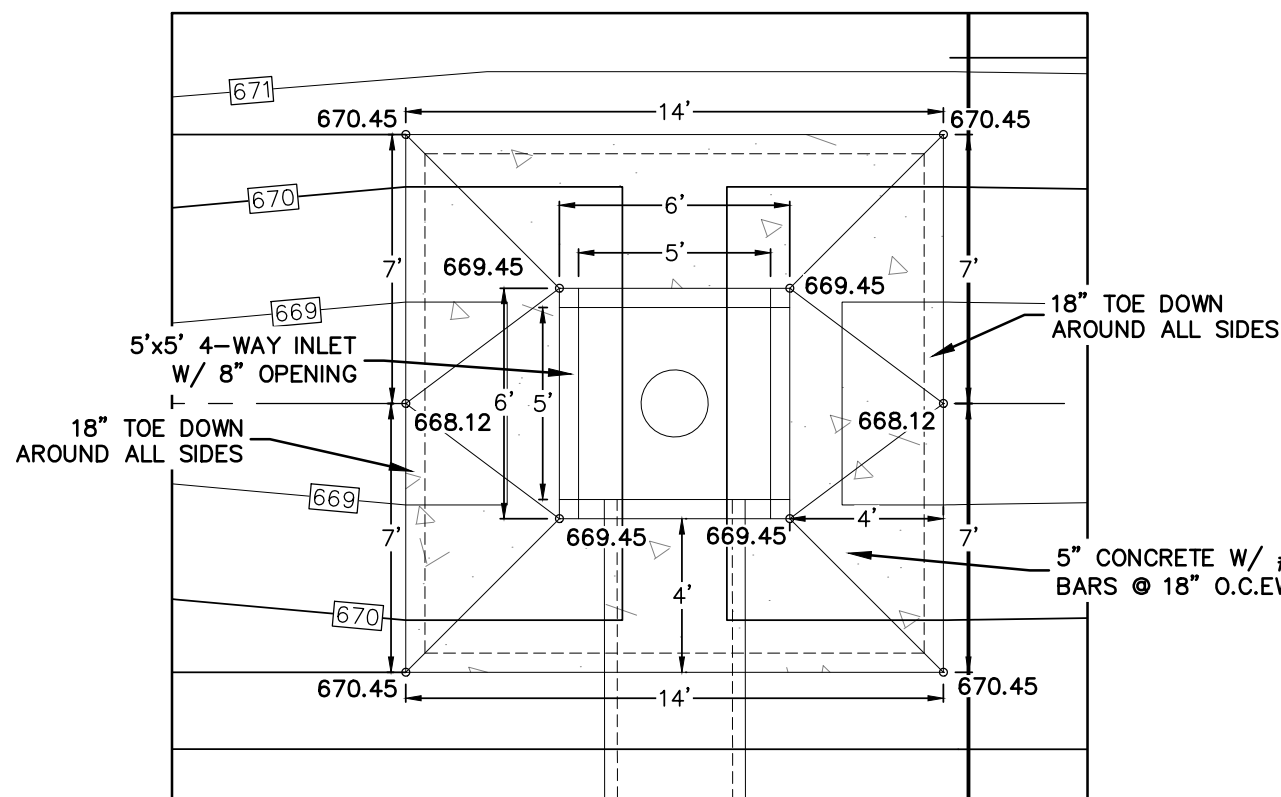
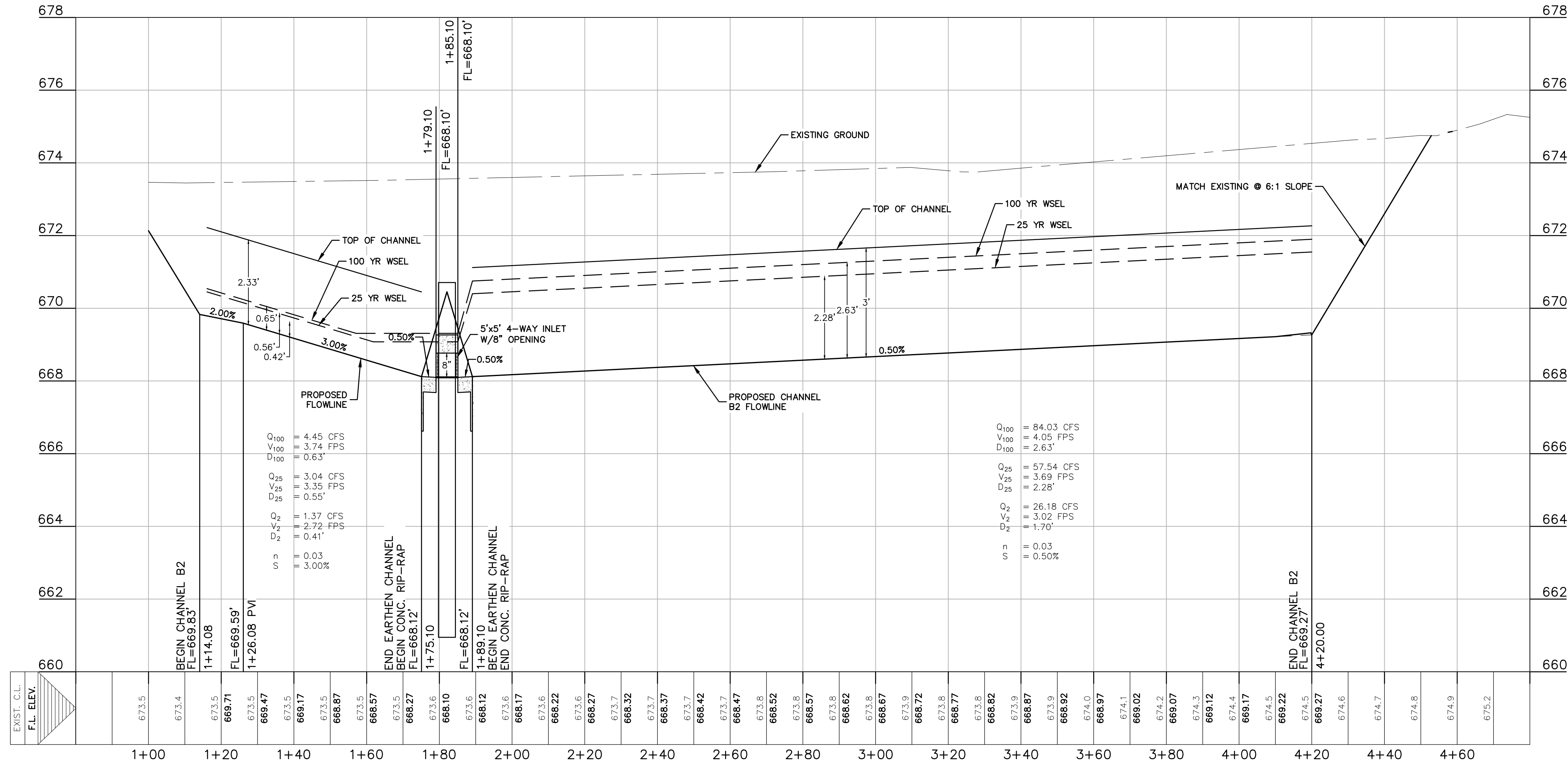
REVISION DATE	
NO.	
DATE:	October 25
DRAWN BY:	RR
DESIGNED BY:	JK
REVIEWED BY:	ZJ
HMT PROJECT NO.:	337.102

**SHEET  
C5.6**

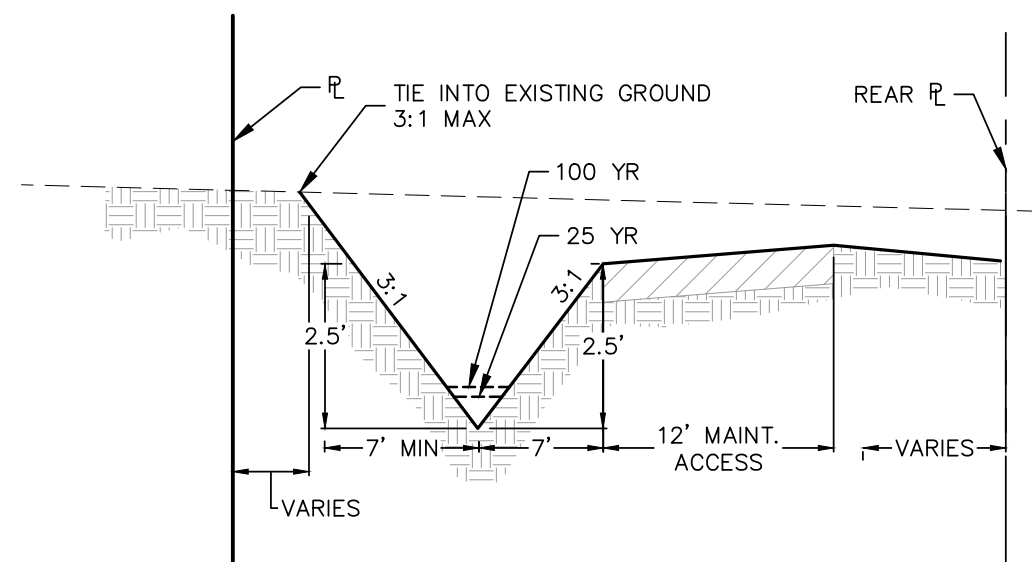




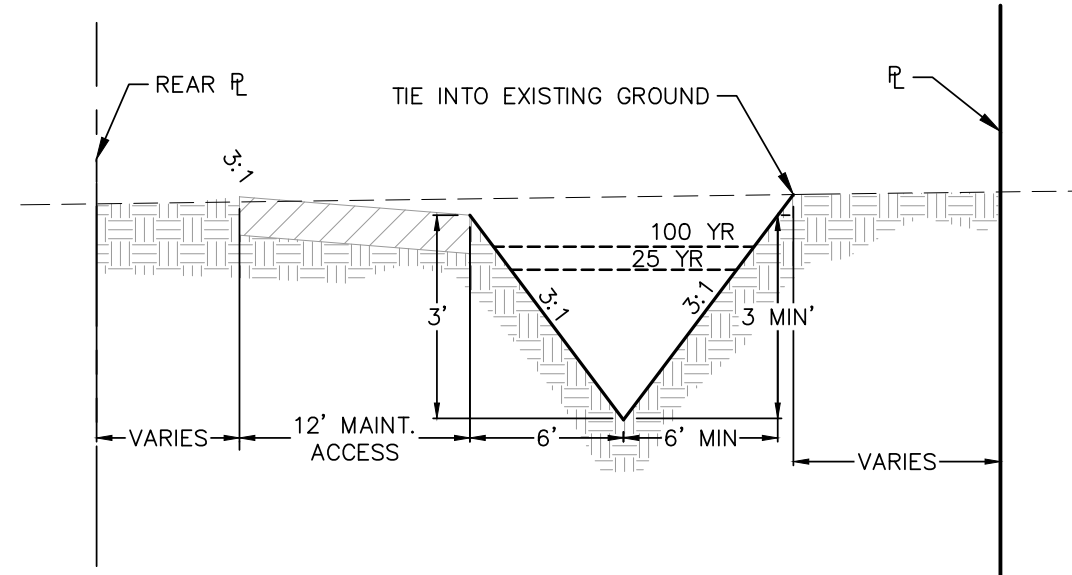
CHANNEL B2  
0+80 - 4+80



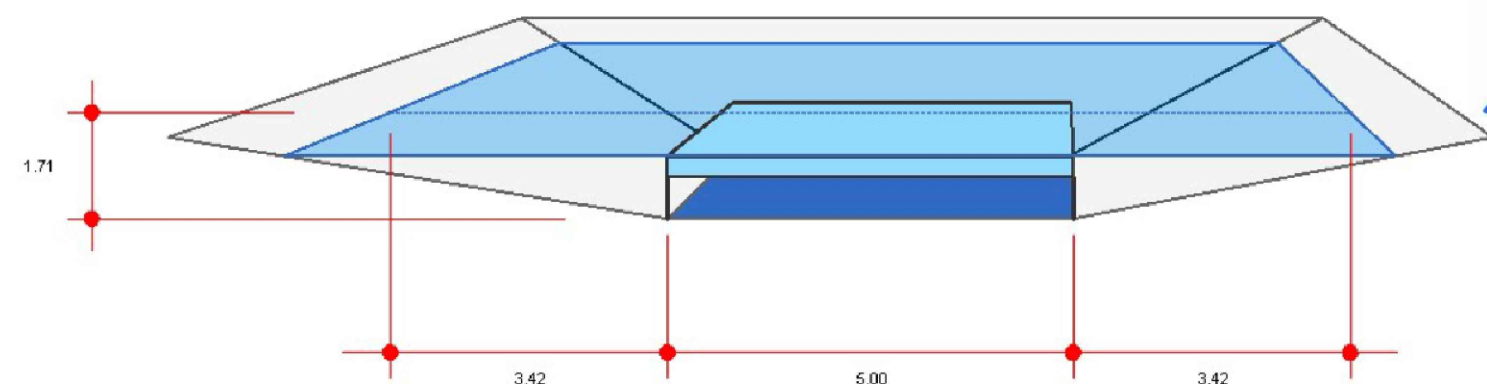
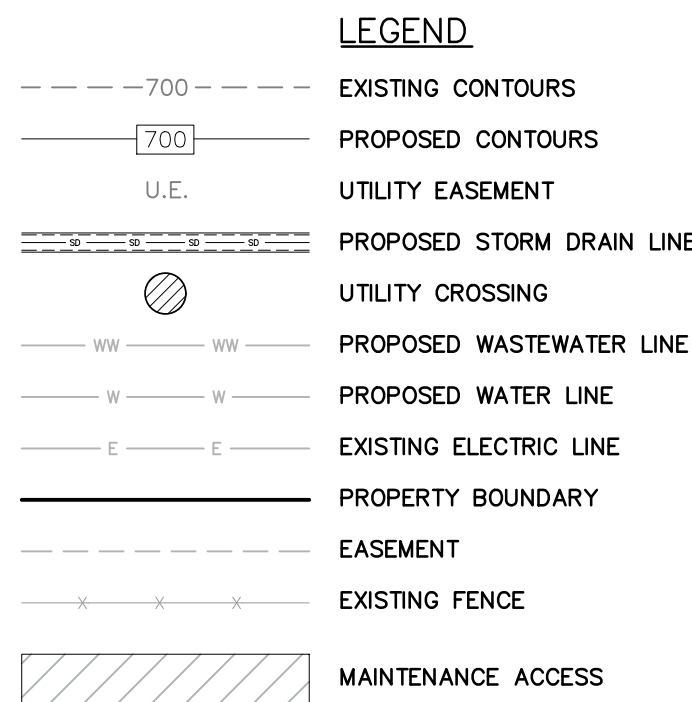
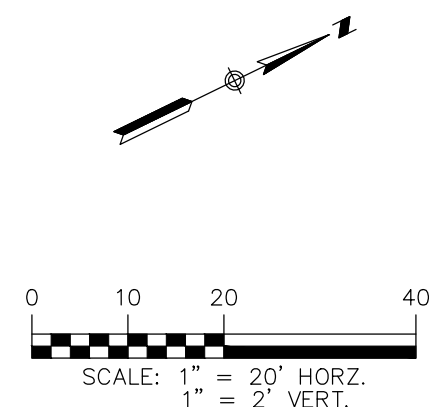
CONCRETE RIP-RAP DETAIL  
SCALE 1"=5'



CHANNEL B2 SECTION A-A  
N.T.S.



CHANNEL B2 SECTION B-B  
N.T.S.



5'x5' 4-WAY INLET (100-YR)  
N.T.S.

**Drop Curb Inlet**  
Location  
Curb Length (ft)  
Throat Height (in)  
Grate Area (sqft)  
Grate Width (ft)  
Grate Length (ft)

= Sag  
= 20.00  
= 8.00  
= -0-  
= -0-  
= -0-

**Calculations**  
Compute by:  
Q (cfs)

Known Q  
= 84.03

**Highlighted**  
Q Total (cfs)  
Q Capt (cfs)  
Q Bypass (cfs)  
Depth at Inlet (in)  
Efficiency (%)  
Gutter Spread (ft)  
Gutter Vel (ft/s)  
Bypass Spread (ft)  
Bypass Depth (in)

= 84.03  
= 84.03  
= -0-  
= 20.51  
= 100  
= 3.42  
= -0-  
= -0-  
= -0-

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TBPELS FIRM F-10961  
TBPELS FIRM 1053600

**HMT**  
ENGINEERING & SURVEYING



**CHANNEL B2 PLAN &  
PROFILE**

JARO NORTH UNIT 3

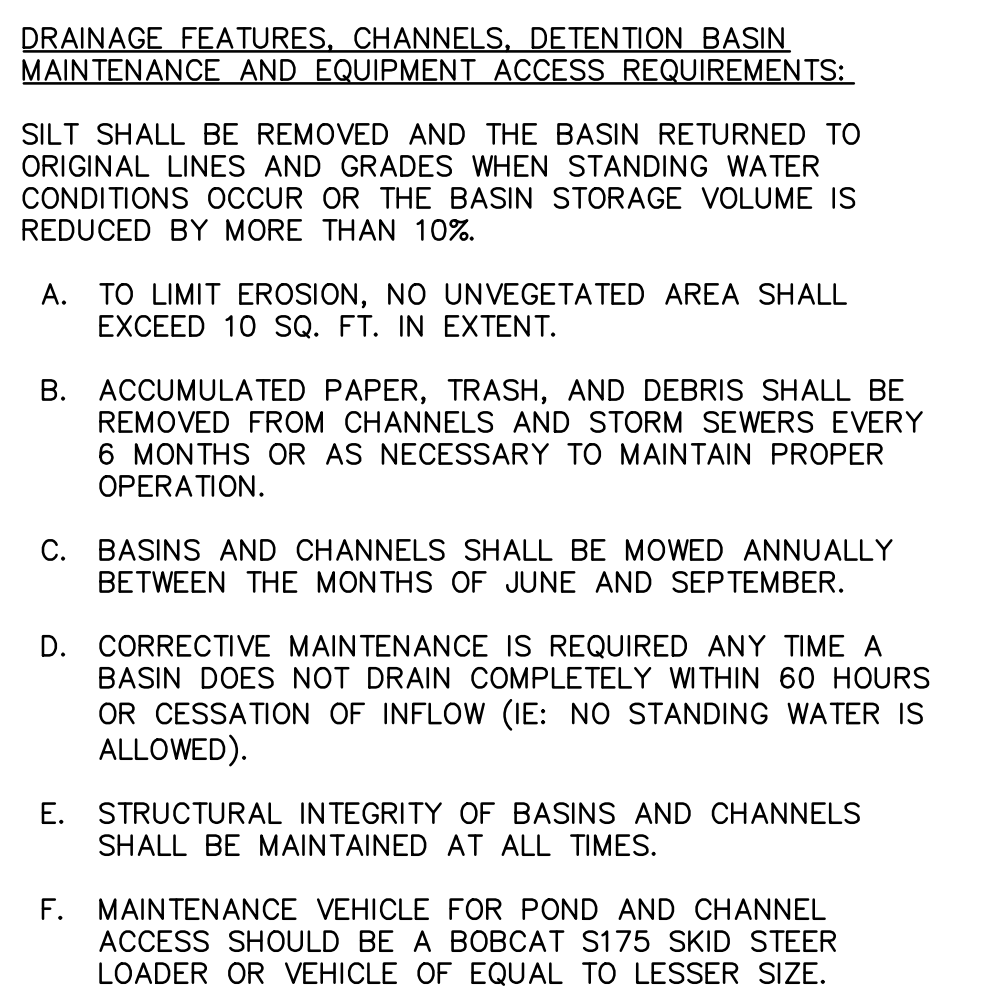
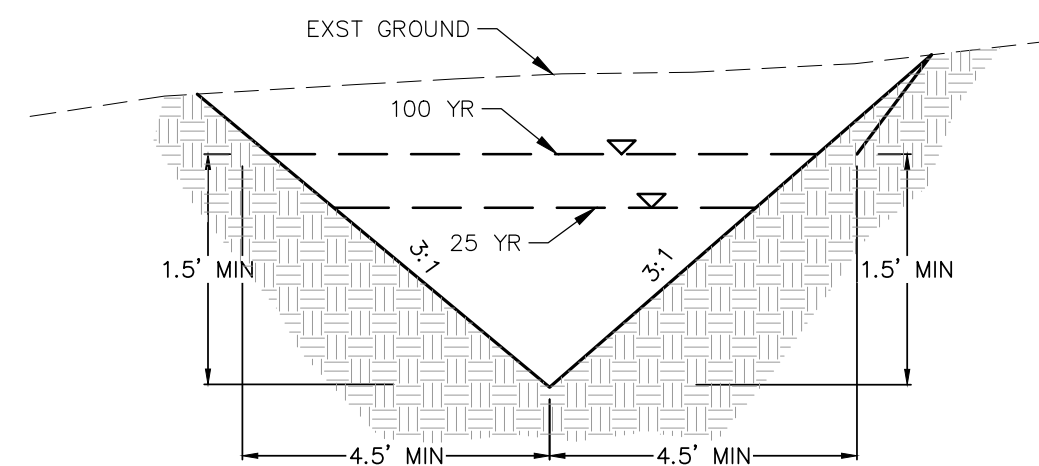
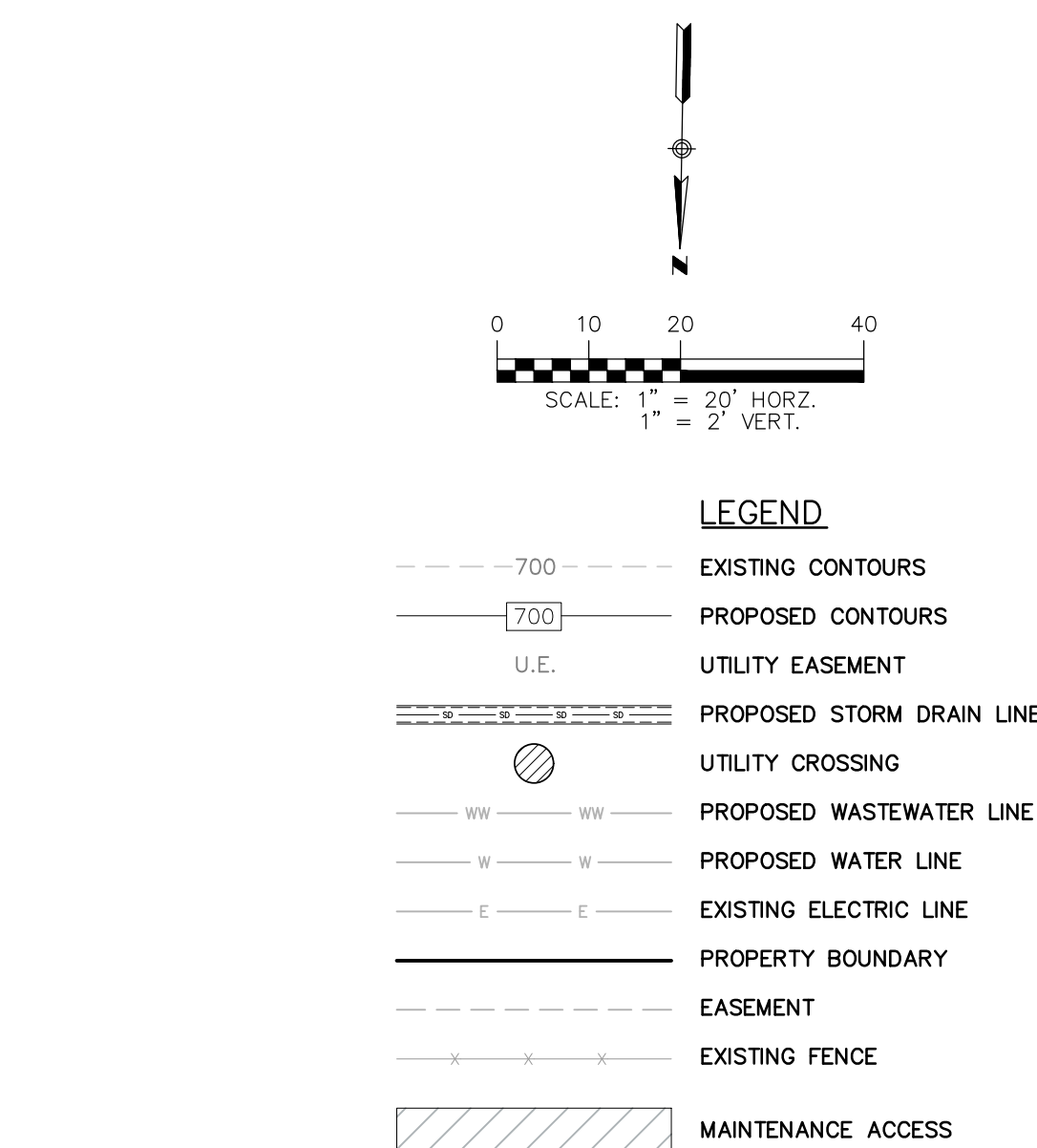
REVISION	DESCRIPTION	DATE
NO.		

DATE: **October 25**  
DRAWN BY: **RR**  
DESIGNED BY: **JK**  
REVIEWED BY: **ZJ**

HMT PROJECT NO.:  
**337.102**

**SHEET**  
**C5.7**

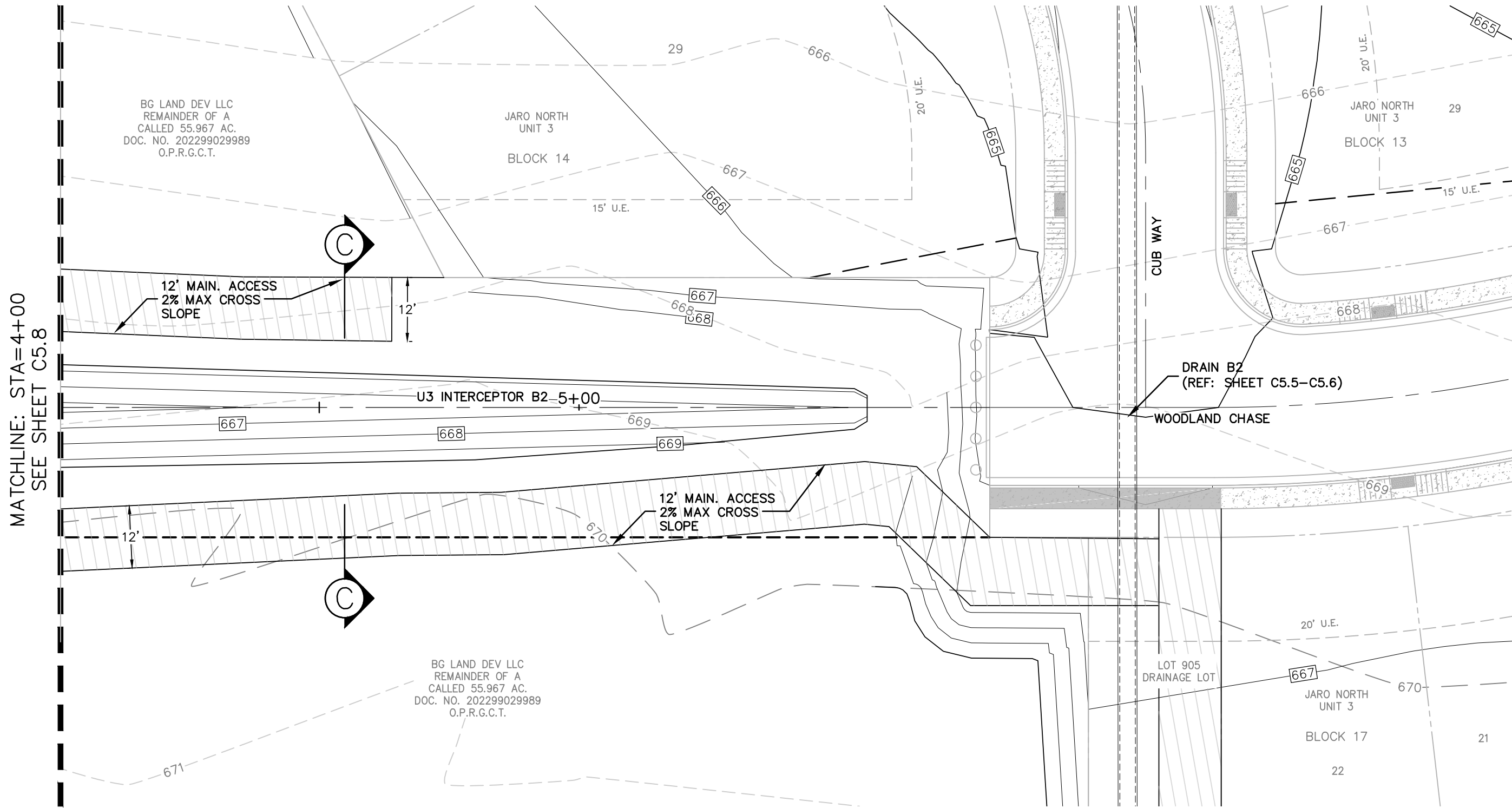




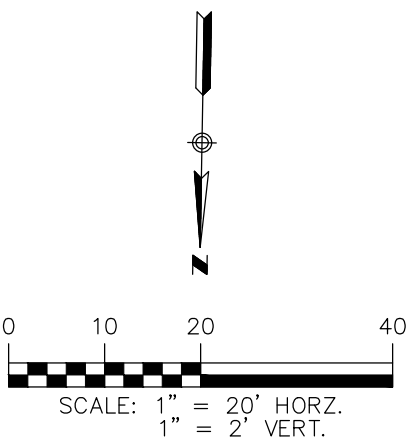
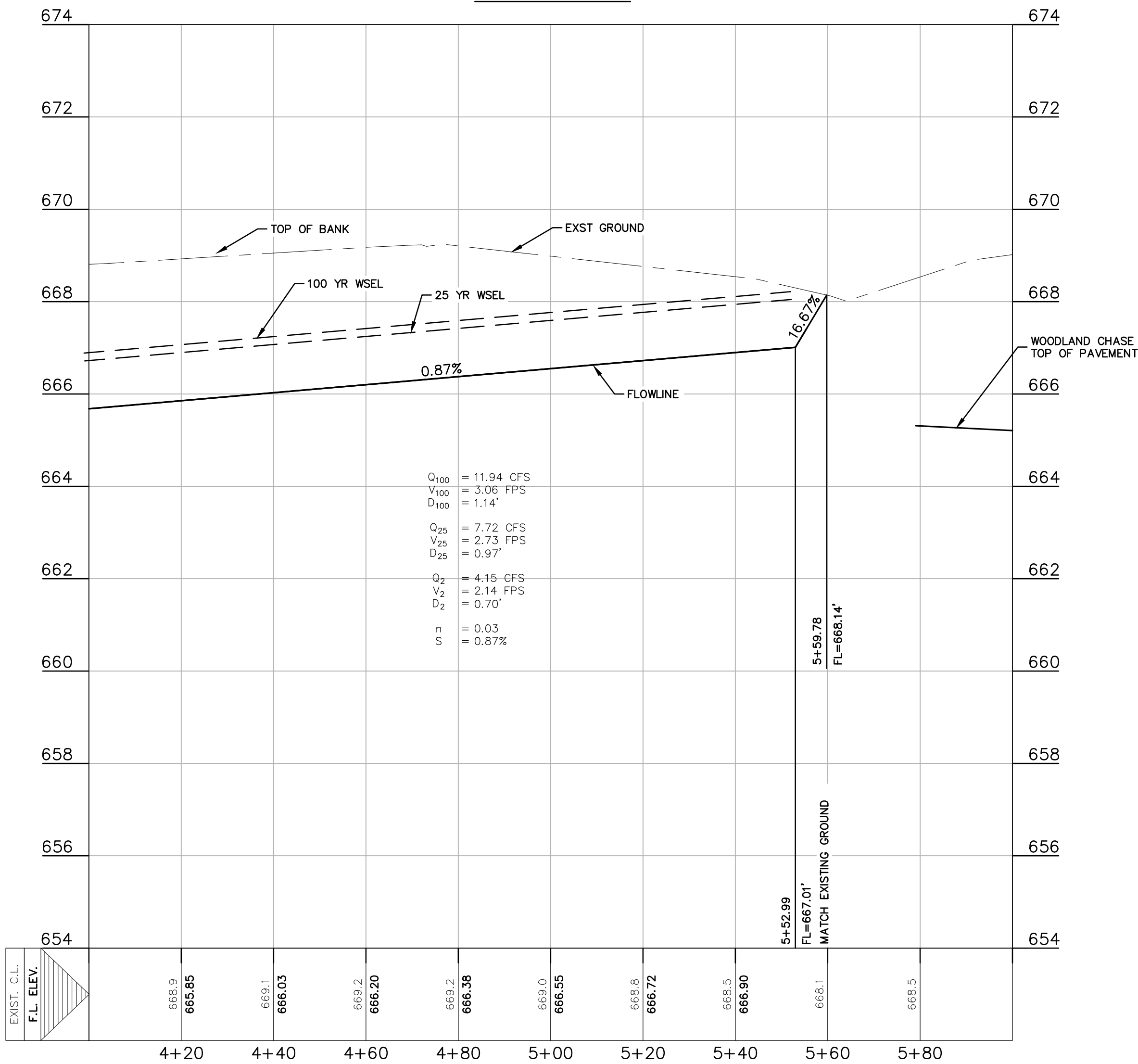
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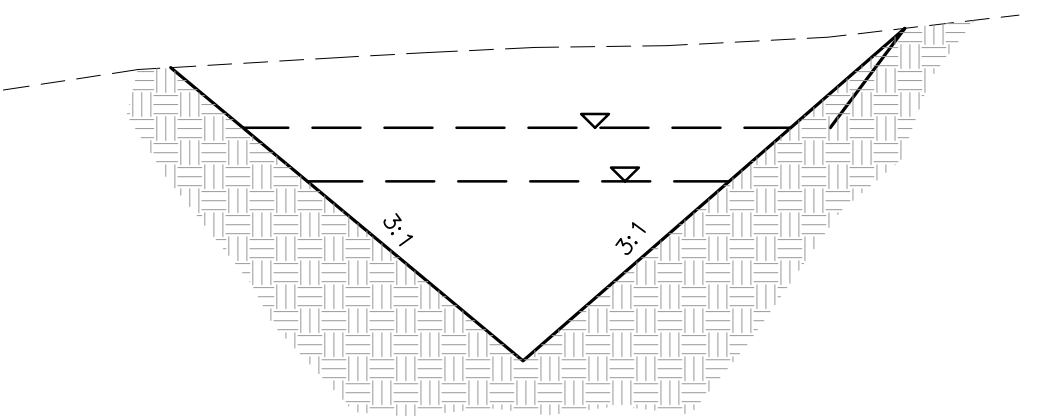




U3 INTERCEPTOR B2  
4+00 - 6+00



- LEGEND**
- 700 --- EXISTING CONTOURS
  - [ 700 ] PROPOSED CONTOURS
  - U.E. UTILITY EASEMENT
  - PROPOSED STORM DRAIN LINE
  - UTILITY CROSSING
  - PROPOSED WASTEWATER LINE
  - PROPOSED WATER LINE
  - EXISTING ELECTRIC LINE
  - PROPERTY BOUNDARY
  - EASEMENT
  - EXISTING FENCE
  - [ ] MAINTENANCE ACCESS



① U3 INTERCEPTOR B2 SECTION C-C  
N.T.S.

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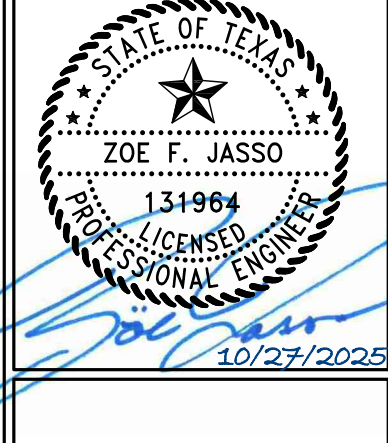
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TBPELS FIRM F-10961  
TBPELS FIRM 1053600



**INTERCEPTOR DRAIN B2  
PLAN & PROFILE (2 OF 2)**

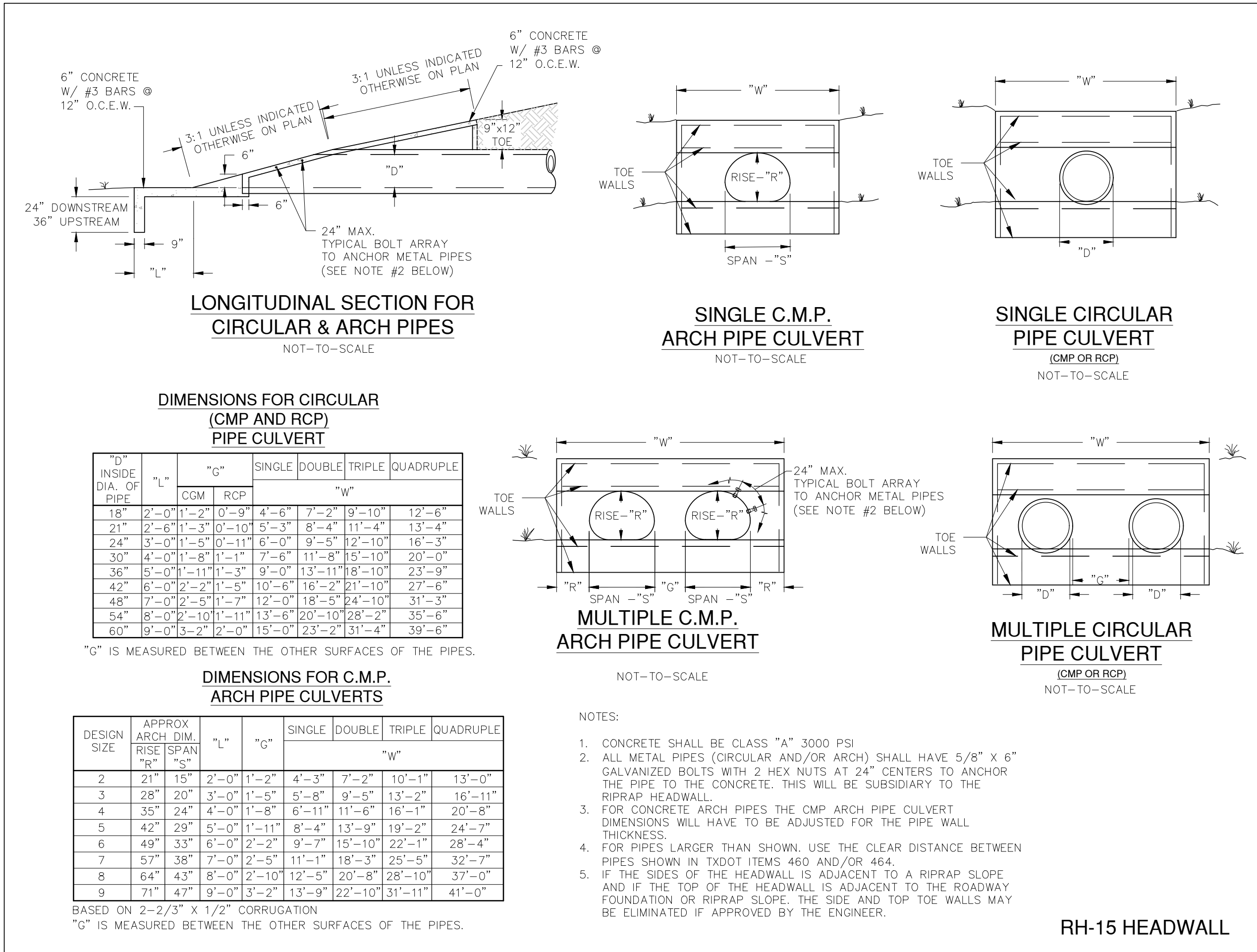
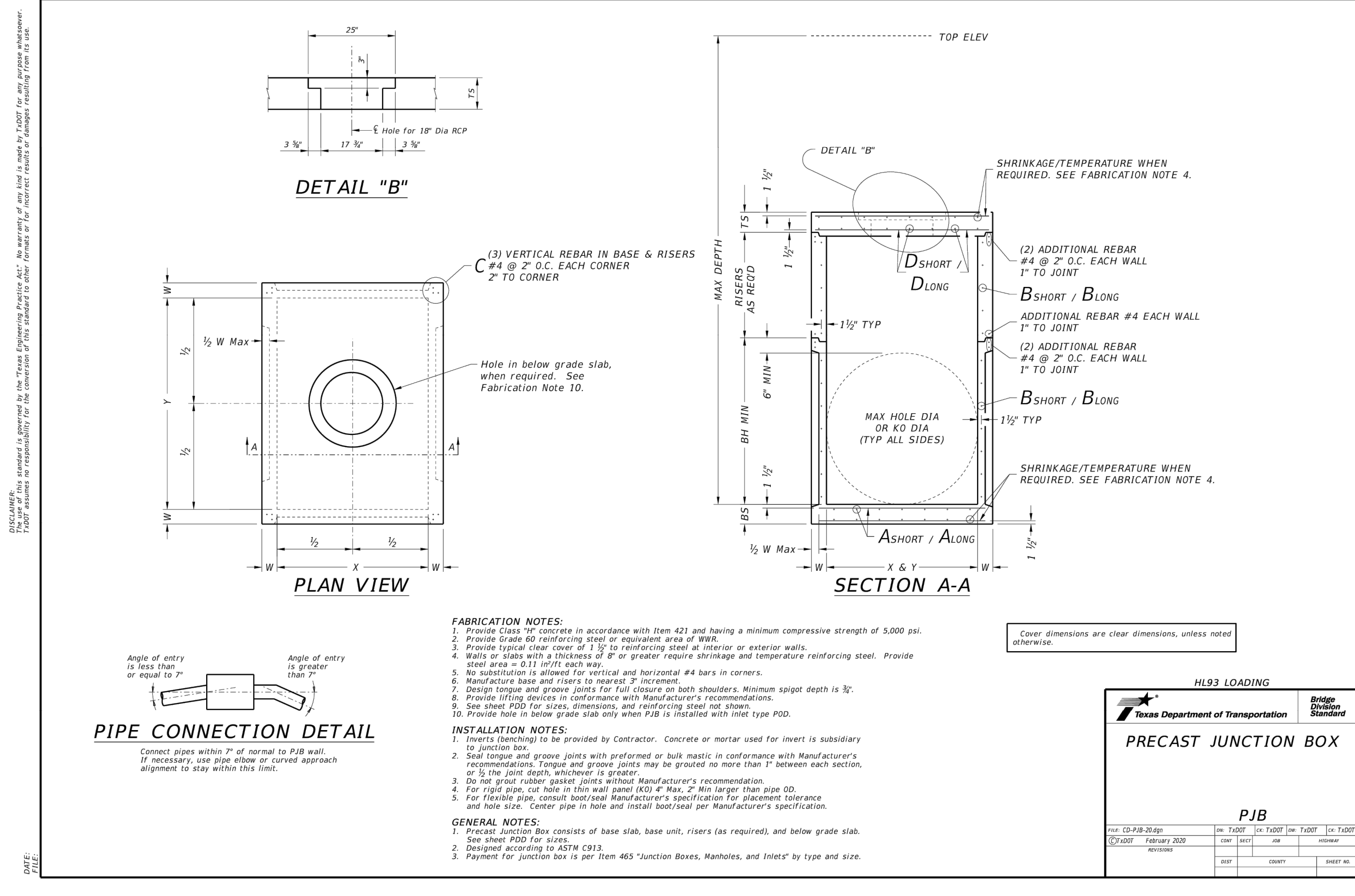
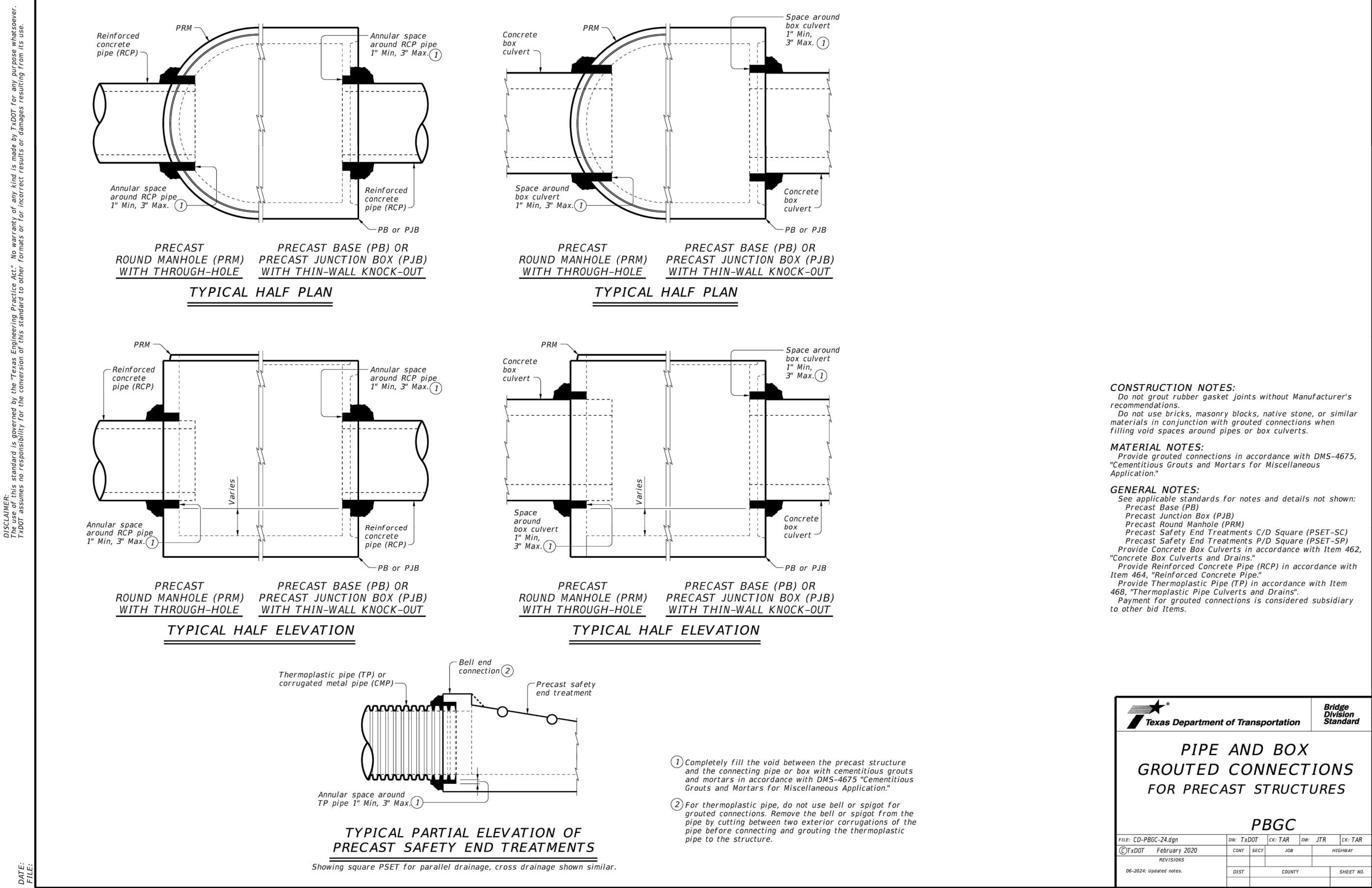
JARO NORTH UNIT 3

NO.	REVISION	DESCRIPTION	REVISION DATE

DATE:	October 25
DRAWN BY:	RR
DESIGNED BY:	JK
REVIEWED BY:	ZJ
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**SHEET**  
**C5.9**





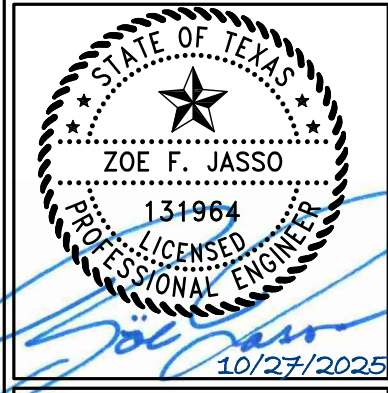
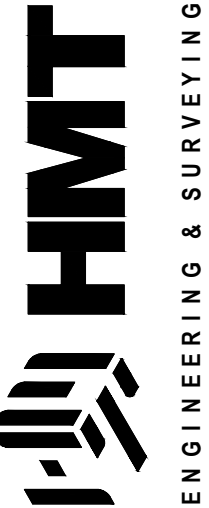
STORM DETAILS

NO.	REVISION	DESCRIPTION	DATE

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DESIGNED BY:	JK
REVIEWED BY:	ZJ
HMT PROJECT NO.:	337.102

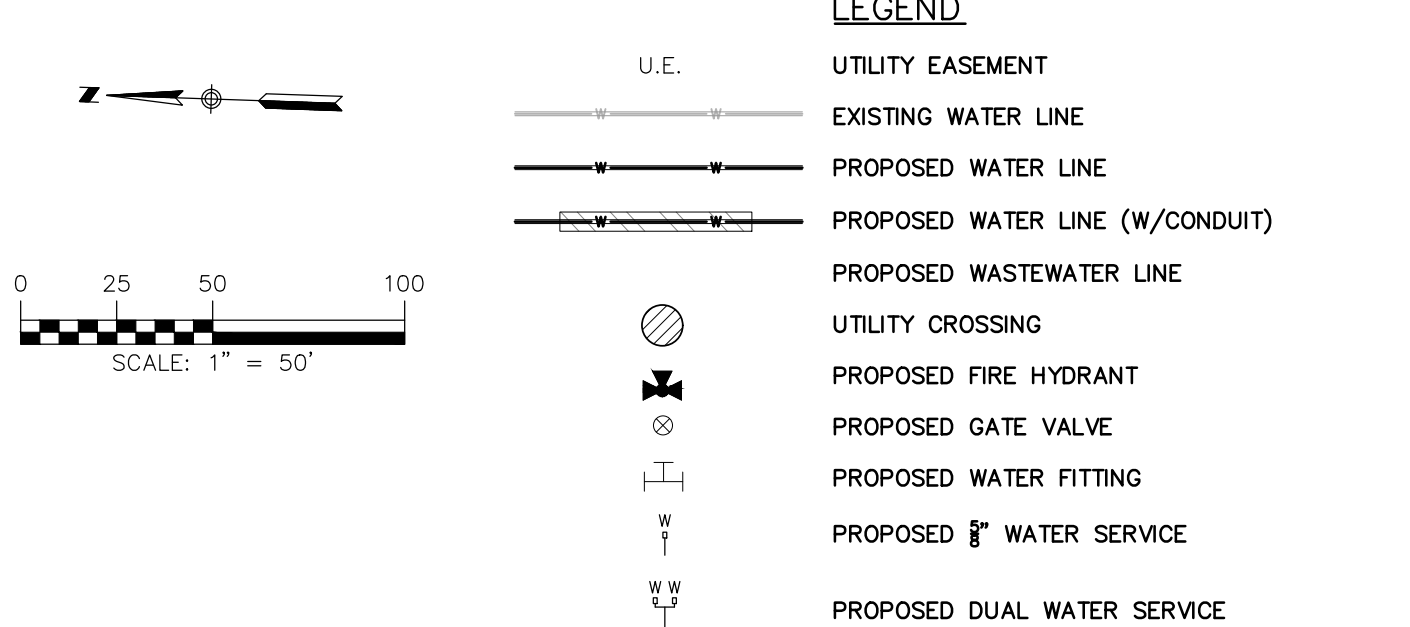
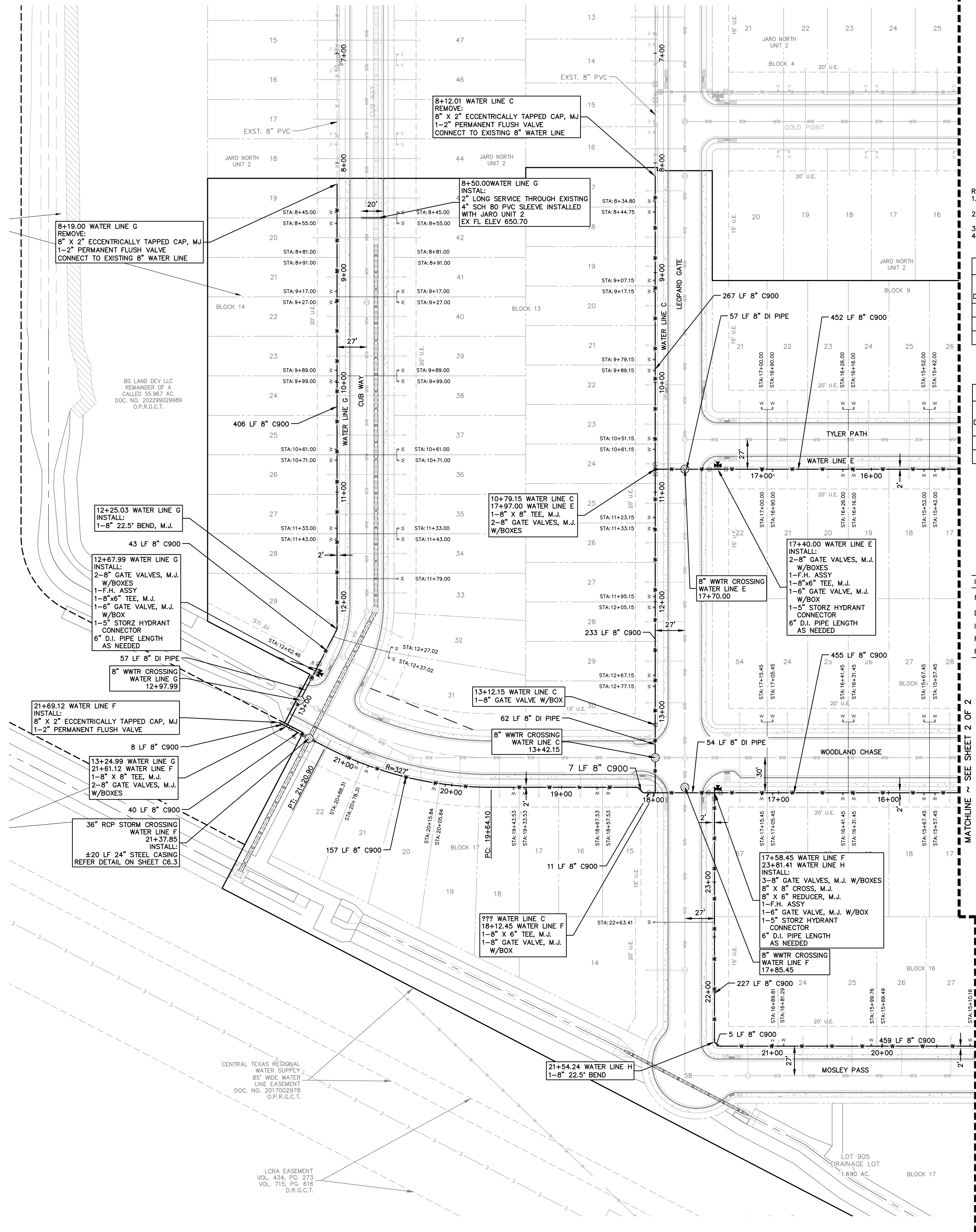
**SHEET**  
**C5.10**

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TBPELS FIRM 1053600



JARO NORTH UNIT 3





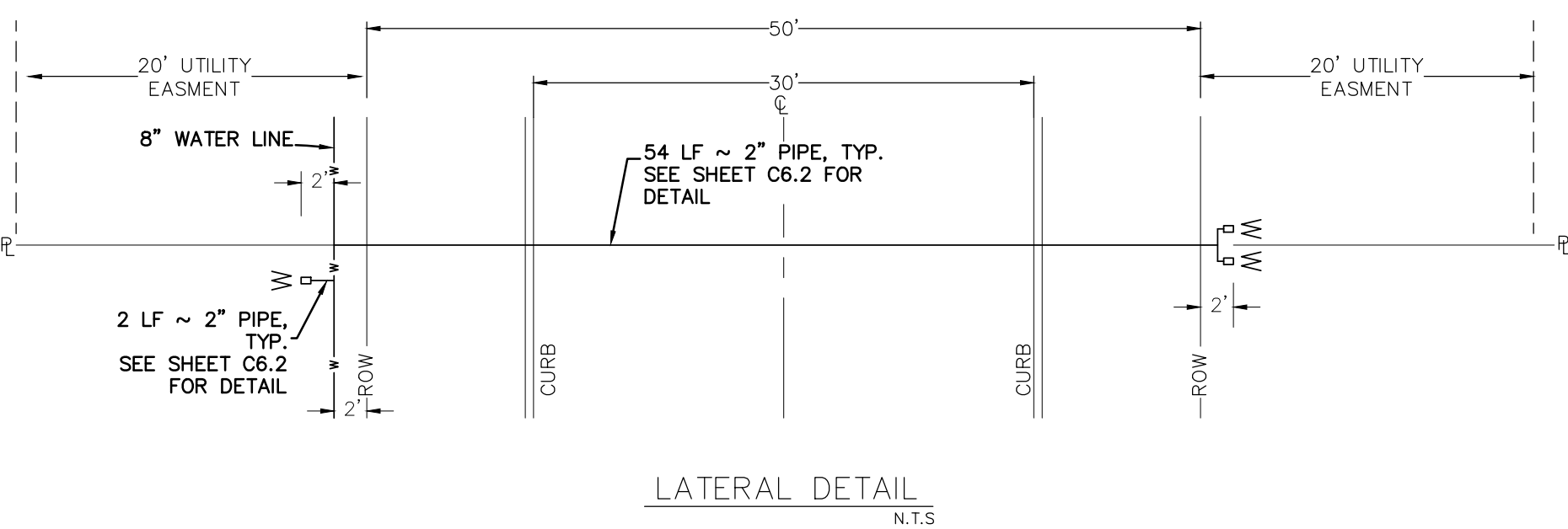
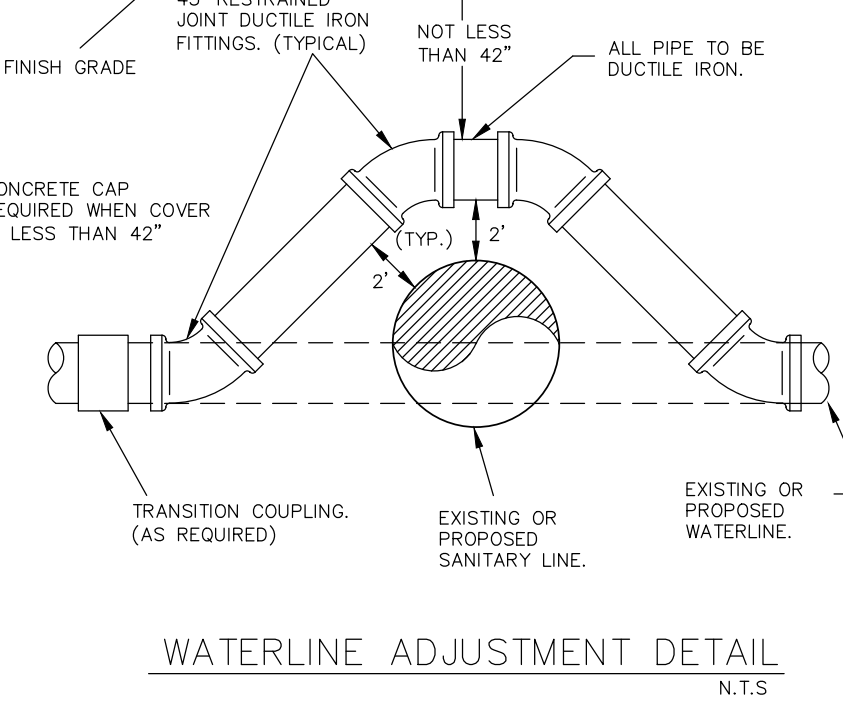
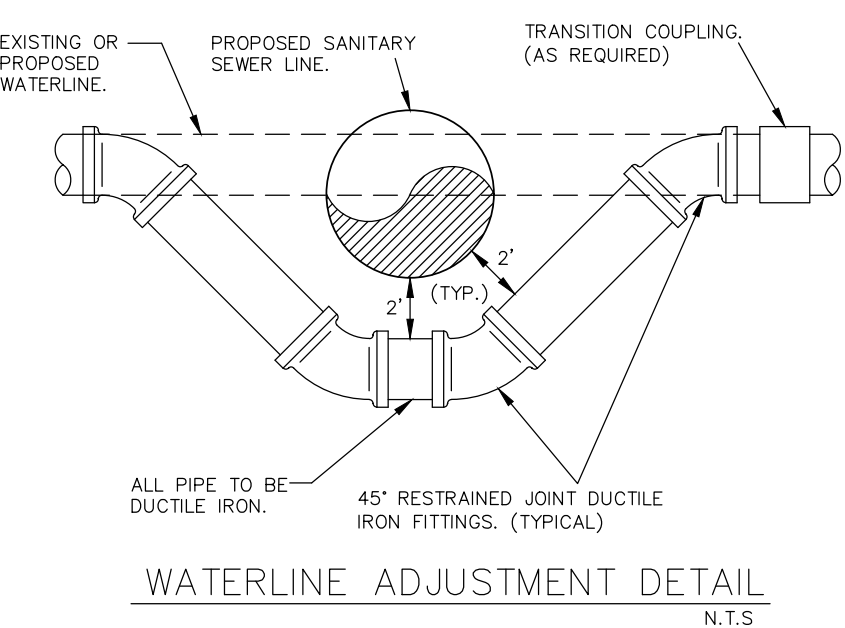
**RESTRAINED LENGTH NOTES:**  
1. CONTRACTOR TO COORDINATE WITH CRYSTAL CLEAR SPECIAL UTILITIES DISTRICT (C.C.S.U.D.) FOR WATER AND SEWER SERVICE TO THE SITE.  
2. ALL IN-LINE VALVES, BENDS & PLUGS SHALL BE RESTRAINED, RESTRAINT TO BE PROVIDED ON EACH SIDE OF THE VALVE, FITTING OR ANY REQUIRED JOINT.  
3. RL=RESTRAINT LENGTH  
4. CONTRACTOR SHALL DETERMINE RESTRAINT LENGTH REQUIRED FOR HORIZONTAL VERTICAL FITTINGS BASED ON RESTRAINT LENGTH TABLE SHOWN BELOW.

RESTRAINED LENGTH FOR PIPE												
PIPE INSIDE DIAMETER	MATERIAL	HORIZONTAL BENDS				VERTICAL BENDS					DEAD END/ INCLINE VALVES	
						UPPER			LOWER			
		90°	45°	22.5°	11.25°	45°	22.5°	11.25°	45°	22.5°		11.25°
8"	PVC	32	14	7	4	37	18	9	10	5	3	88
8"	DUCTILE IRON	27	11	6	3	24	12	6	8	4	2	57

TEE			
PIPE INSIDE DIAMETER OF RUN	PIPE INSIDE DIAMETER OF BRANCH	MATERIAL	FT.
8"	8"	PVC	77
8"	8"	DUCTILE IRON	50

**NOTES:**  
LENGTHS SHOWN ABOVE WERE COMPUTED BASED ON THE FOLLOWING VALUES:  
1) SAFETY FACTOR = 1.5 TO 1  
2) TEST PRESSURE = 200psi.  
3) SOIL DESIGNATION = INORGANIC CLAY OF HIGH PLASTICITY (CH, GRAN, FLL)  
4) DEPTH OF COVER = 4 FEET (TYPICAL AND UPPER BEND)  
5) DEPTH OF COVER = 5 FEET (LOWER BEND)  
6) LENGTH ALONG RUN = 2 FEET

CCSUD PIPES AND STRUCTURES TOTAL		
ITEM	QTY	UNIT
8" PIPE	4304	LF
DOMESTIC METER 8"	159	EA
IRRIGATION METER	0	EA
FIRE HYDRANTS	6	EA
FIRE LINE	0	LF



**TRENCH EXCAVATION SAFETY PROTECTION**  
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATIONS.

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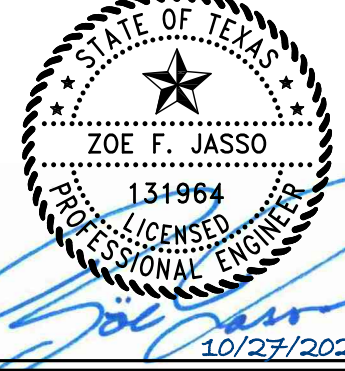
**UTILITY NOTES**

- ALL UTILITIES TO BE CONSTRUCTED PRIOR TO THE STREETS.
- NO VALVES, HYDRANTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS OR DRIVEWAYS.
- CONTRACTOR TO VERIFY EXISTING LATERAL HAS A MINIMUM LONGITUDINAL SLOPE OF 2%.
- FIRE HYDRANTS ARE TO BE INSTALLED OUTSIDE OF THE SIDEWALK AND NO GREATER THAN 9 FEET FROM THE BACK OF CURB.
- LOCATION AND DEPTH OF EXISTING UTILITIES SHOWN HERE ARE APPROXIMATE ONLY. ACTUAL LOCATIONS AND DEPTHS MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF ALL EXISTING UTILITIES ENCOUNTERED DURING CONSTRUCTION, INCLUDING THOSE NOT SHOWN ON THE DRAWINGS.
- ANY EXISTING UTILITIES, ON OR OFF THE SITE, THAT ARE DAMAGED OR UNDERCUT BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED AS DIRECTED BY THE ENGINEER AND APPROVED BY THE RESPECTIVE UTILITY COMPANY AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR SHALL NOTIFY APPROPRIATE UTILITY COMPANIES AND GOVERNMENTAL AGENCIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION AT:  
  
CRYSTAL CLEAR SUD (WATER) (830) 372-1031  
CITY OF SEGUIN (SEWER) (830) 401-2222  
GUADALUPE VALLEY ELECTRIC COMPANY (ELECTRIC) (830) 857-1200  
TIME WARNER CABLE SPECTRUM (830) 625-3408  
AT&T (830) 303-1333  
TEXAS ONE CALL SYSTEM (800) 245-4545
- DUE TO FEDERAL REGULATIONS TITLE 49, PART 192(8), GAS COMPANIES MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT THE WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.

**UTILITY TRENCH COMPACTION**  
ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET PAVEMENT/SIDEWALK SECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEOTECHNICAL ENGINEER. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE INCHES (12") LOOSE. DETERMINE THE MAXIMUM LIFT THICKNESS BASED ON THE ABILITY OF THE COMPACTING OPERATION AND EQUIPMENT USED TO MEET THE REQUIRED DENSITY. EACH LAYER OF MATERIAL SHALL BE COMPACTED TO A MINIMUM 95% DENSITY AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEST METHODS TEX-113-E, TEX-114-E, TEX-115-E. THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINED BY THE GEOTECHNICAL ENGINEER AND APPROVED BY THE CITY OF NEW BRAUNFELS STREET INSPECTOR. AT A MINIMUM, TESTS SHALL BE TAKEN EVERY 200 LF FOR EACH LIFT AND EVERY OTHER SERVICE LINE. UPON COMPLETION OF TESTING THE GEOTECHNICAL ENGINEER SHALL PROVIDE THE CITY OF NEW BRAUNFELS STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FILL MATERIAL HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS. ADDITIONAL DENSITY TESTS MAY BE REQUESTED BY THE CITY OF NEW BRAUNFELS INSPECTOR.

**UTILITY TRENCH COMPACTION (DEEP)**  
THIS PROJECT INCLUDES UTILITY INSTALLATIONS GREATER THAN 5- FEET IN DEPTH LOCATED IN PUBLIC RIGHT-OF-WAY OR EASEMENTS. DEEP TRENCHES POSE COMPACTION TESTING AND CONSTRUCTION CHALLENGES AND CITY METHODS FOR TESTING AND COMPACTION MAY NOT BE ACHIEVABLE. A UTILITY COMPACTION PLAN WILL BE REQUIRED AND MUST BE SUBMITTED FOR APPROVAL TO CITY PRIOR TO UTILITY INSTALLATION.

290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPBLS FIRM F-10961  
TBPBLS FIRM 1053600



OVERALL WATER  
(1 OF 2)

JARO NORTH UNIT 3

REVISION DATE	
NO.	REVISION DESCRIPTION

DATE: October 25

DRAWN BY: RR

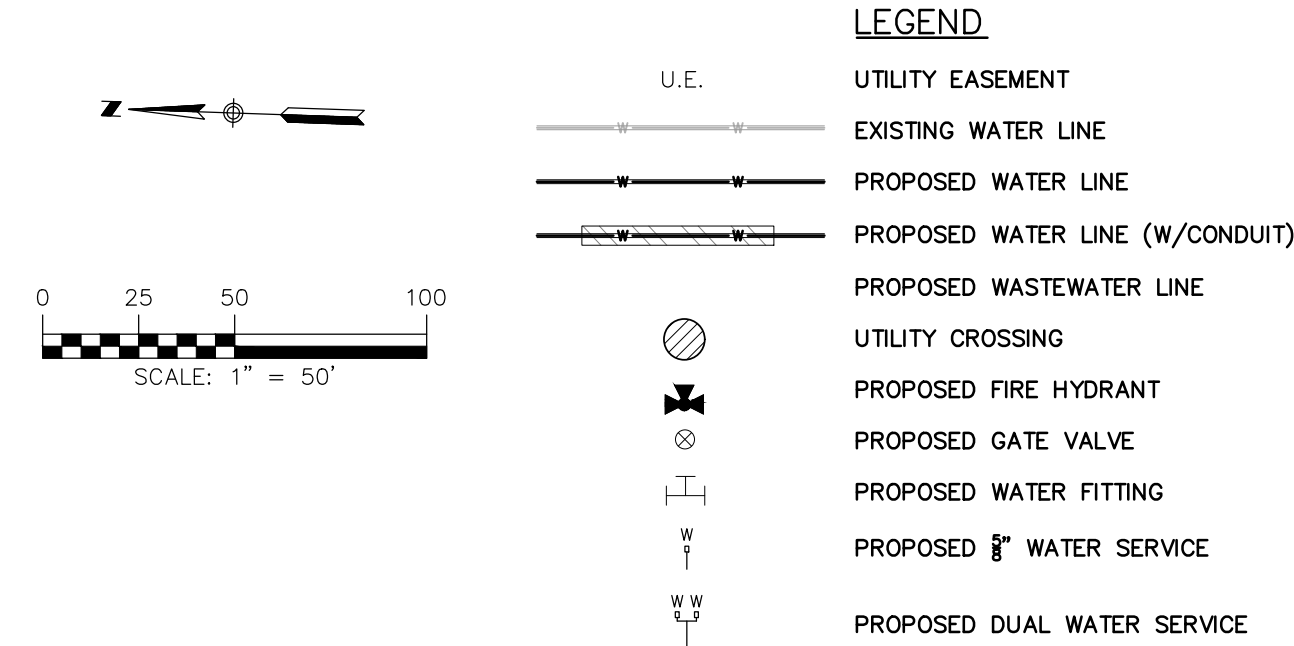
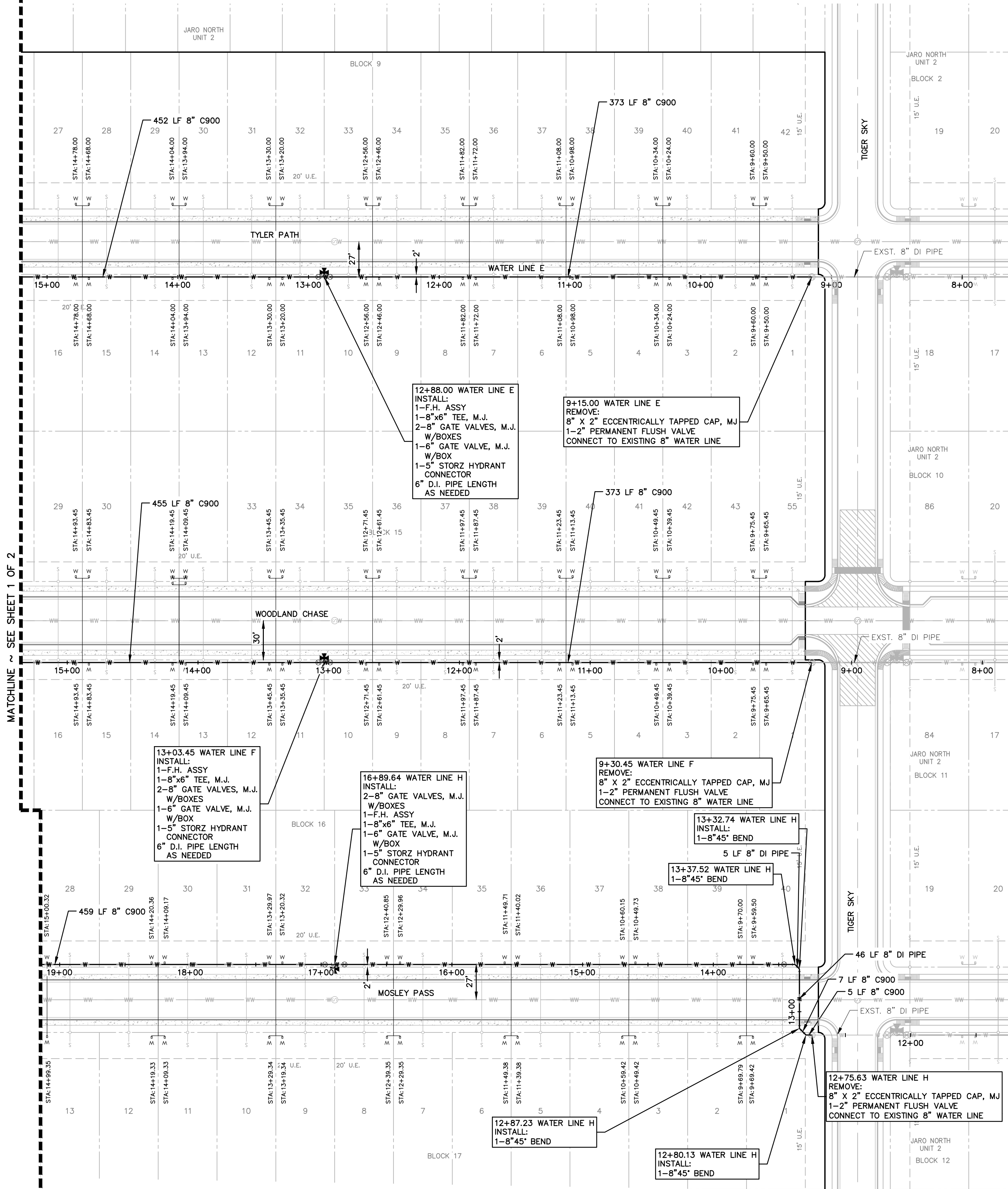
DESIGNED BY: JK

REVIEWED BY: ZJ

HMT PROJECT NO.: 337.102

**SHEET**  
**C6.0**





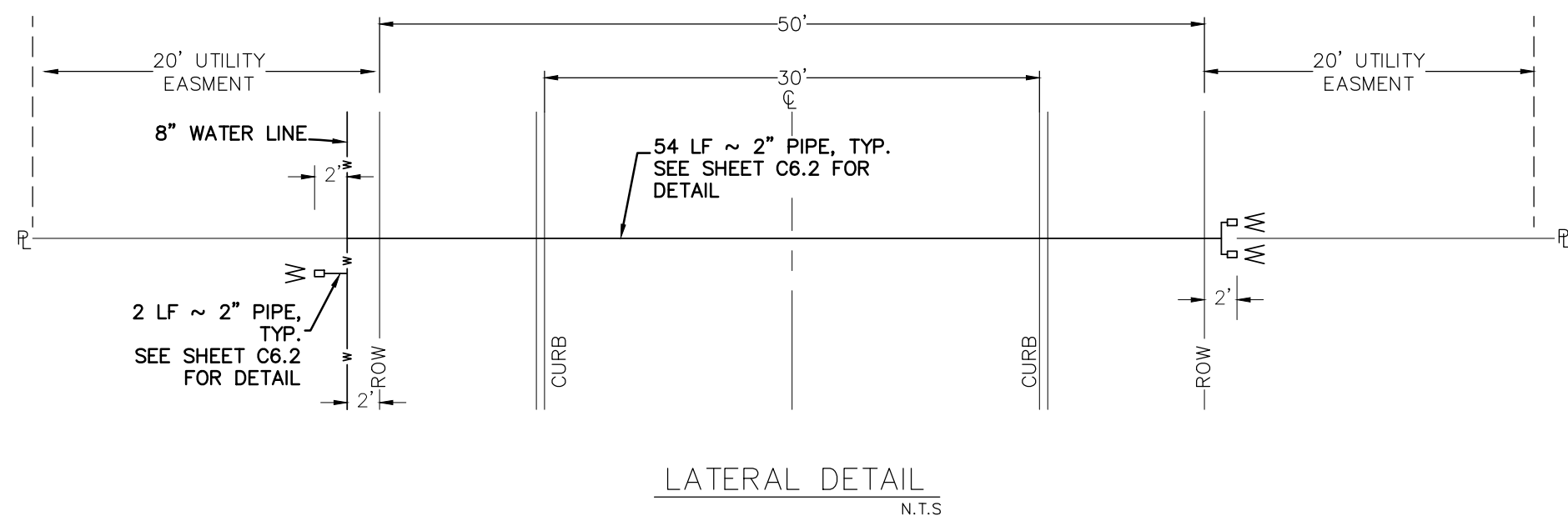
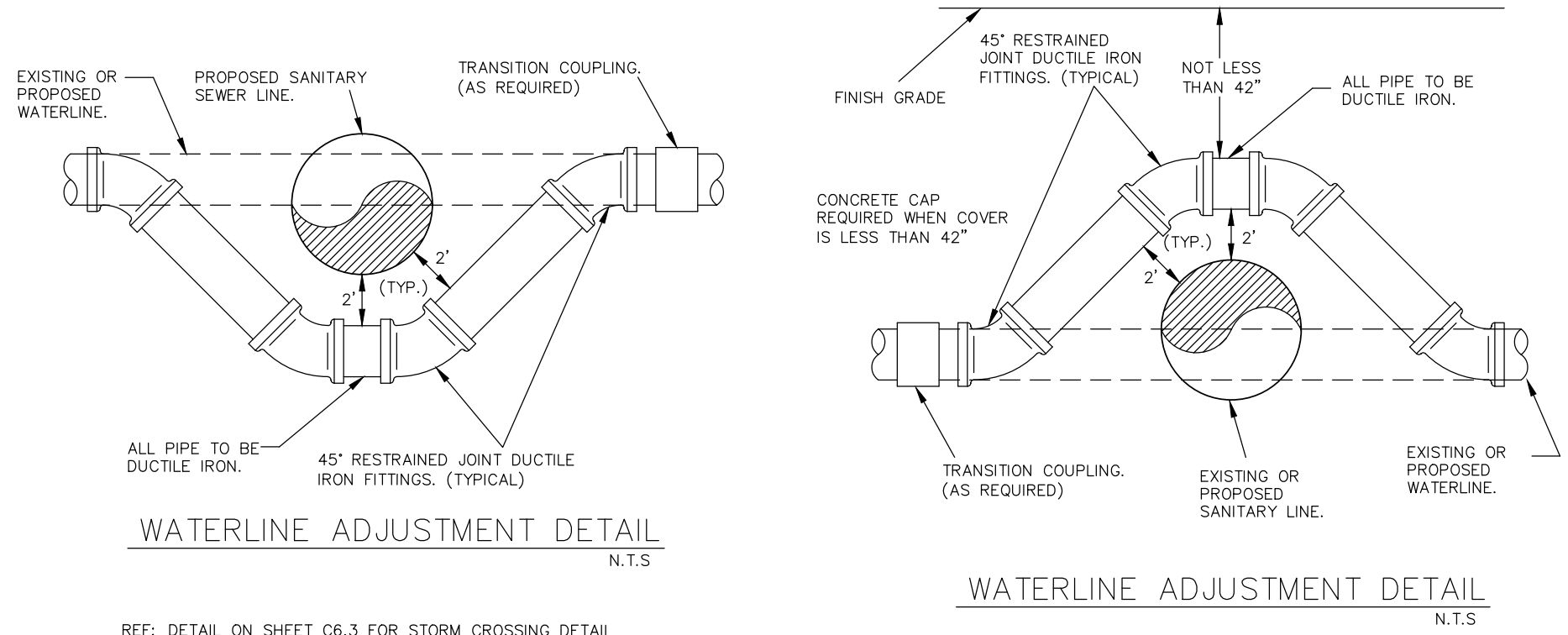
- RESTRAINED LENGTH NOTES:**
- CONTRACTOR TO COORDINATE WITH CRYSTAL CLEAR SPECIAL UTILITIES DISTRICT (C.C.S.U.D.) FOR WATER AND SEWER SERVICE TO THE SITE.
  - ALL IN-LINE VALVES, BENDS & PLUGS SHALL BE RESTRAINED, RESTRAINT TO BE PROVIDED ON EACH SIDE OF THE VALVE, FITTING OR ANY REQUIRED JOINT.
  - RL=RESTRAINT LENGTH
  - CONTRACTOR SHALL DETERMINE RESTRAINT LENGTH REQUIRED FOR HORIZONTAL VERTICAL FITTINGS BASED ON RESTRAINT LENGTH TABLE SHOWN BELOW.

RESTRAINED LENGTH FOR PIPE												
PIPE INSIDE DIAMETER	MATERIAL	HORIZONTAL BENDS				VERTICAL BENDS					DEAD END/ INCLINE VALVES	
						UPPER		LOWER				
		90°	45°	22.5°	11.25°	45°	22.5°	11.25°	45°	22.5°		11.25°
8"	PVC	32	14	7	4	37	18	9	10	5	3	88
	DUCTILE IRON	27	11	6	3	24	12	6	8	4	2	57

TEE			
PIPE INSIDE DIAMETER OF RUN	PIPE INSIDE DIAMETER OF BRANCH	MATERIAL	FT.
8"	8"	PVC	77
8"	8"	DUCTILE IRON	50

- NOTES:**
- LENGTHS SHOWN ABOVE WERE COMPUTED BASED ON THE FOLLOWING VALUES:
- SAFETY FACTOR = 1.5 TO 1
  - TEST PRESSURE = 200psi.
  - SOIL DESIGNATION = INORGANIC CLAY OF HIGH PLASTICITY (CH, GRAN. FILL)
  - DEPTH OF COVER = 4 FEET (TYPICAL AND UPPER BEND)
  - DEPTH OF COVER = 5 FEET (LOWER BEND)
  - LENGTH ALONG RUN = 2 FEET

CCSUD PIPES AND STRUCTURES TOTAL		
ITEM	QTY	UNIT
8" PIPE	4304	LF
DOMESTIC METER 8"	159	EA
IRRIGATION METER	0	EA
FIRE HYDRANTS	6	EA
FIRE LINE	0	LF



**TRENCH EXCAVATION SAFETY PROTECTION**

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATIONS.

REFER TO THE COVER SHEET FOR BENCHMARK INFORMATION.

THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR WILL AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE INCURRED BY THEIR FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES, STRUCTURES OR FACILITIES. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES 24-HOURS PRIOR TO COMMENCING CONSTRUCTION.

**UTILITY NOTES**

- ALL UTILITIES TO BE CONSTRUCTED PRIOR TO THE STREETS.
- NO VALVES, HYDRANTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS OR DRIVEWAYS.
- CONTRACTOR TO VERIFY EXISTING LATERAL HAS A MINIMUM LONGITUDINAL SLOPE OF 2%.
- FIRE HYDRANTS ARE TO BE INSTALLED OUTSIDE OF THE SIDEWALK AND NO GREATER THAN 9 FEET FROM THE BACK OF CURB.
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CRYSTAL CLEAR SUD (WATER)	(830) 372-1031
CITY OF SEGUIN (SEWER)	(830) 401-2222
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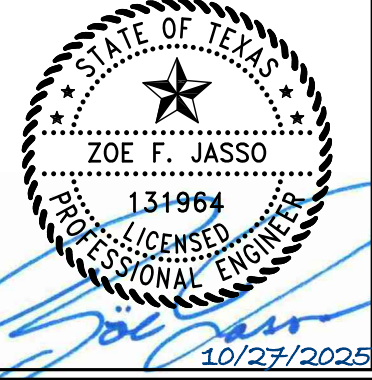
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290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPELS FIRM F-10961  
TBPELS FIRM 1053600



OVERALL WATER  
(2 OF 2)

JARO NORTH UNIT 3

REVISION DATE	NO.	DESCRIPTION

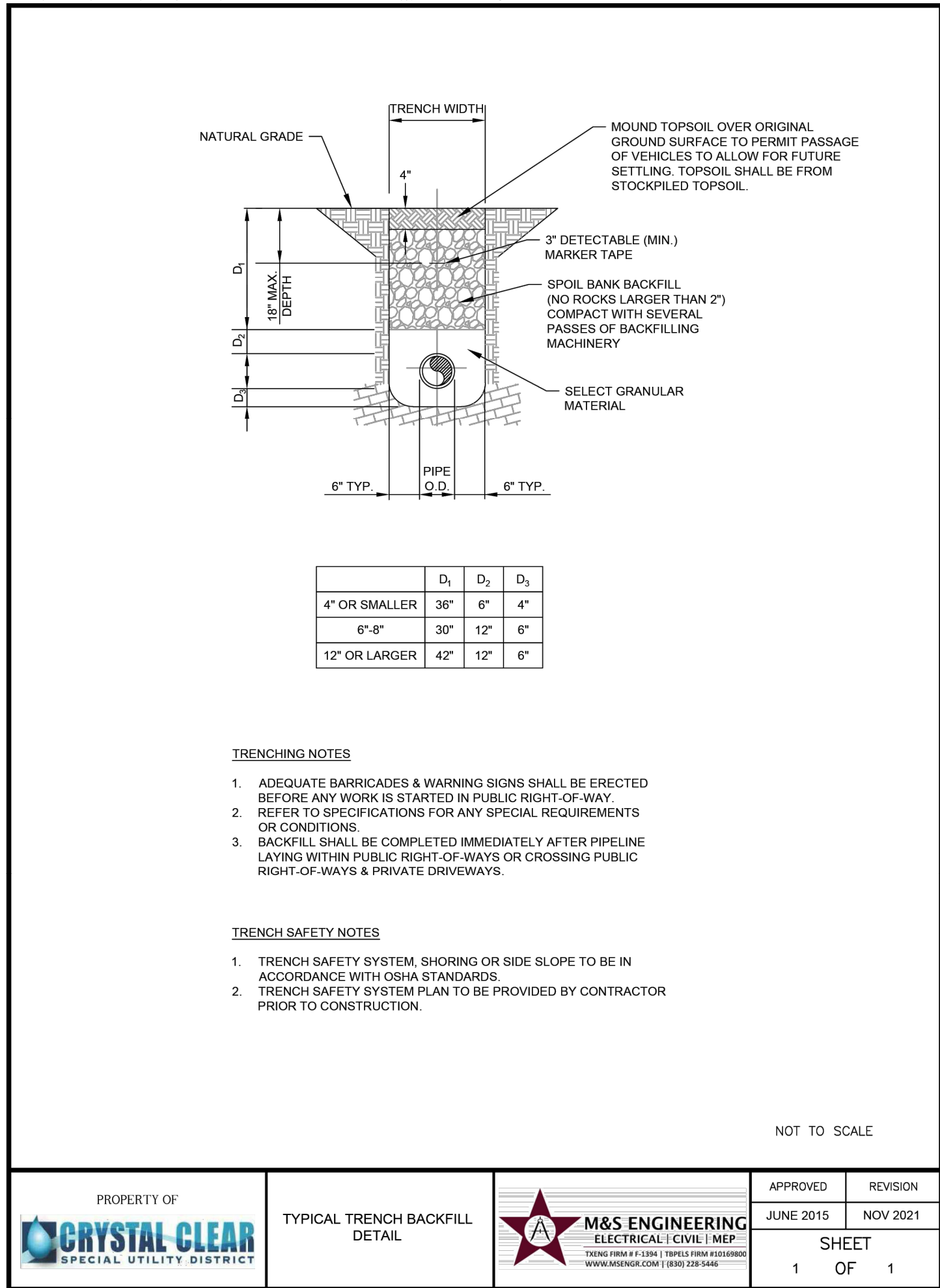
DATE: October 25  
DRAWN BY: RR  
DESIGNED BY: JK  
REVIEWED BY: ZJ  
HMT PROJECT NO.: 337.102

**SHEET**  
**C6.1**

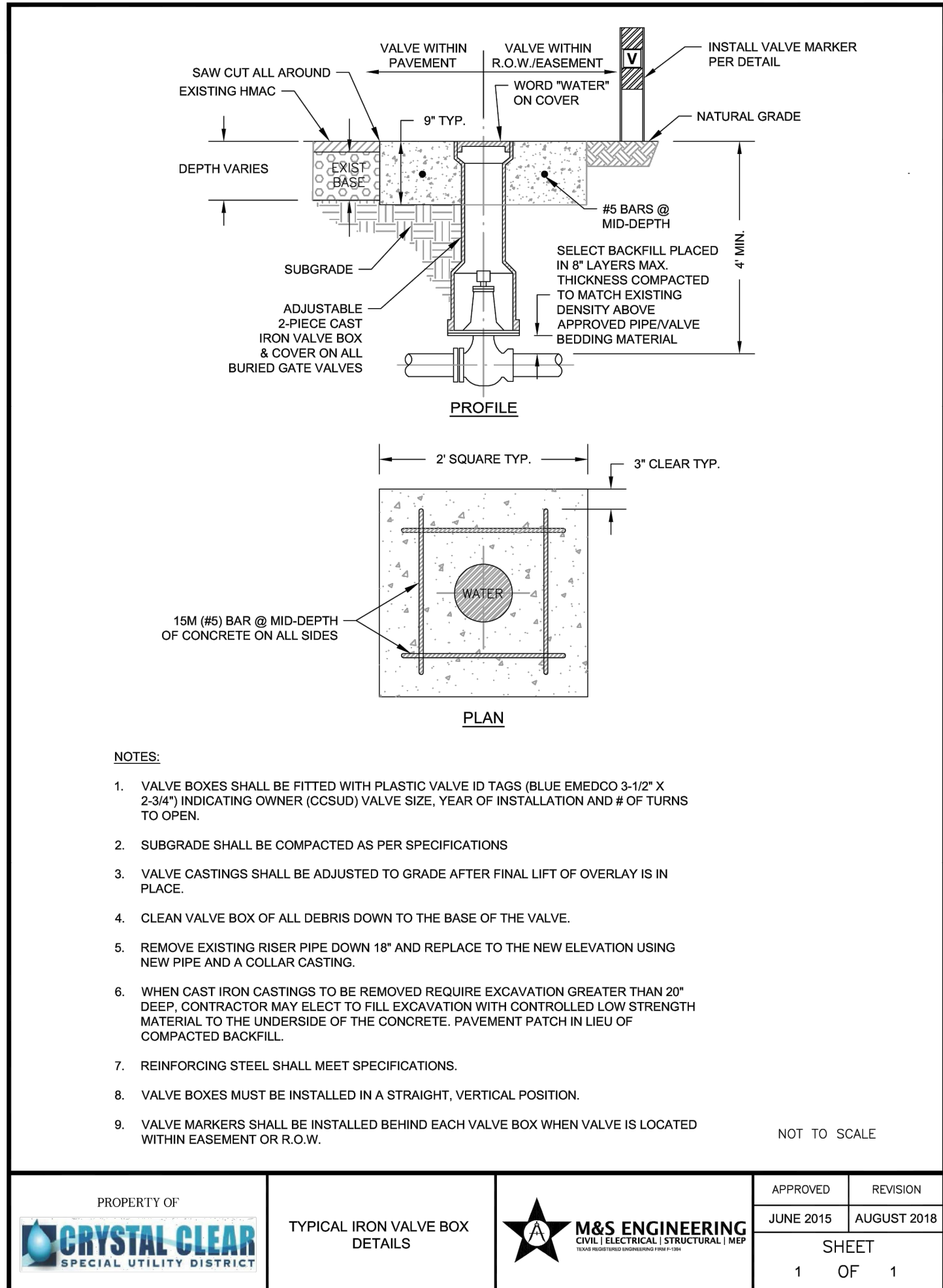


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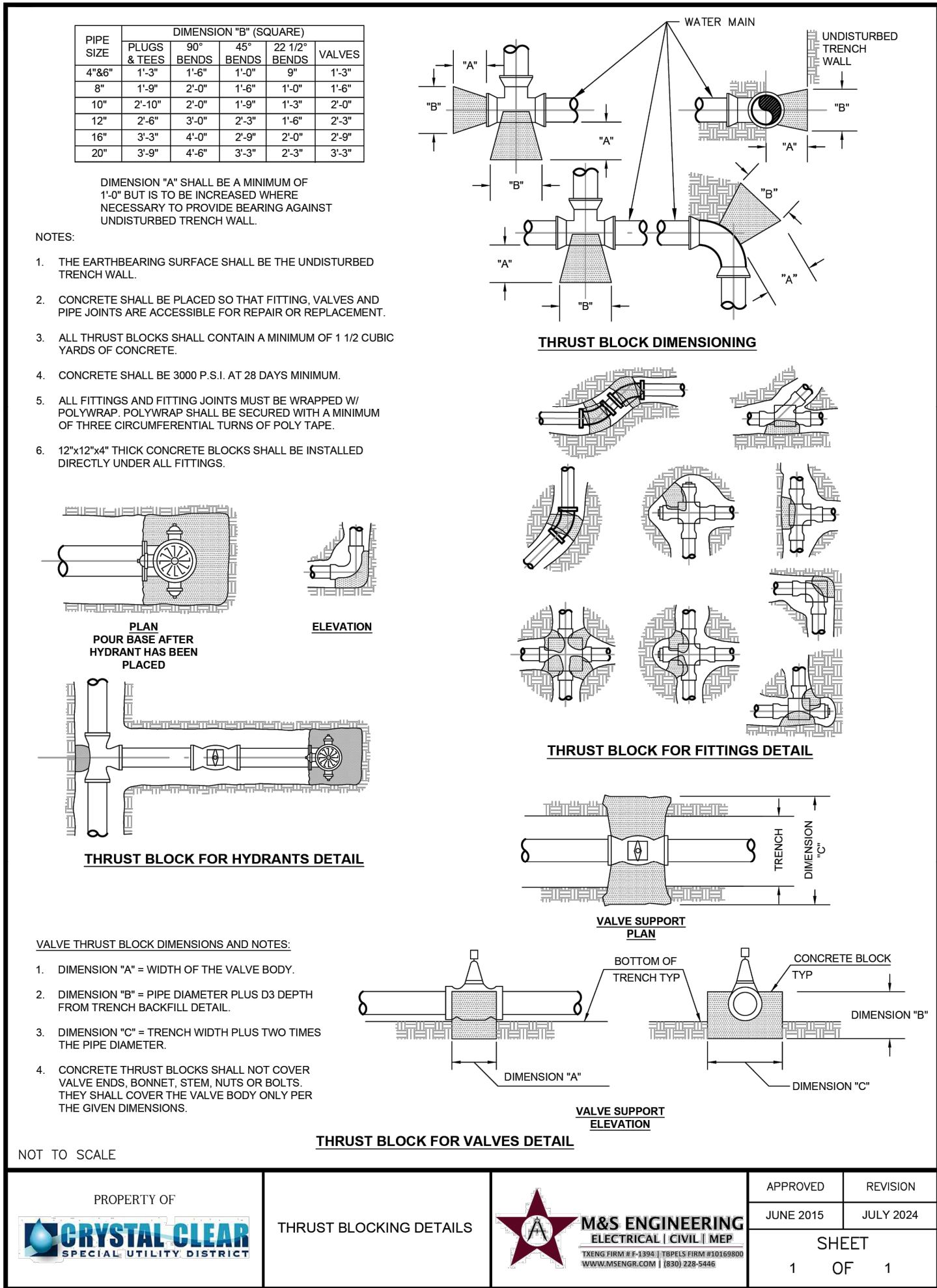
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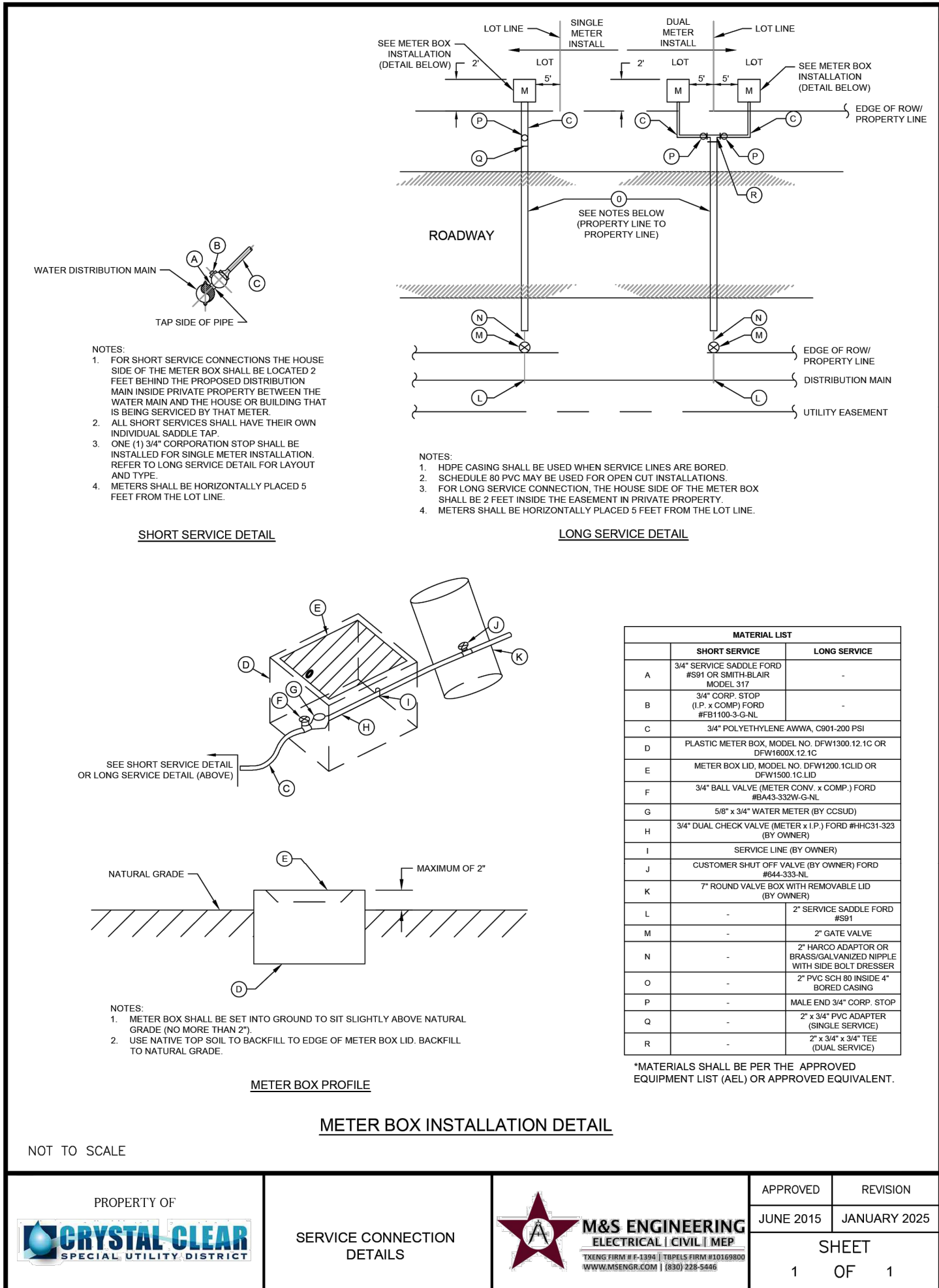
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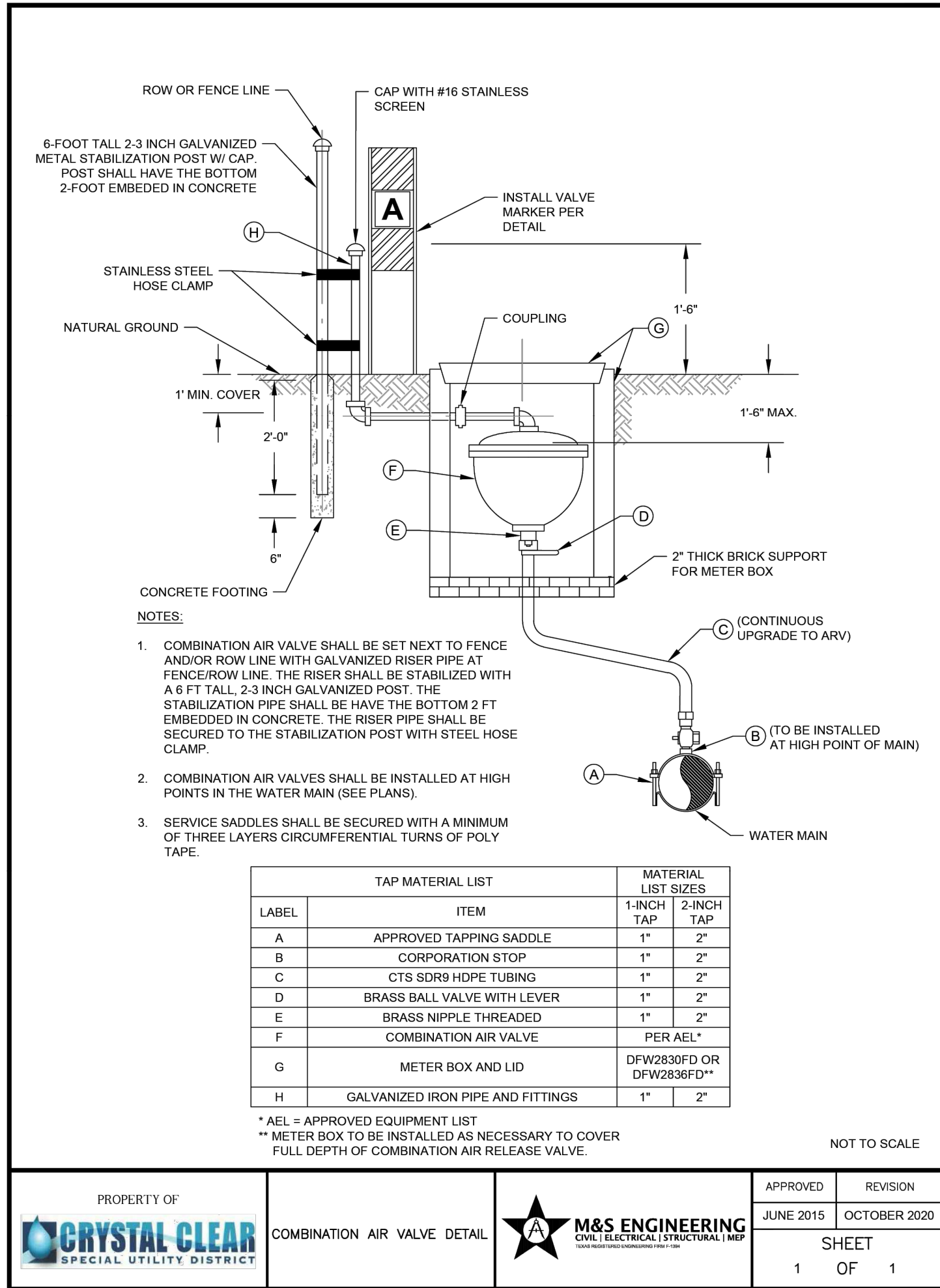
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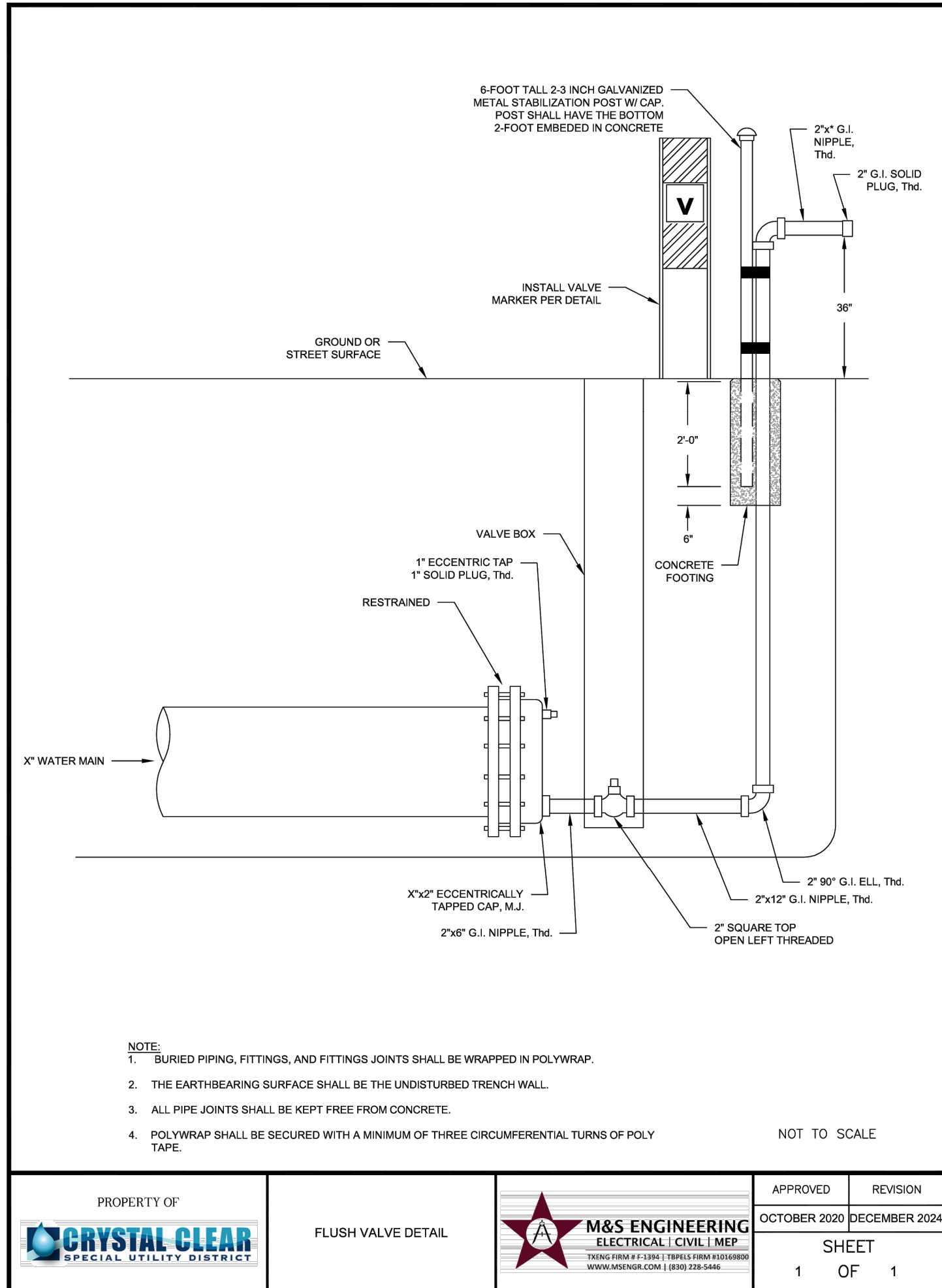
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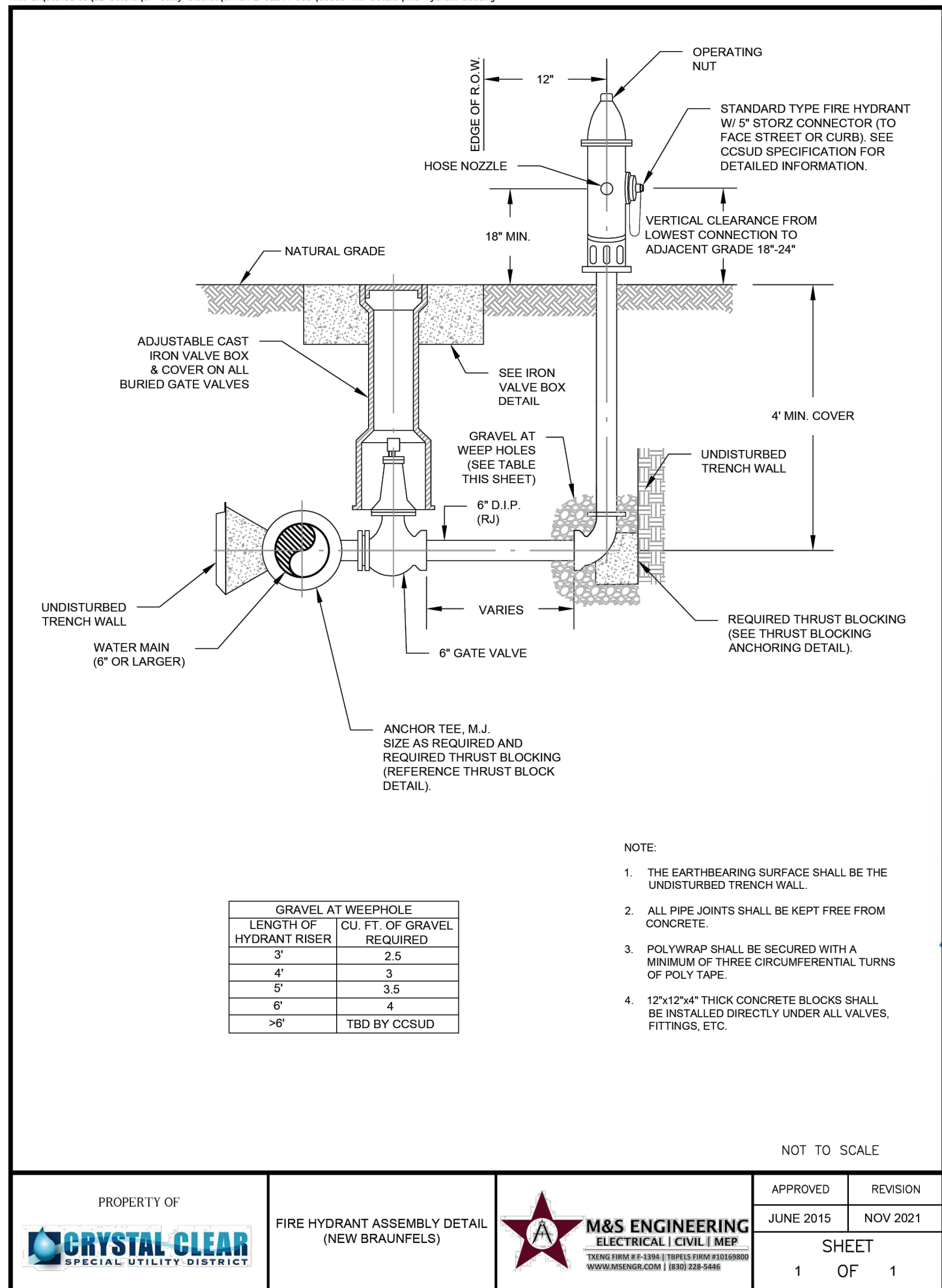
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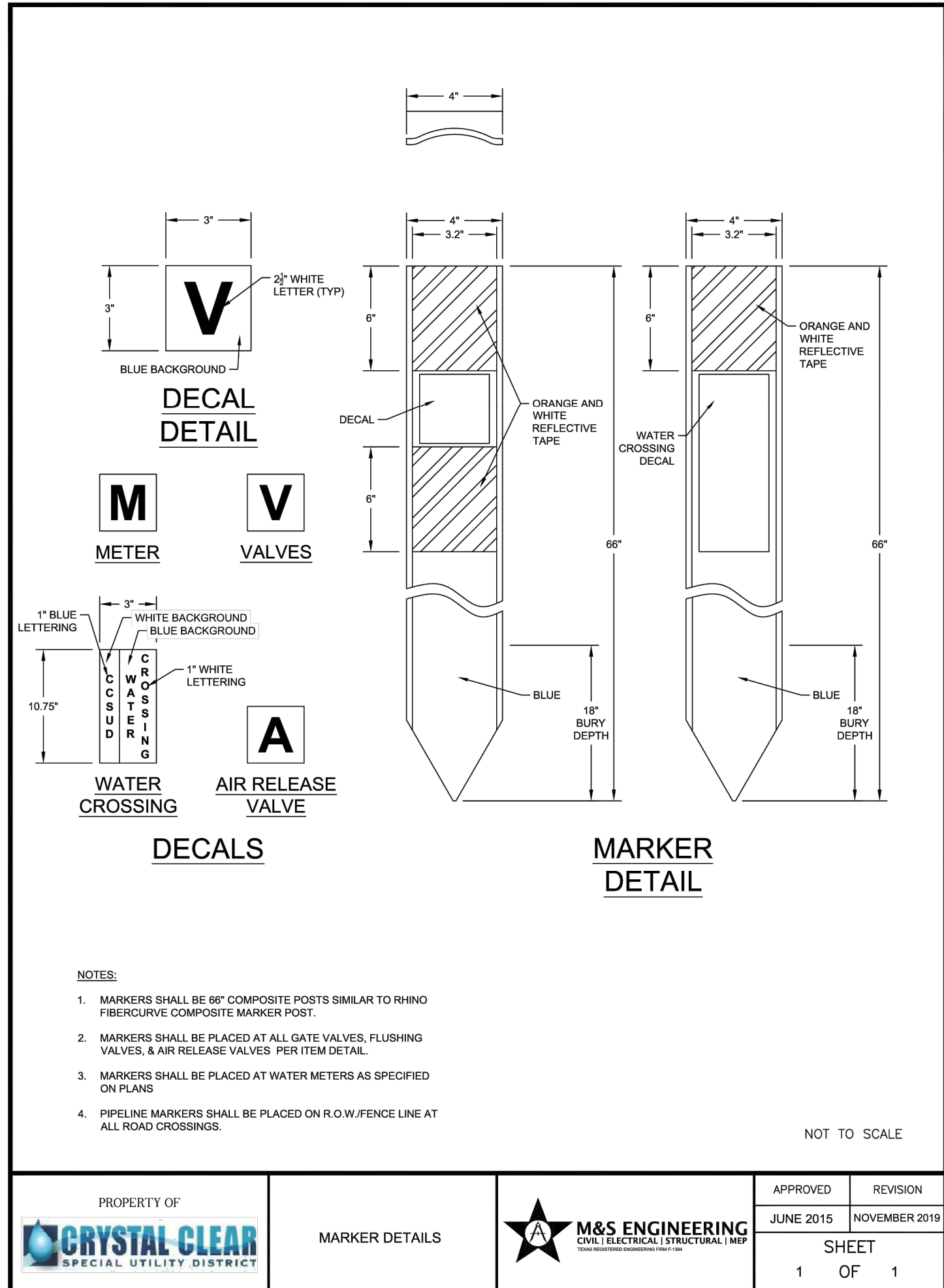
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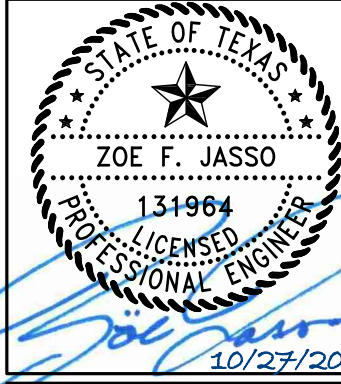
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290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPELS FIRM F-10961  
TBPELS FIRM 1053600



WATER DETAILS  
(1 OF 2)

JARO NORTH UNIT 3

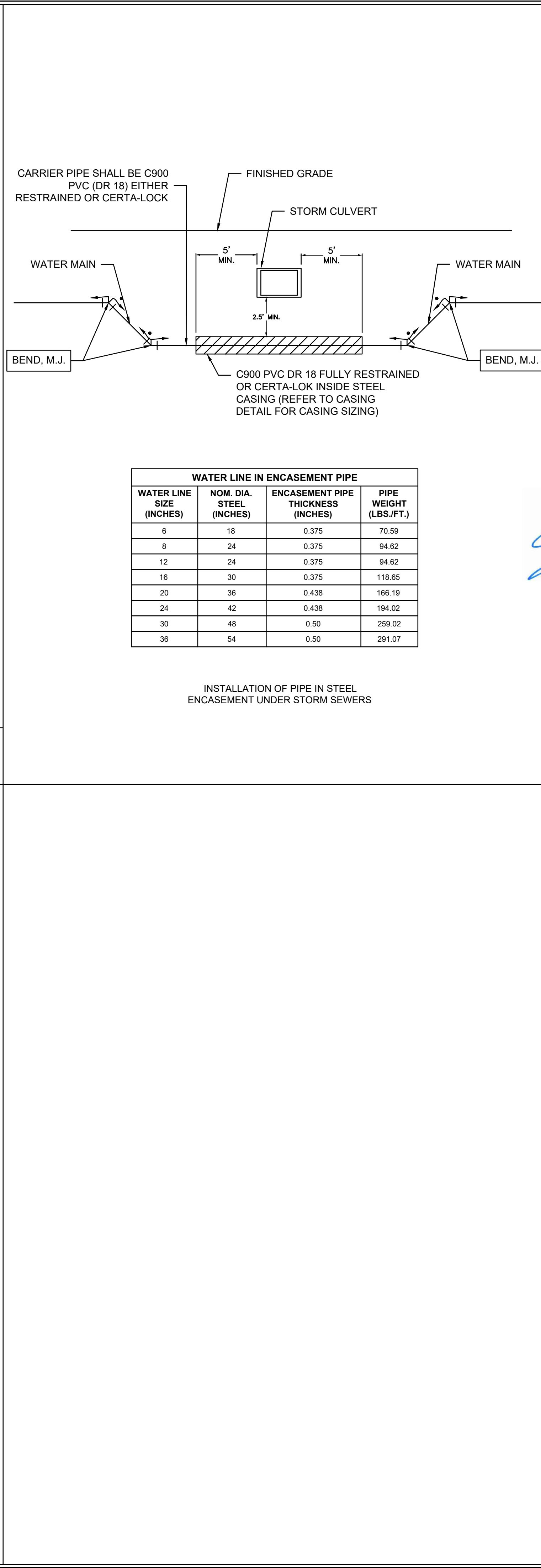
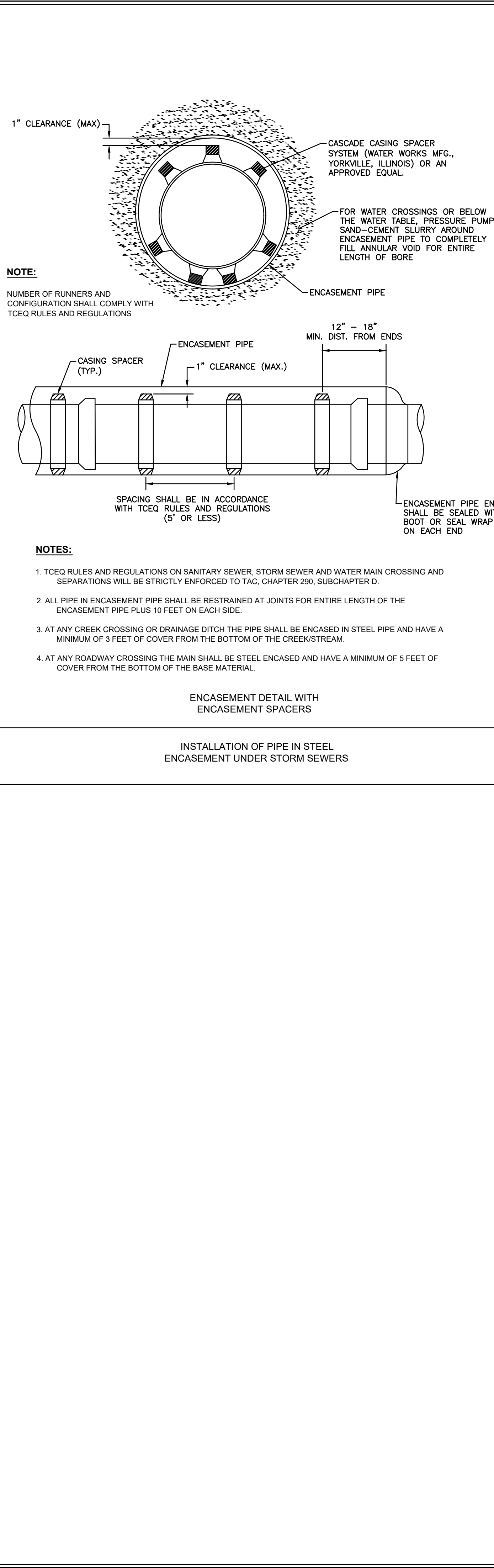
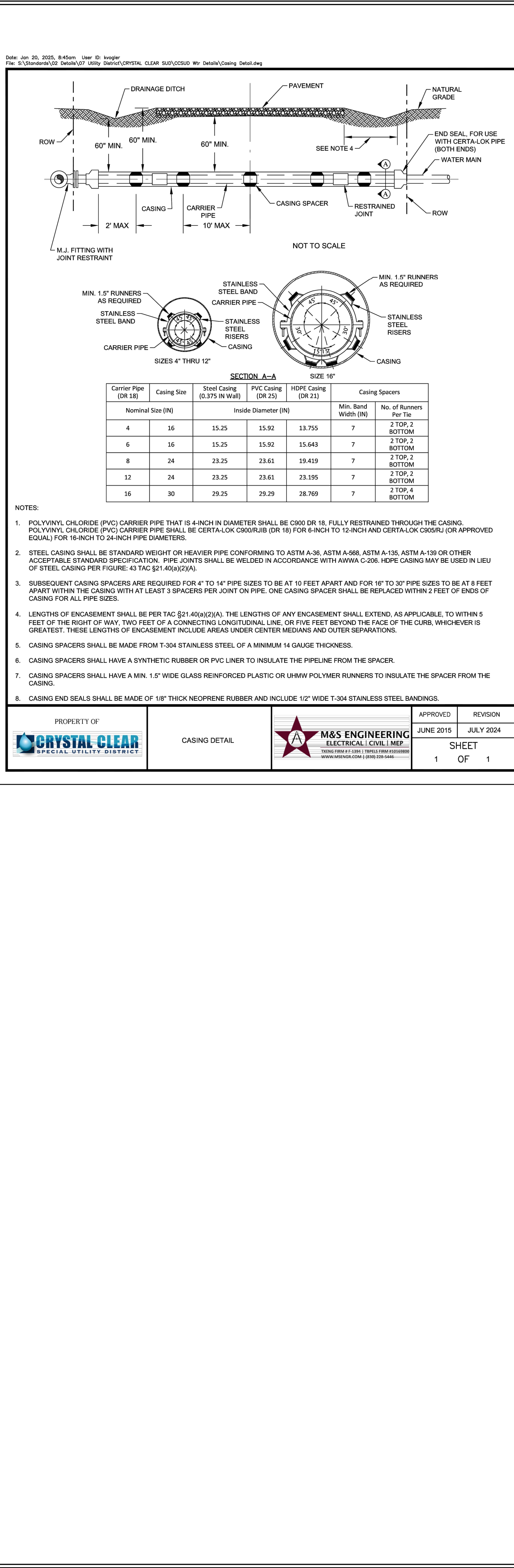
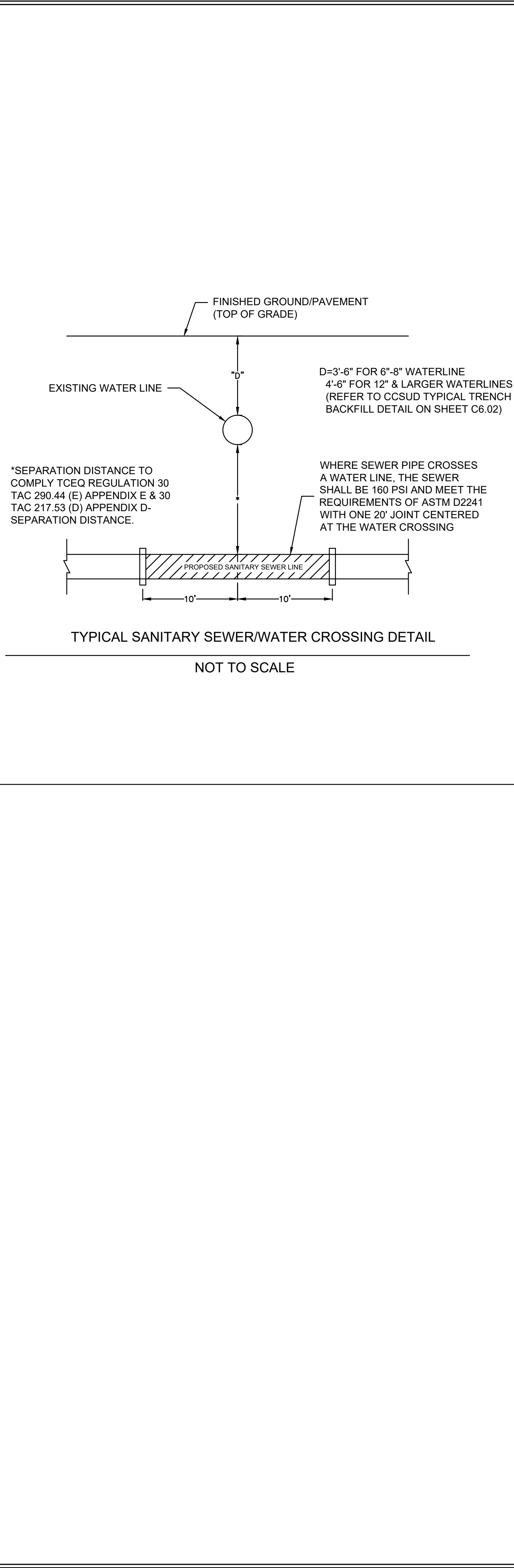
REVISION DATE	NO.	DESCRIPTION

DATE: October 25  
DRAWN BY: RR  
DESIGNED BY: JK  
REVIEWED BY: ZJ

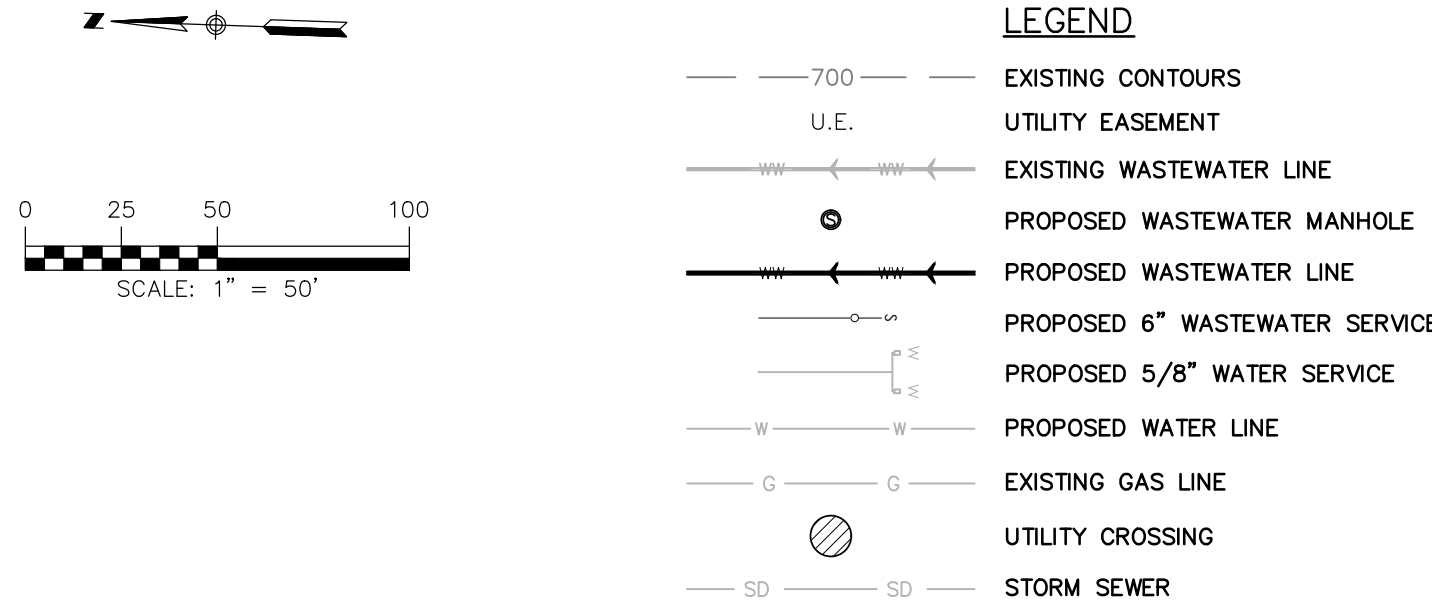
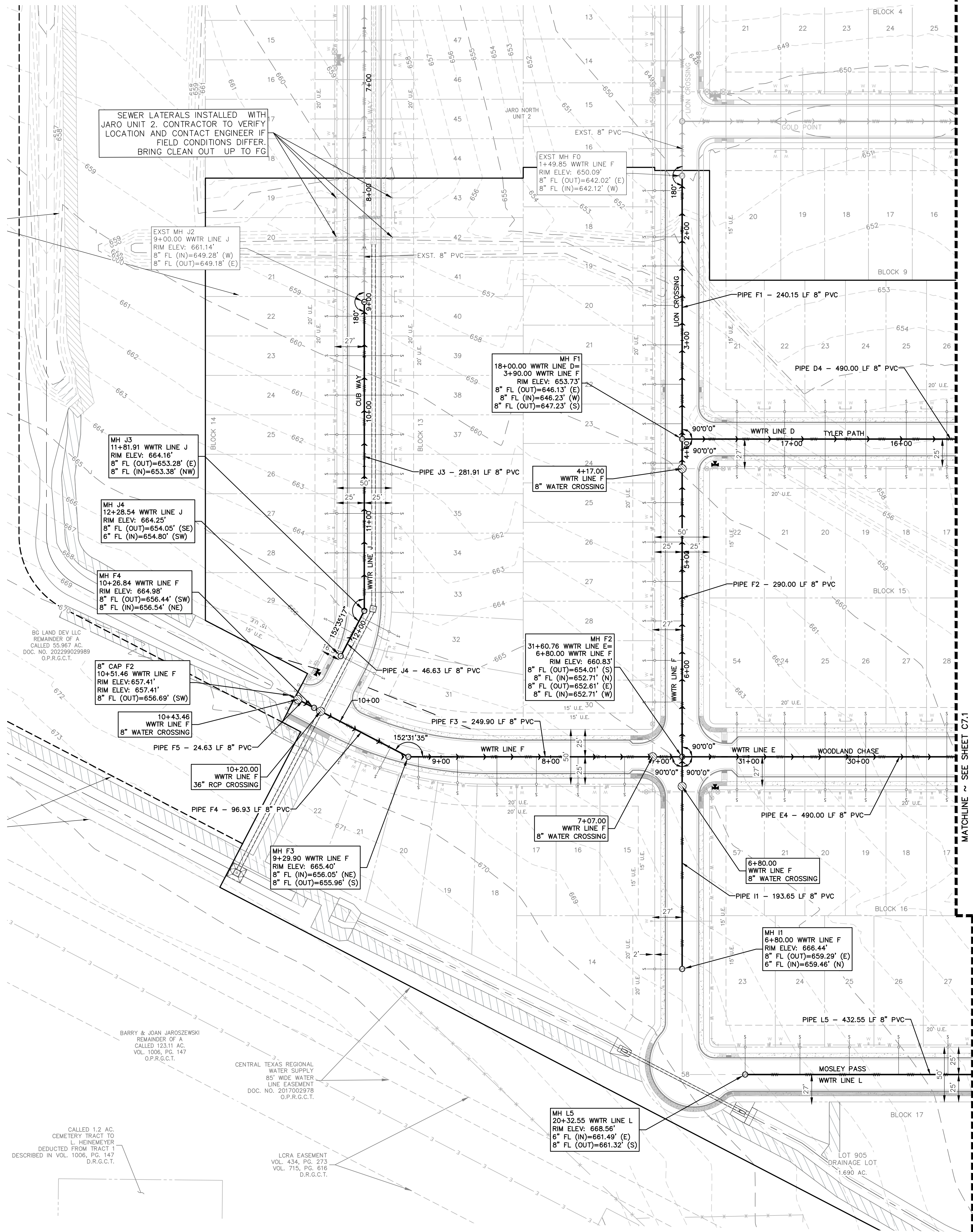
HMT PROJECT NO.: 337.102

SHEET  
C6.2









THIS PROJECT INCLUDES UTILITY INSTALLATIONS GREATER THAN 5- FEET IN DEPTH LOCATED IN PUBLIC RIGHT-OF-WAY OR EASEMENTS. DEEP TRENCHES POSE COMPACTION TESTING AND CONSTRUCTION CHALLENGES. CITY METHODS FOR TESTING AND COMPACTION MAY NOT BE ACHIEVABLE. A UTILITY COMPACTION PLAN WILL BE REQUIRED AND MUST BE SUBMITTED FOR APPROVAL TO CITY PRIOR TO UTILITY INSTALLATION.

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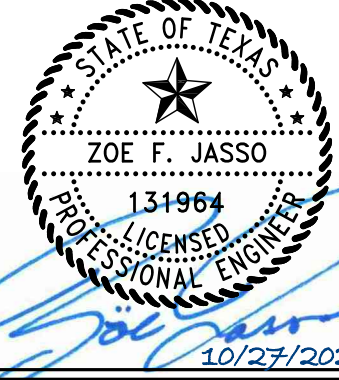
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1. NO VALVES, HYDRANTS, CLEAN-OUTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS, OR DRIVEWAYS.
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  4. ALL RING AND COVER SHALL BE 32" DIAMETER.
  5. CONTRACTOR TO FIELD VERIFY EXISTING SANITARY SEWER TIE-INS AND CONSTRUCT SEWER FROM DOWNSTREAM TO UPSTREAM.
  6. ALL DIMENSIONS ARE FROM FACE OF CURB.
  7. MANHOLES MUST BE BOLTED UNLESS WAIVED BY UTILITY ENGINEER.
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290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPELS FIRM F-10961  
TBPELS FIRM 1053600



OVERALL WASTEWATER  
(1 OF 2)

JARO NORTH UNIT 3

NO.	REVISION	DESCRIPTION	DATE

DATE: October 25

DRAWN BY: RR

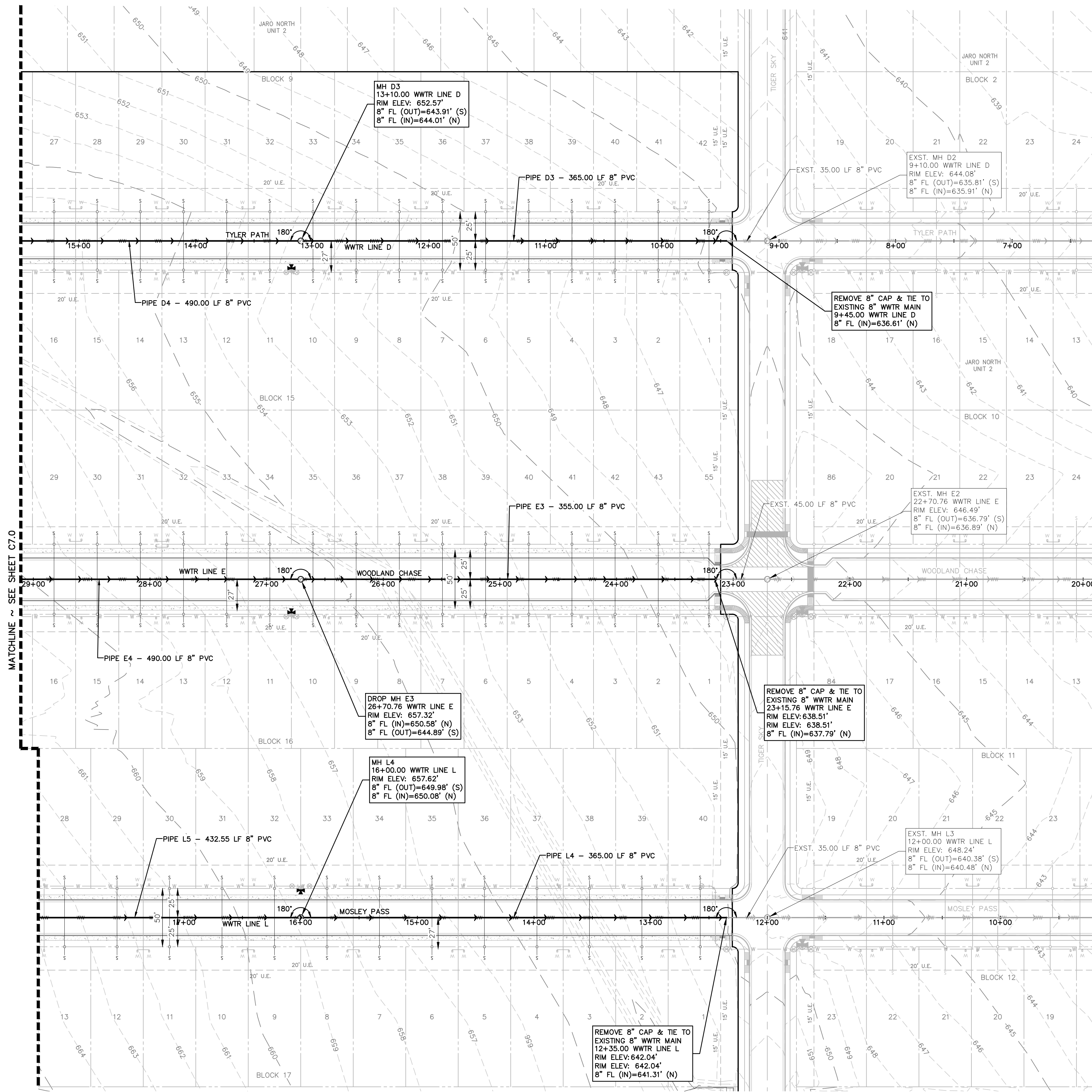
DESIGNED BY: JK

REVIEWED BY: ZJ

HMT PROJECT NO.: 337.102

SHEET  
C7.0





**LEGEND**

- 700 — EXISTING CONTOURS
- U.E. — UTILITY EASEMENT
- W — EXISTING WASTEWATER LINE
- W — PROPOSED WASTEWATER MANHOLE
- W — PROPOSED WASTEWATER LINE
- W — PROPOSED 6" WASTEWATER SERVICE
- W — PROPOSED 5/8" WATER SERVICE
- W — PROPOSED WATER LINE
- G — EXISTING GAS LINE
- SD — UTILITY CROSSING
- SD — STORM SEWER

- UTILITY TRENCH COMPACTION**
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  8. ALL UTILITIES TO BE CONSTRUCTED PRIOR TO STREETS.

**TRENCH EXCAVATION SAFETY PROTECTION**

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATIONS.

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290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPELS FIRM F-10961  
TBPELS FIRM 1053600

**OVERALL WASTEWATER (2 OF 2)**

JARO NORTH UNIT 3

NO.	REVISION	DESCRIPTION	DATE

DATE: **October 25**

DRAWN BY: **RR**

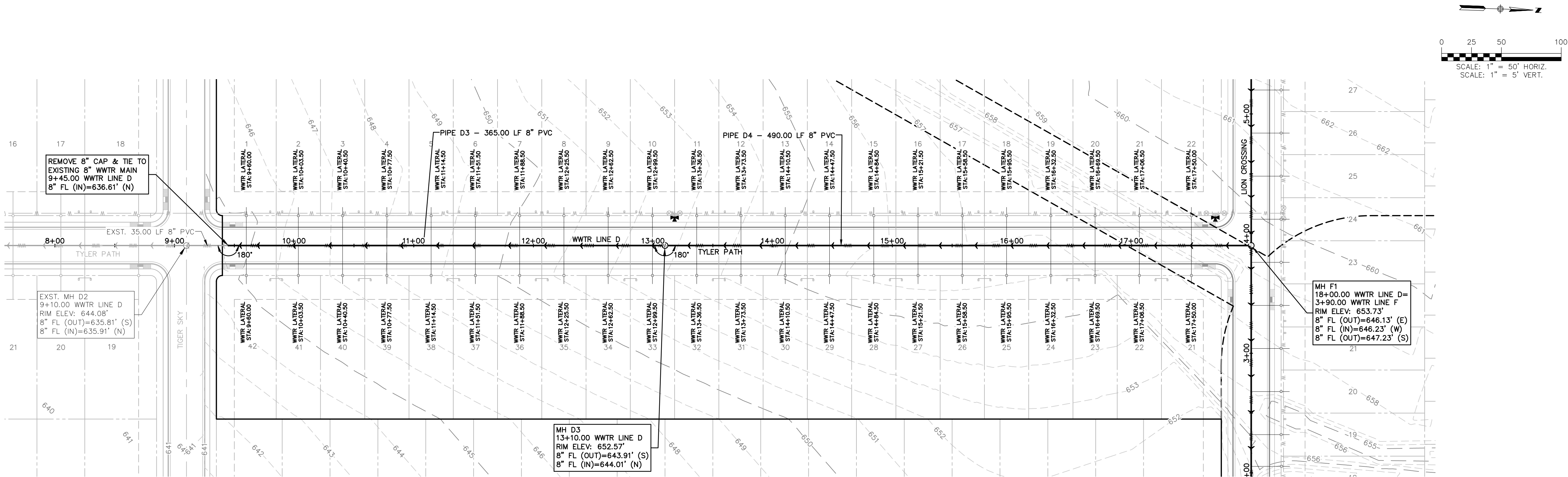
DESIGNED BY: **JK**

REVIEWED BY: **ZJ**

HMT PROJECT NO.: **337.102**

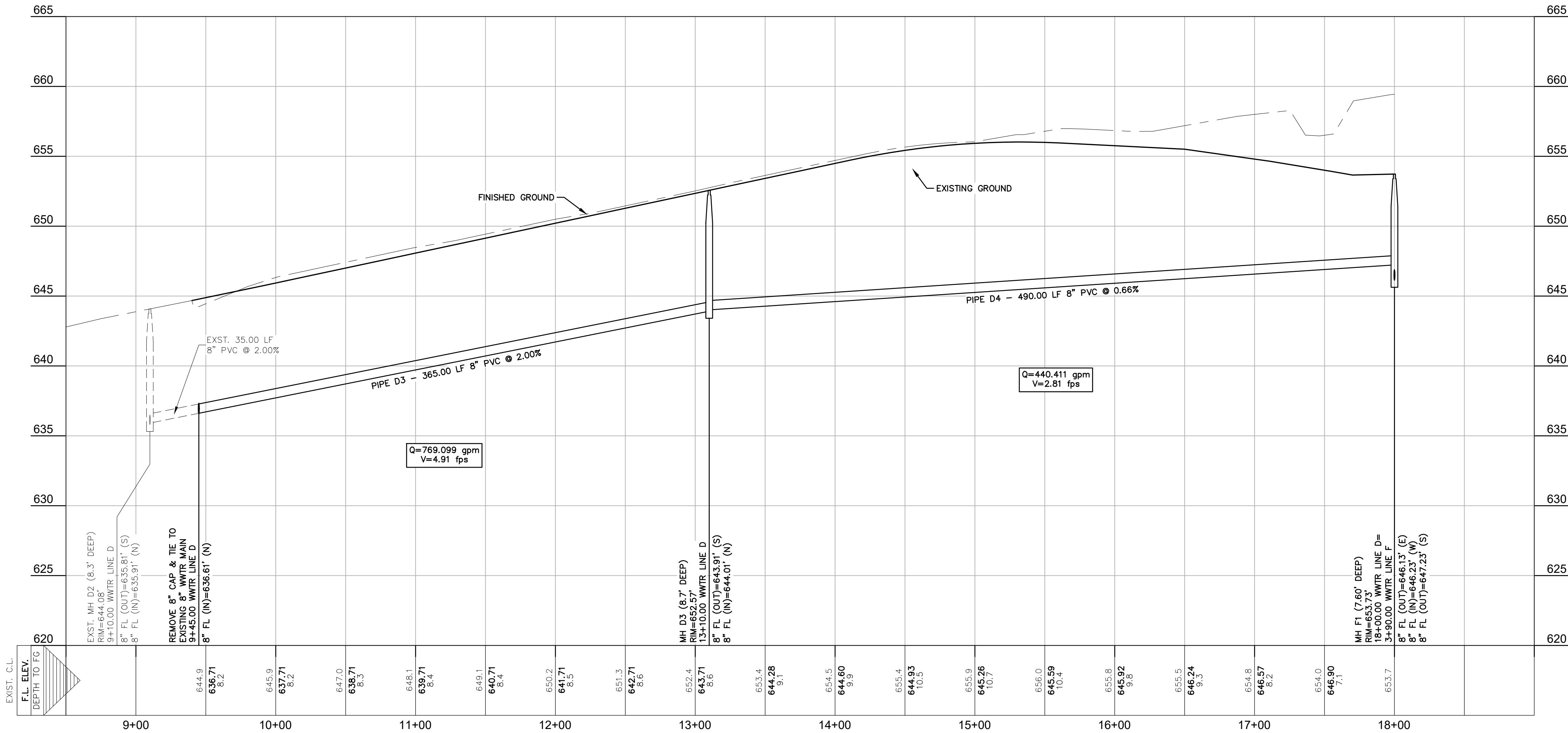
**SHEET C7.1**





Pipe Segment	Pipe Dia (in)	Slope	LUE	Peak Wet Flow (gpm)	Peak Wet Flow (CFS)	Pipe Capacity (CFS)	PWF V (fps)	PWF Depth (in)	Sufficient Capacity
D3	8	2.00%	44	30.19	0.07	1.71	1.77	0.86	Yes
D4	8	0.62%	24	16.71	0.04	0.95	0.98	0.86	Yes

WWTR LINE D  
8+50 - 19+00



UTILITY TRENCH COMPACTION

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290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPELS FIRM F-10961  
TBPELS FIRM 1053600



WWTR LINE D  
PLAN & PROFILE

JARO NORTH UNIT 3

NO.	REVISION	DESCRIPTION	REVISION DATE

DATE: October 25

DRAWN BY: RR

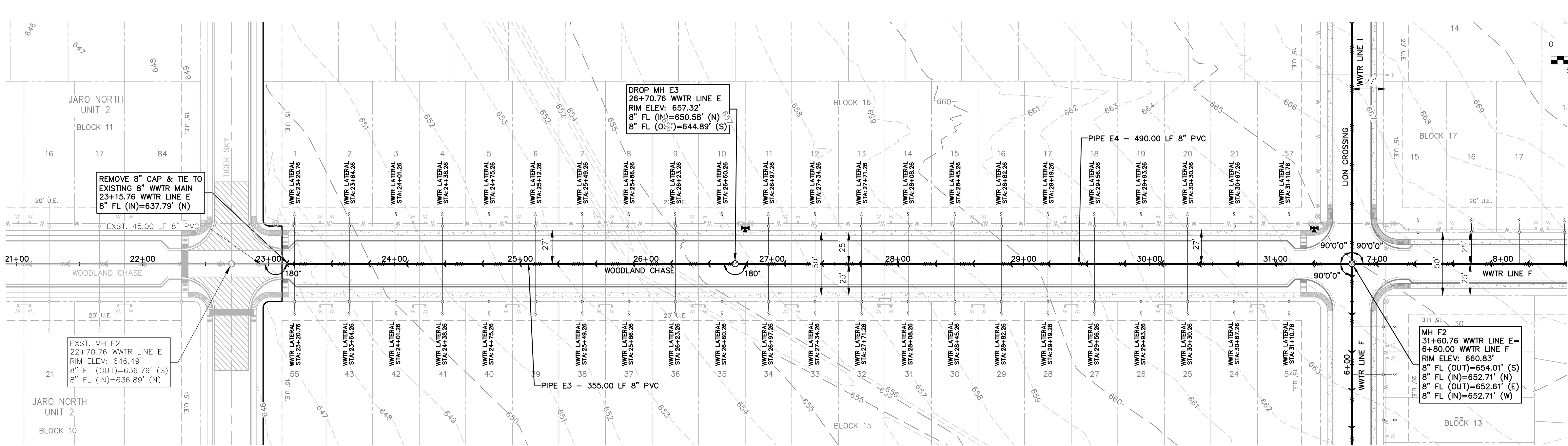
DESIGNED BY: JK

REVIEWED BY: ZJ

HMT PROJECT NO.: 337.102

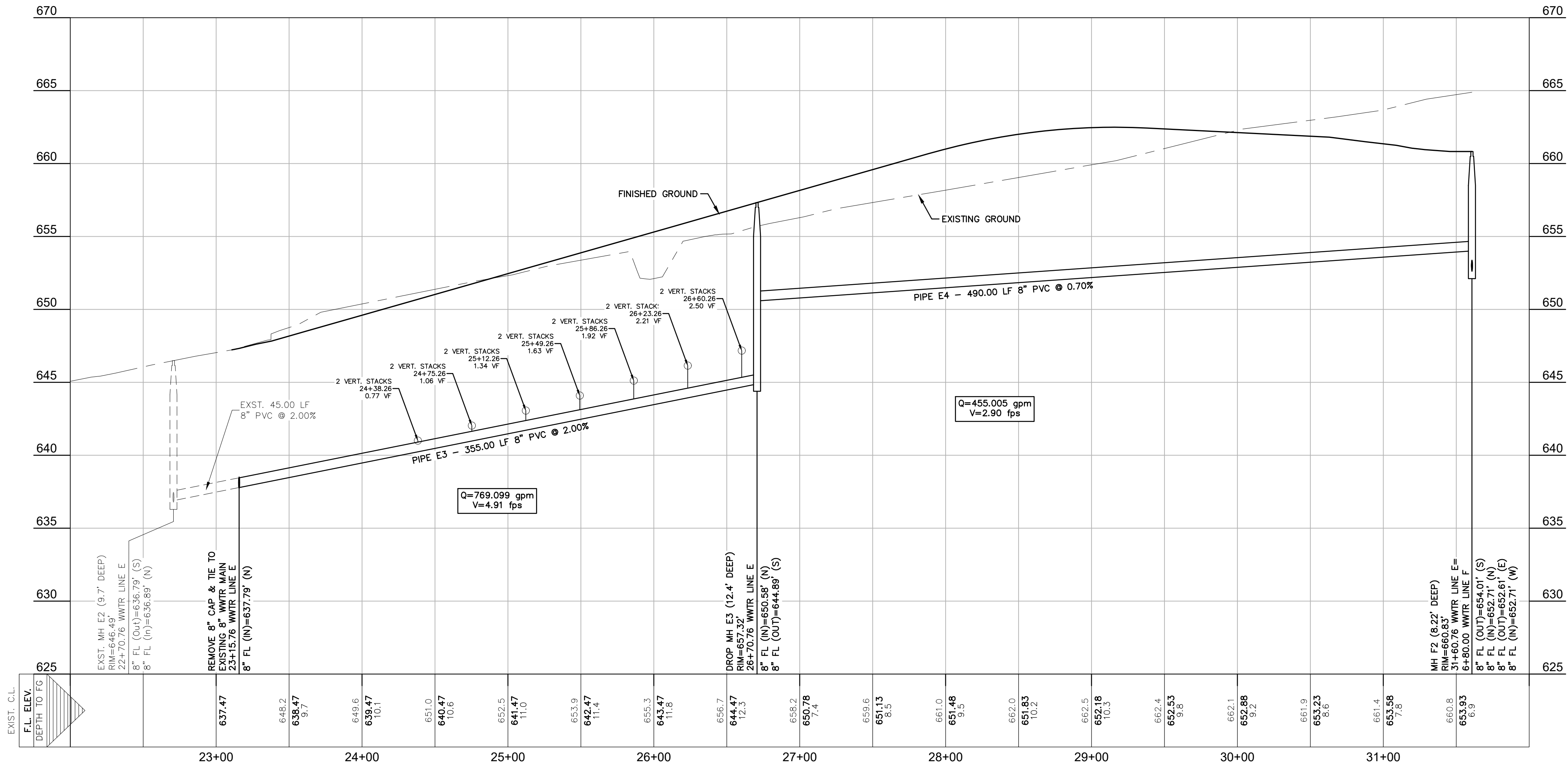
SHEET  
C7.2





Pipe Segment	Pipe Dia (in)	Slope	LUE	Peak Wet Flow (gpm)	Peak Wet Flow (CFS)	Pipe Capacity (CFS)	PWF V (fps)	PWF Depth (in)	Sufficient Capacity
E3	8	2.85%	44	30.19	0.07	2.05	2.06	0.82	Yes
E4	8	1.08%	24	16.71	0.04	1.26	1.25	0.80	Yes

WWTR LINE E  
22+00 - 32+00



UTILITY TRENCH COMPACTION

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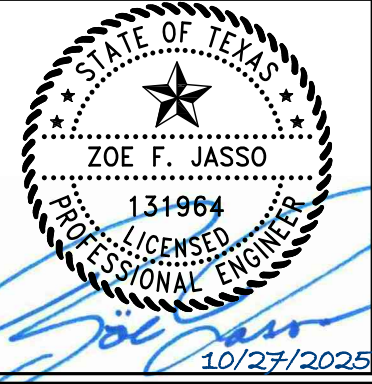
TRENCH EXCAVATION SAFETY PROTECTION

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290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPELS FIRM F-10961  
TBPELS FIRM 1053600



WWTR LINE E  
PLAN & PROFILE

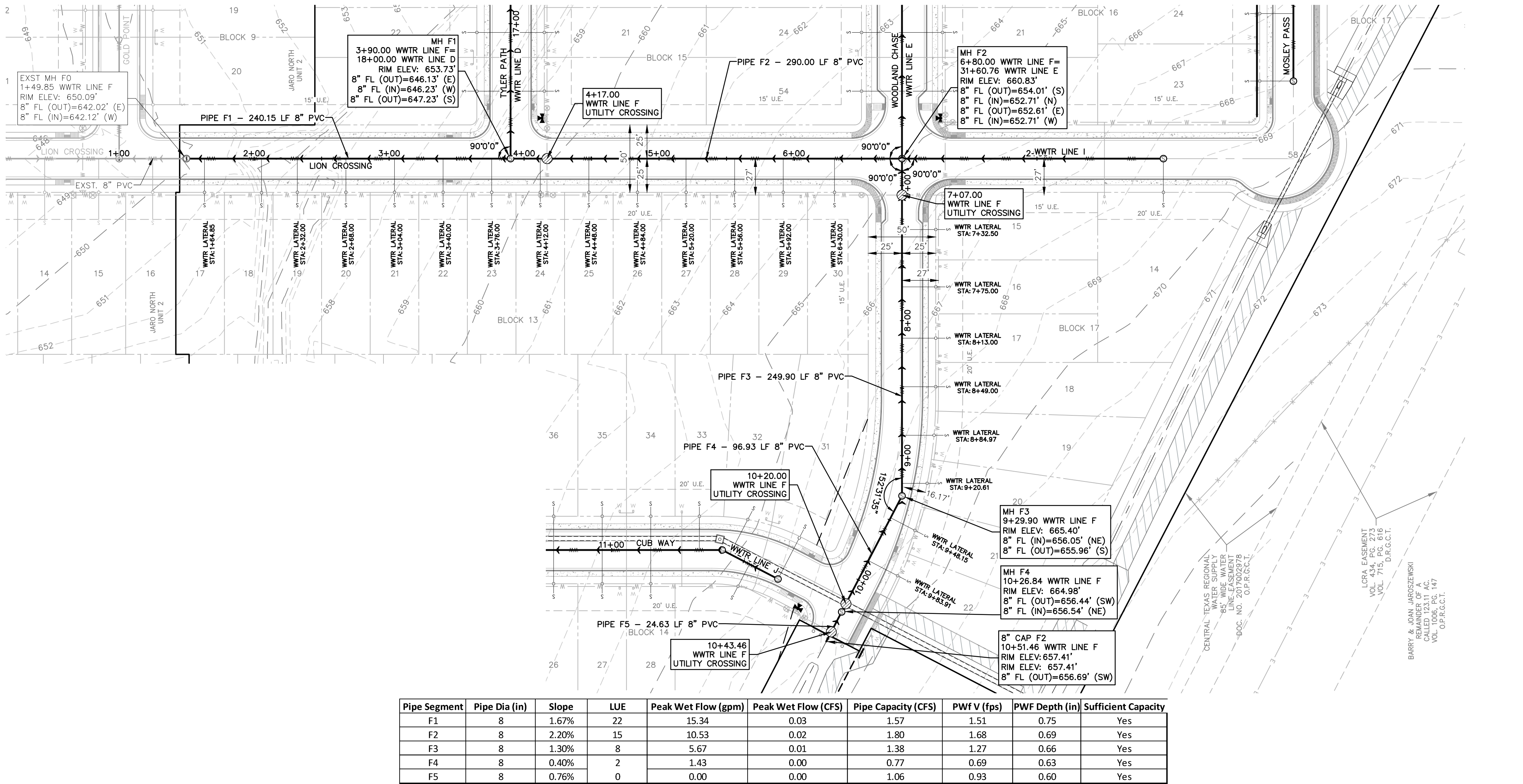
JARO NORTH UNIT 3

NO.	REVISION	DESCRIPTION	REVISION DATE

DATE:	October 25
DRAWN BY:	RR
DESIGNED BY:	JK
REVIEWED BY:	ZJ
HMT PROJECT NO.:	337.102

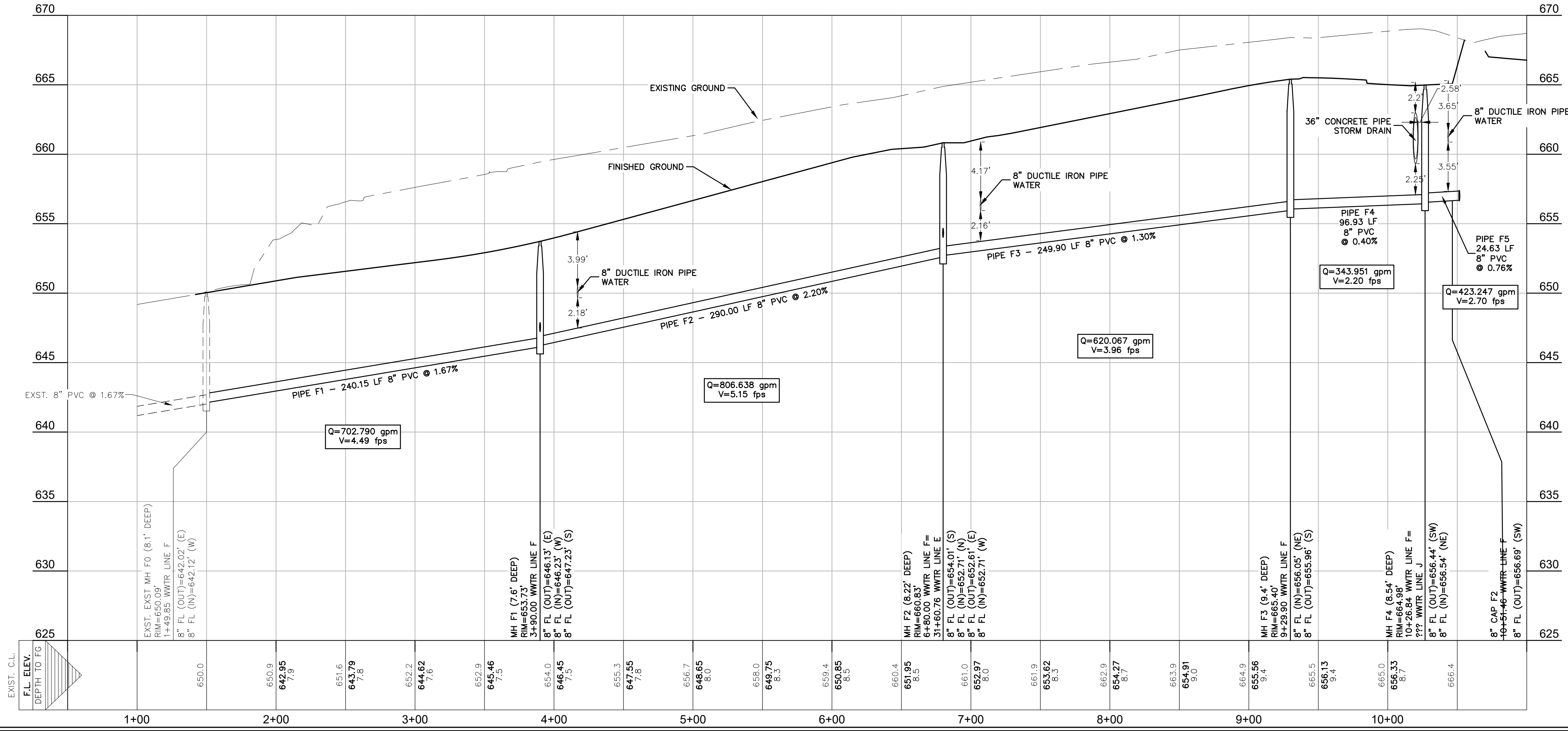
SHEET  
C7.3





Pipe Segment	Pipe Dia (in)	Slope	LUE	Peak Wet Flow (gpm)	Peak Wet Flow (CFS)	Pipe Capacity (CFS)	PWF V (fps)	PWF Depth (in)	Sufficient Capacity
F1	8	1.67%	22	15.34	0.03	1.57	1.51	0.75	Yes
F2	8	2.20%	15	10.53	0.02	1.80	1.68	0.69	Yes
F3	8	1.30%	8	5.67	0.01	1.38	1.27	0.66	Yes
F4	8	0.40%	2	1.43	0.00	0.77	0.69	0.63	Yes
F5	8	0.76%	0	0.00	0.00	1.06	0.93	0.60	Yes

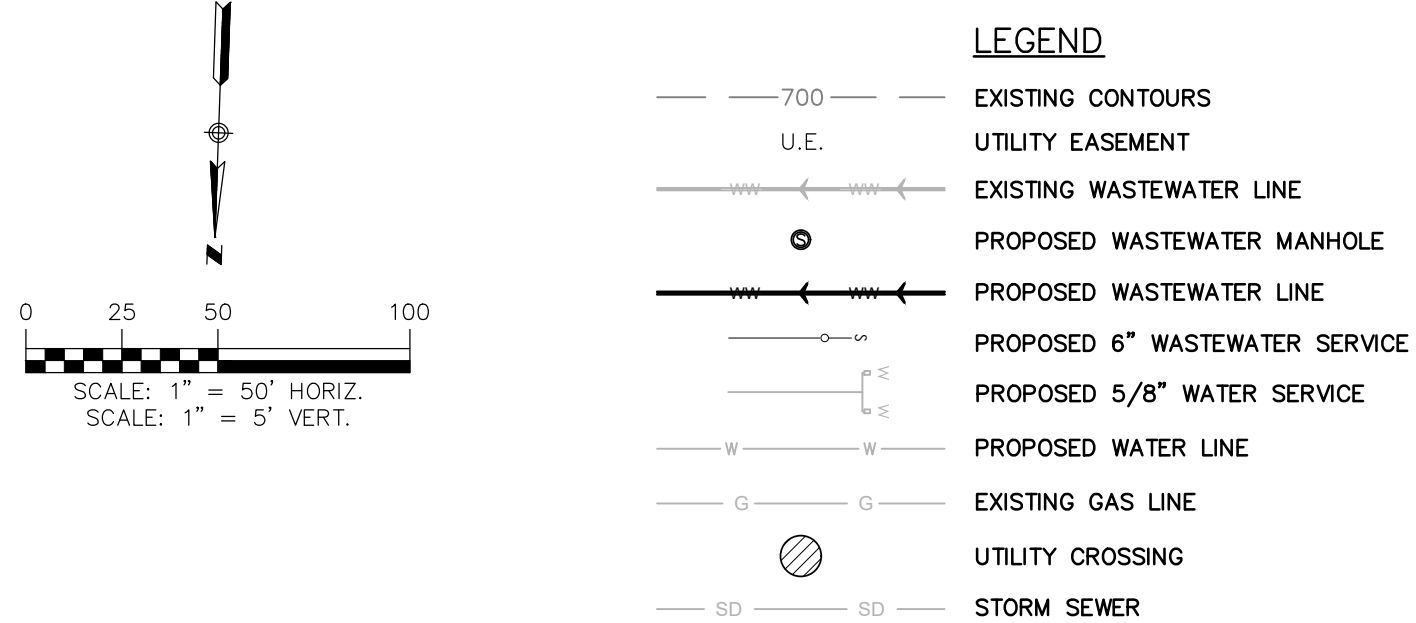
WWTR LINE F  
0+50 - 11+00



**TRENCH EXCAVATION SAFETY PROTECTION**  
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290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPELS FIRM F-10961  
TBPELS FIRM 1053600

**HMT**  
ENGINEERING & SURVEYING

**WWTR LINE F**  
**PLAN & PROFILE**

JARO NORTH UNIT 3

NO.	REVISION	DESCRIPTION	REVISION DATE

DATE: **October 25**

DRAWN BY: **RR**

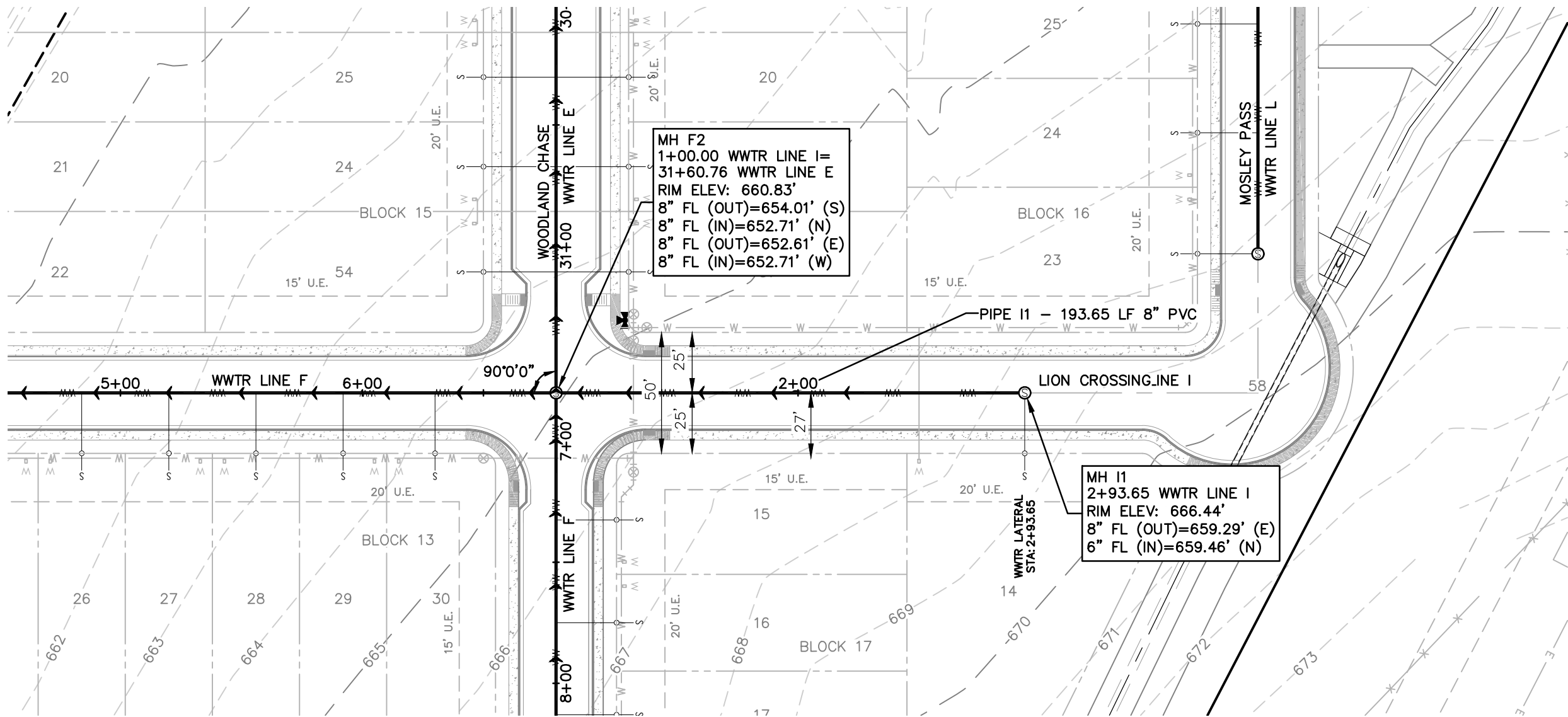
DESIGNED BY: **JK**

REVIEWED BY: **ZJ**

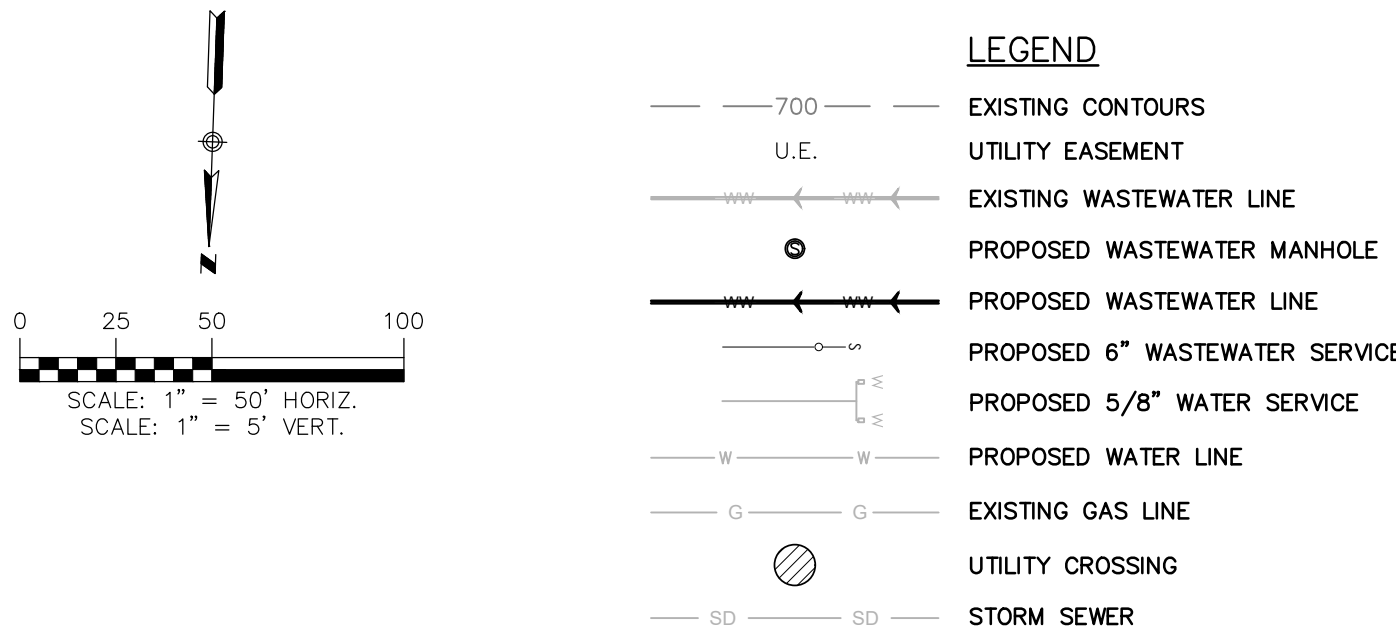
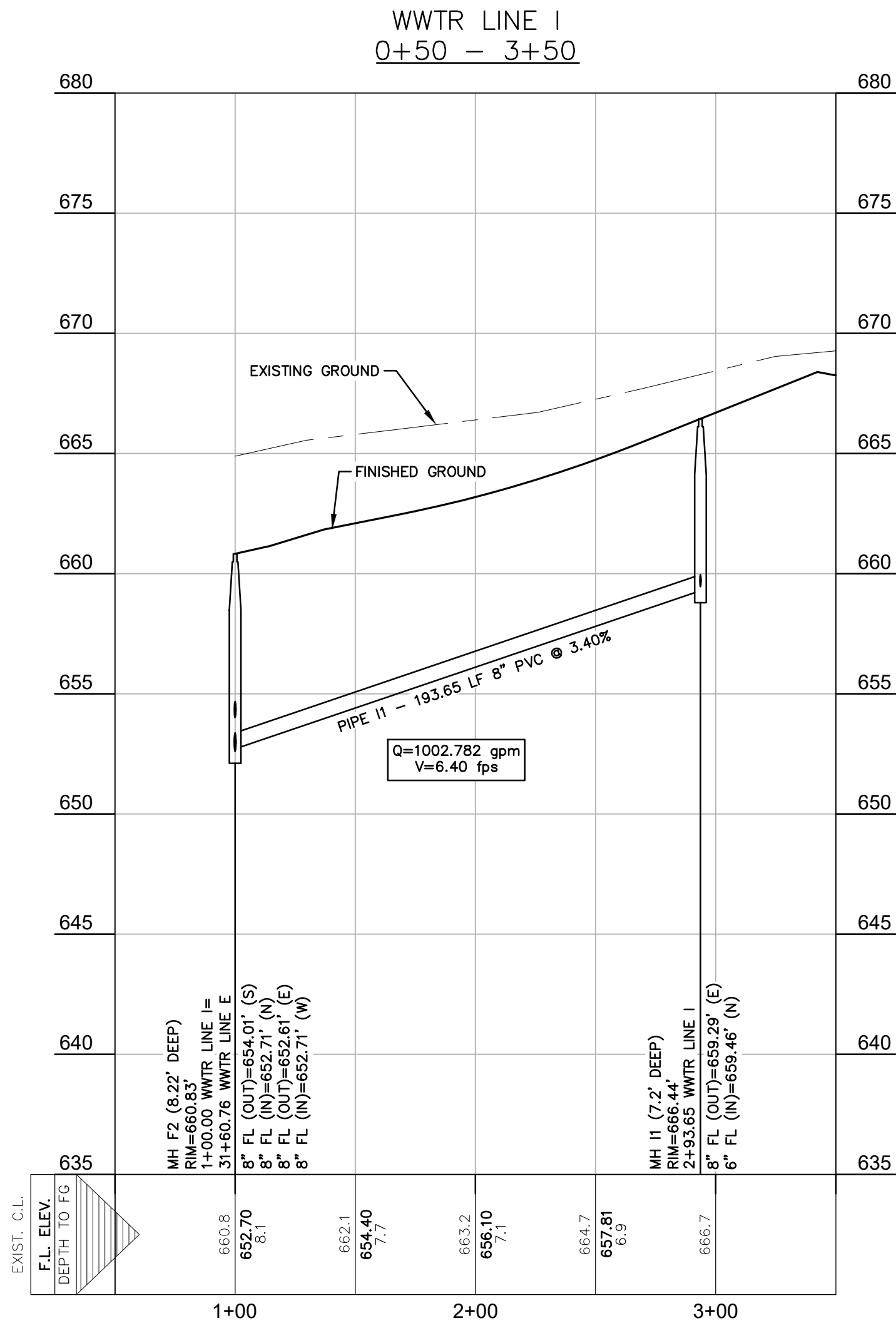
HMT PROJECT NO.: **337-102**

**SHEET**  
**C7.4**





Pipe Segment	Pipe Dia (in)	Slope	LUE	Peak Wet Flow (gpm)	Peak Wet Flow (CFS)	Pipe Capacity (CFS)	PWF V (fps)	PWF Depth (in)	Sufficient Capacity
I1	8	3.40%	1	0.72	0.00	2.23	1.98	0.61	Yes



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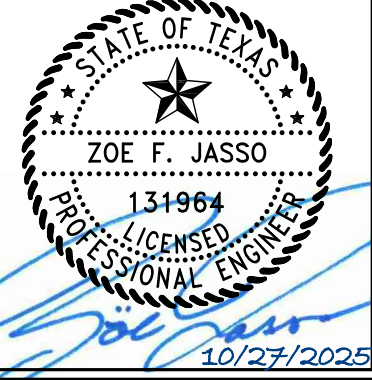
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290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPELS FIRM F-10961  
TBPELS FIRM 1053600



WWTR LINE I  
PLAN & PROFILE

JARO NORTH UNIT 3

NO.	REVISION	DESCRIPTION	REVISION DATE

DATE: October 25

DRAWN BY: RR

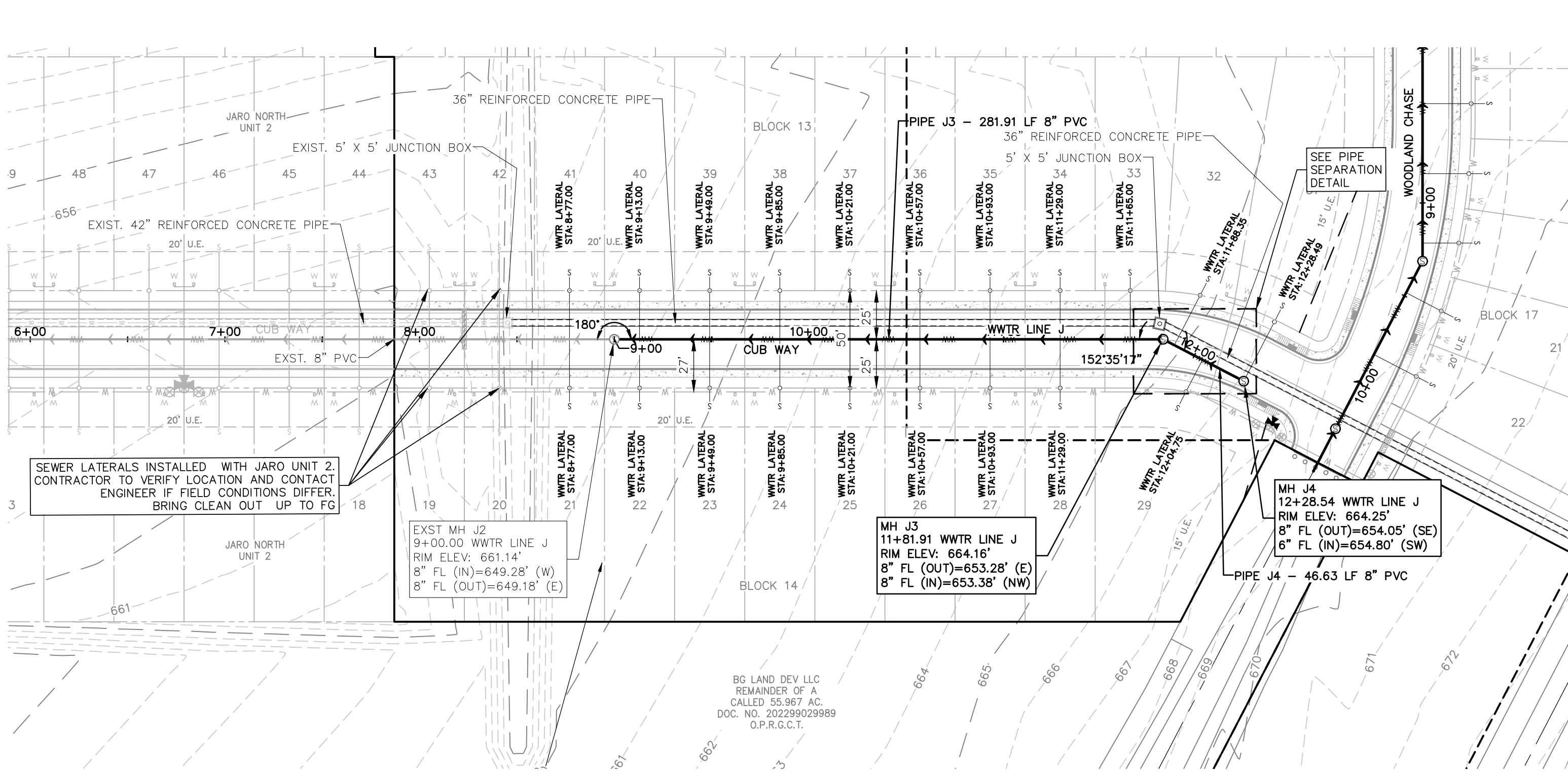
DESIGNED BY: JK

REVIEWED BY: ZJ

HMT PROJECT NO.: 337.102

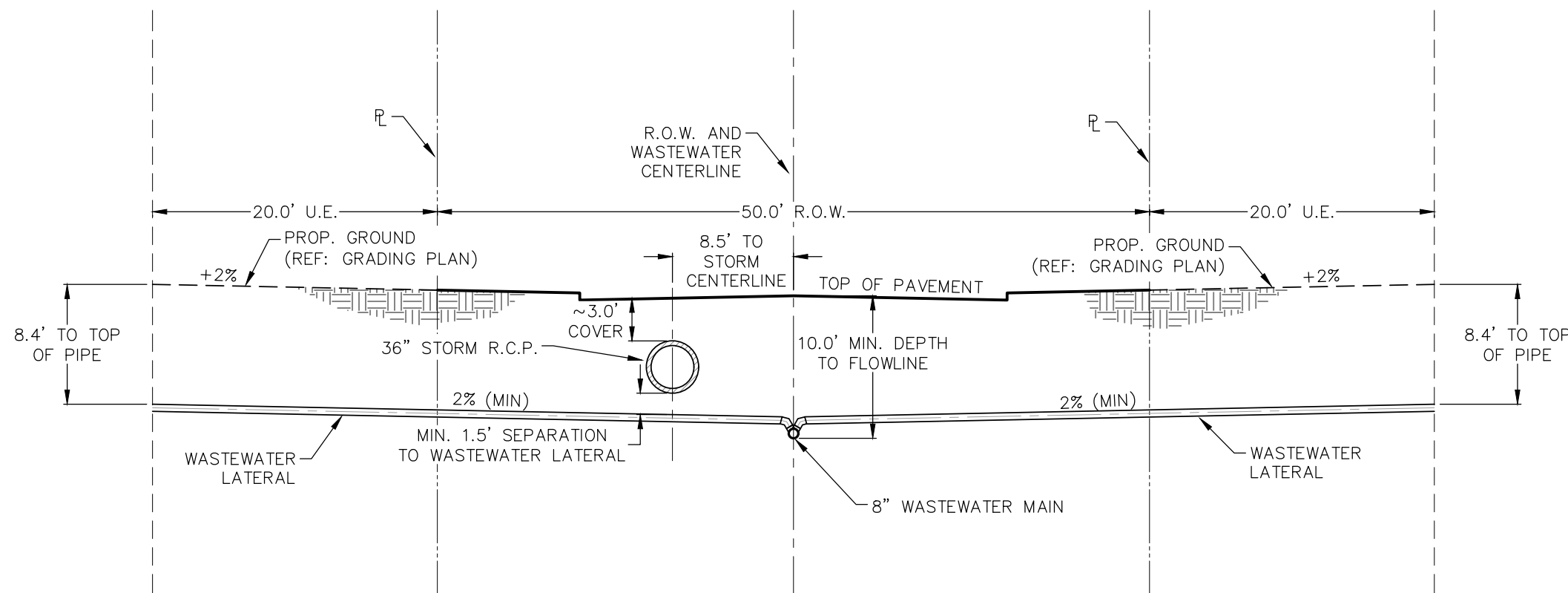
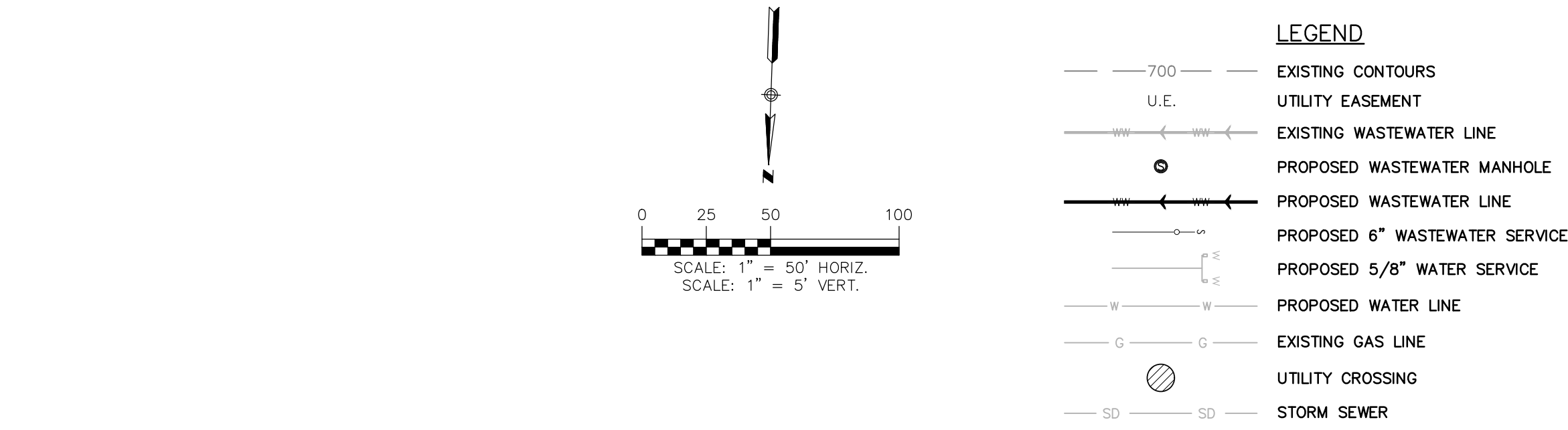
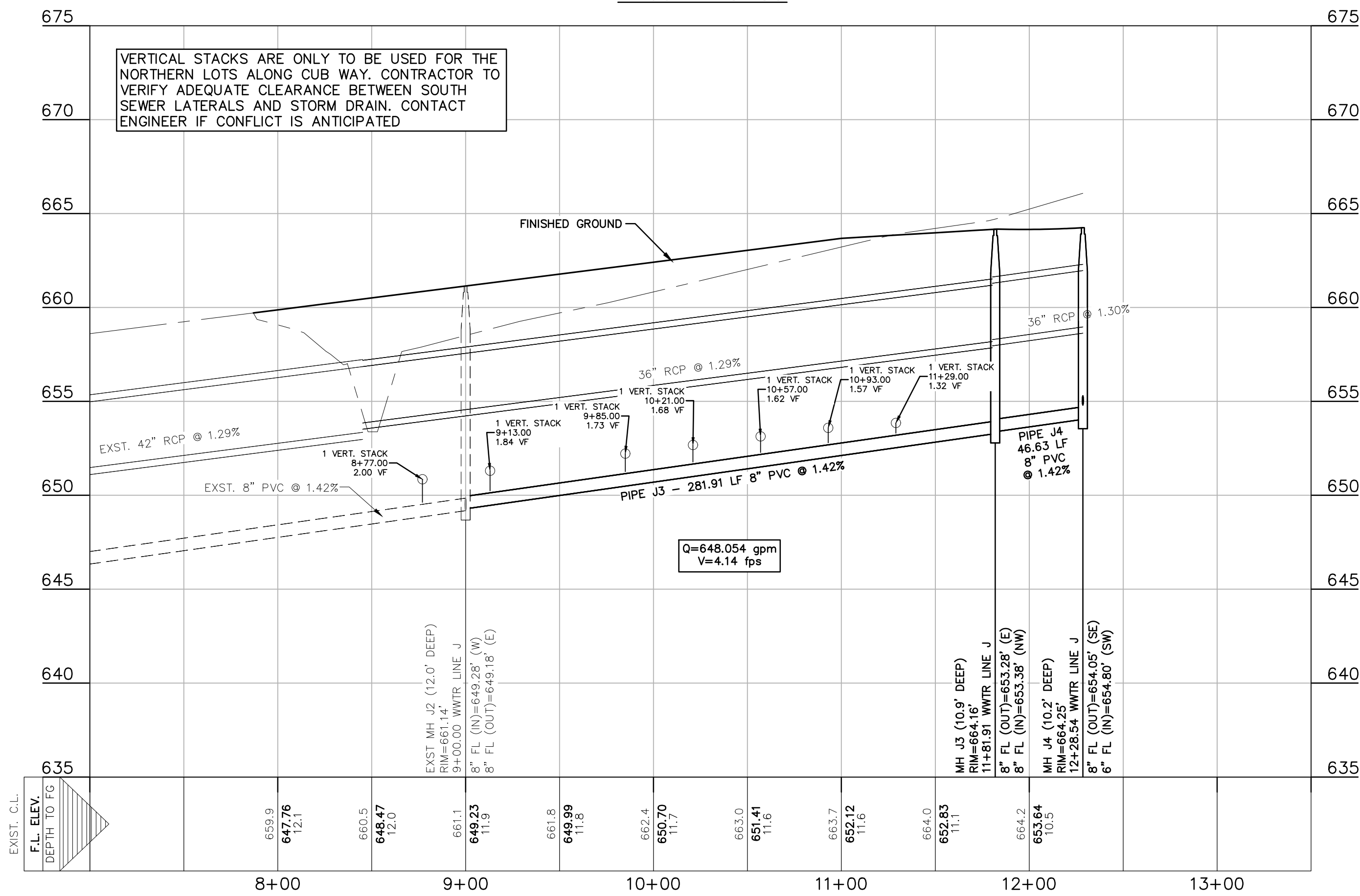
SHEET  
C7.5



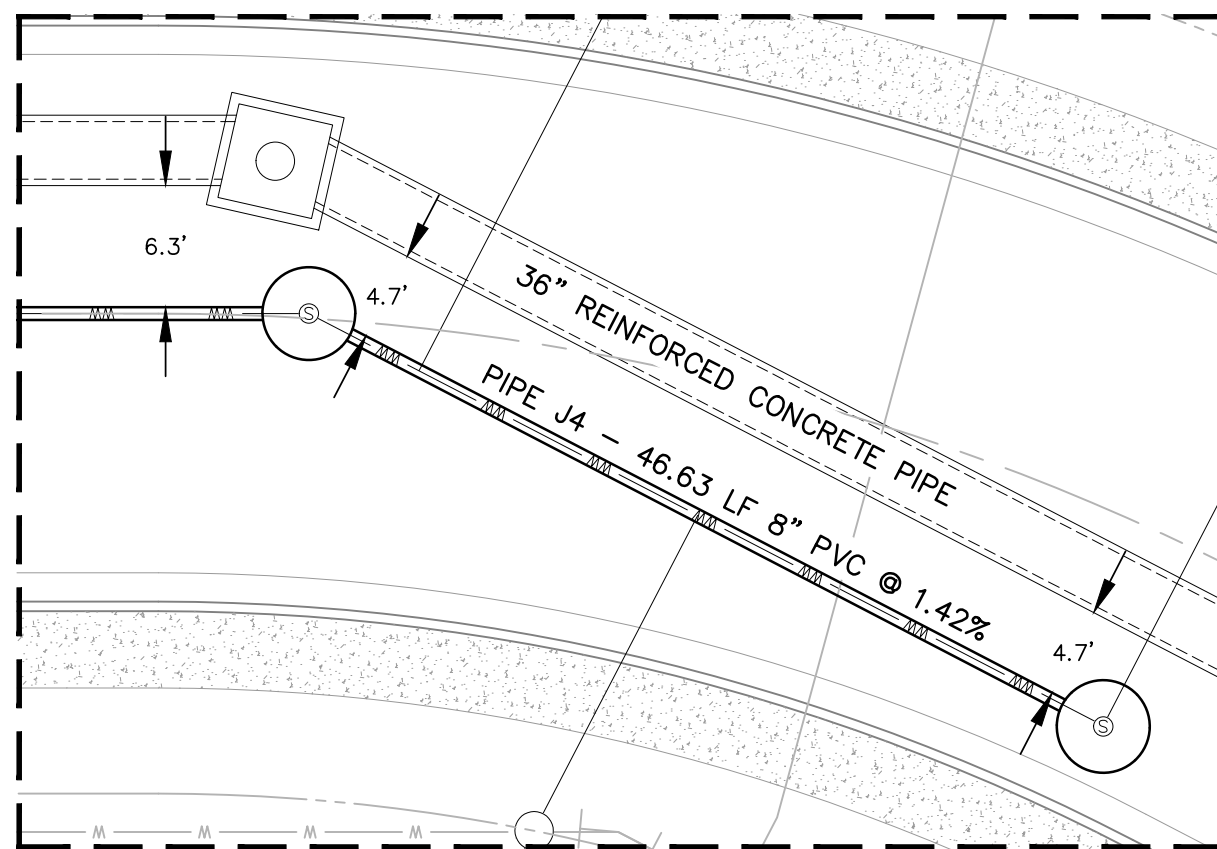


Pipe Segment	Pipe Dia (in)	Slope	LUE	Peak Wet Flow (gpm)	Peak Wet Flow (CFS)	Pipe Capacity (CFS)	PWF V (fps)	PWF Depth (in)	Sufficient Capacity
J3	8	1.42%	18	12.60	0.03	1.44	1.38	0.73	Yes
J4	8	1.42%	2	1.43	0.00	1.44	1.29	0.62	Yes

WWTR LINE J  
7+00 - 13+00



WASTEWATER SEPARATION DETAIL  
N.T.S.



PIPE SEPARATION DETAIL  
N.T.S.

#### UTILITY TRENCH COMPACTION

ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET PAVEMENT SECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEO-TECHNICAL ENGINEER. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE INCHES (12") LOOSE. EACH LAYER OF MATERIAL SHALL BE COMPACTED TO A MINIMUM 95% DENSITY AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEST METHODS TEX-113-E, TEX-114-E, TEX-115-E. THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINED BY THE GEOTECHNICAL ENGINEER AND APPROVED BY THE CITY OF SEGUIN STREET INSPECTOR. AT A MINIMUM, TESTS SHALL BE TAKEN EVERY 100LF FOR EACH LIFT. UPON COMPLETION OF TESTING THE GEO-TECHNICAL ENGINEER SHALL PROVIDE THE CITY OF SEGUIN STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FILL MATERIAL HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS.

#### DEEP TRENCH COMPACTION TESTING

CITY REQUIREMENTS FOR TESTING SHALL BE ADHERED TO, IN CASES WHERE TRENCH DEPTHS DO NOT ALLOW TECHNICIANS ACCESS, METHODS FOR TESTING SHALL BE PROPOSED AND APPROVED PRIOR TO CONSTRUCTION COMMENCING.

#### CONSTRUCTION NOTES:

1. NO VALVES, HYDRANTS, CLEAN-OUTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS, OR DRIVEWAYS.
2. ALL SEWER PIPE ASTM 3034 (115 PSI) SDR 26
3. ALL MANHOLES SHALL BE 48" DIAMETER.
4. ALL RING AND COVER SHALL BE 32" DIAMETER.
5. CONTRACTOR TO FIELD VERIFY EXISTING SANITARY SEWER TIE-INS AND CONSTRUCT SEWER FROM DOWNSTREAM TO UPSTREAM.
6. ALL DIMENSIONS ARE FROM FACE OF CURB.
7. MANHOLES MUST BE BOLTED UNLESS WAIVED BY UTILITY ENGINEER.
8. ALL UTILITIES TO BE CONSTRUCTED PRIOR TO STREETS.

#### TRENCH EXCAVATION SAFETY PROTECTION

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATIONS.

REFER TO THE COVER SHEET  
FOR BENCHMARK INFORMATION.

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290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPELS FIRM F-10961  
TBPELS FIRM 1053600



WWTR LINE J  
PLAN & PROFILE

JARO NORTH UNIT 3

REVISION	DESCRIPTION	DATE
NO.		

DATE: October 25

DRAWN BY: RR

DESIGNED BY: JK

REVIEWED BY: ZJ

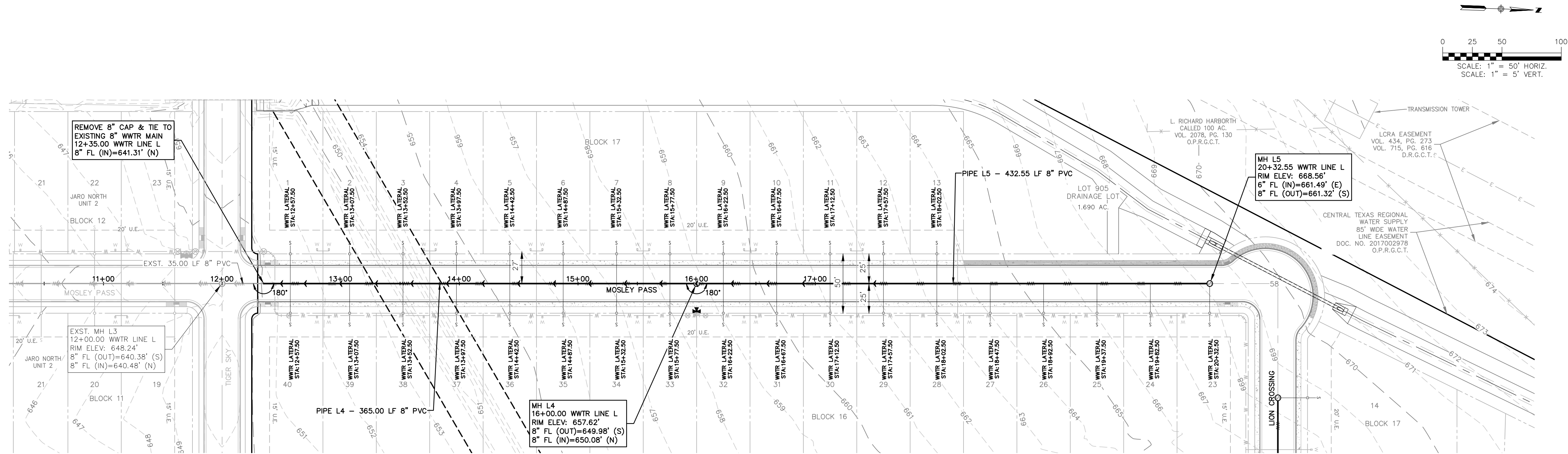
HMT PROJECT NO.:

337.102

SHEET

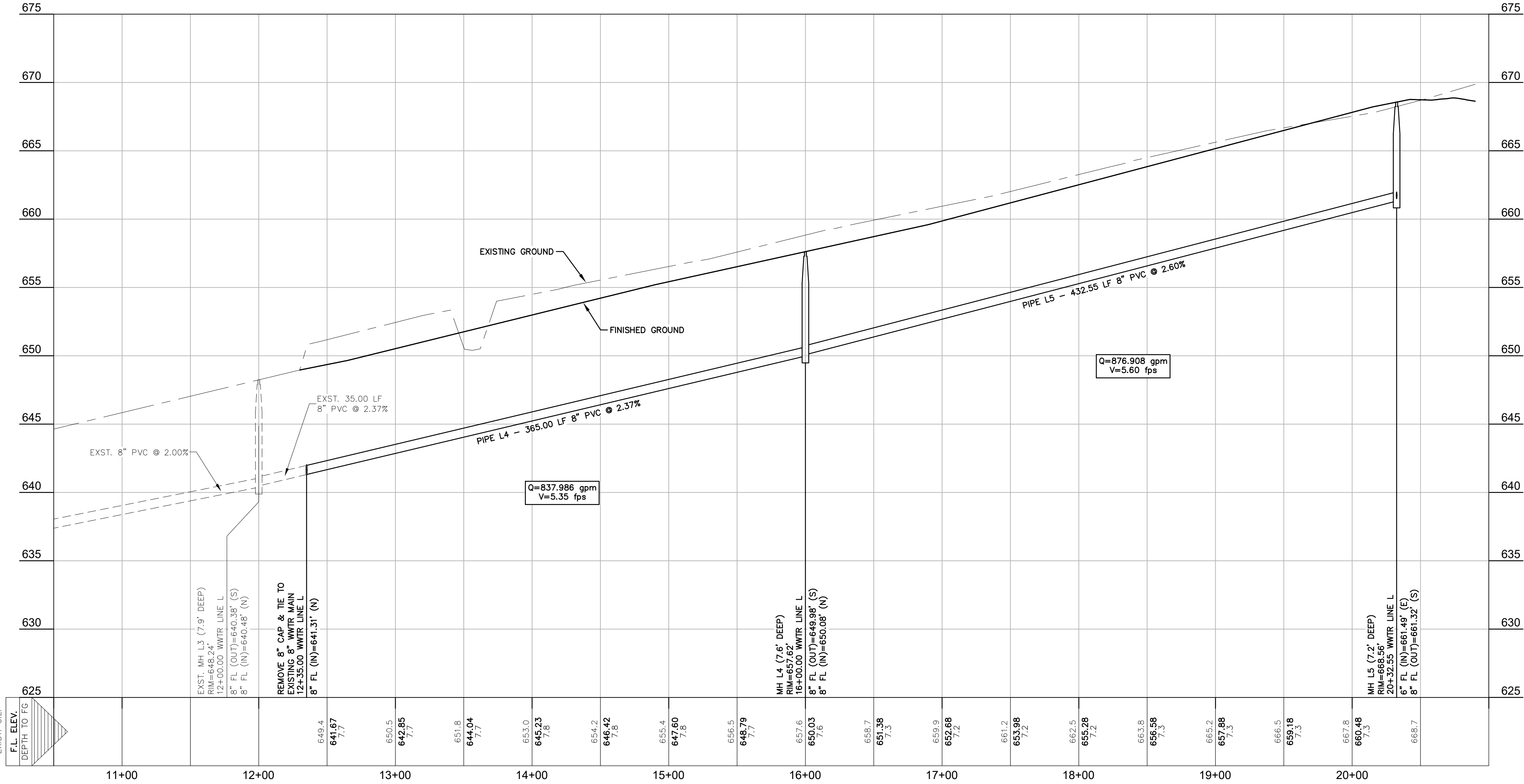
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Pipe Segment	Pipe Dia (in)	Slope	LUE	Peak Wet Flow (gpm)	Peak Wet Flow (CFS)	Pipe Capacity (CFS)	PWF V (fps)	PWF Depth (in)	Sufficient Capacity
L4	8	2.37%	31	21.46	0.05	1.87	1.83	0.77	Yes
L5	8	2.60%	15	10.53	0.02	1.95	1.82	0.68	Yes

WWTR LINE L  
10+50 - 21+00



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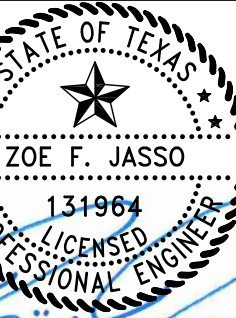
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#### LEGEND

- 700' U.E. EXISTING CONTOURS
- EXISTING WASTEWATER LINE
- PROPOSED WASTEWATER MANHOLE
- PROPOSED WASTEWATER LINE
- PROPOSED 6" WASTEWATER SERVICE
- PROPOSED 5/8" WATER SERVICE
- PROPOSED WATER LINE
- EXISTING GAS LINE
- UTILITY CROSSING
- STORM SEWER

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WWTR LINE L  
PLAN & PROFILE

JARO NORTH UNIT 3

NO.	REVISION	DESCRIPTION	REVISION DATE

DATE:	October 25
DRAWN BY:	RR
DESIGNED BY:	JK
REVIEWED BY:	ZJ
HMT PROJECT NO.:	337.102

**SHEET**  
**C7.7**



