

APPENDIX P-1: EROSION CONTROL NOTES:

- THE CONTRACTOR SHALL INSTALL EROSION/SEDIMENTATION CONTROLS, TREE/NATURAL AREA PROTECTIVE FENCING, AND CONDUCT "PRE-CONSTRUCTION" TREE FERTILIZATION (IF APPLICABLE) PRIOR TO ANY SITE PREPARATION WORK (CLEARING, GRUBBING OR EXCAVATION).
- THE PLACEMENT OF EROSION/SEDIMENTATION CONTROLS SHALL BE IN ACCORDANCE WITH THE ENVIRONMENTAL CRITERIA MANUAL AND THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN. THE COA ESC PLAN SHALL BE CONSULTED AND USED AS THE BASIS FOR A TPO'S REQUIRED SWPPP. IF A SWPPP IS REQUIRED, IT SHALL BE AVAILABLE FOR REVIEW BY THE CITY OF AUSTIN ENVIRONMENTAL INSPECTOR AT ALL TIMES DURING CONSTRUCTION, INCLUDING AT THE PRE-CONSTRUCTION MEETING.
- THE PLACEMENT OF TREE/NATURAL AREA PROTECTIVE FENCING SHALL BE IN ACCORDANCE WITH THE CITY OF AUSTIN STANDARD NOTES FOR TREE AND NATURAL AREA PROTECTION AND THE APPROVED GRADING/TREE AND NATURAL AREA PLAN.
- A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD ON-SITE WITH THE CONTRACTOR, DESIGN ENGINEER/PERMIT APPLICANT AND ENVIRONMENTAL INSPECTOR AFTER INSTALLATION OF THE EROSION/SEDIMENTATION CONTROLS, TREE/NATURAL AREA PROTECTION MEASURES AND "PRE-CONSTRUCTION" TREE FERTILIZATION (IF APPLICABLE) PRIOR TO BEGINNING ANY SITE PREPARATION WORK. THE OWNER OR OWNER'S REPRESENTATIVE SHALL NOTIFY THE DEVELOPMENT SERVICES DEPARTMENT, 512-974-2278 OR BY EMAIL AT ENVIRONMENTALINSPECTIONS@AUSTINTEXAS.GOV, AT LEAST THREE DAYS PRIOR TO THE MEETING DATE. COA APPROVED ESC PLAN AND TPO'S SWPPP (IF REQUIRED) SHOULD BE REVIEWED BY COA EV INSPECTOR AT THIS TIME.
- ANY MAJOR VARIATION IN MATERIALS OR LOCATIONS OF CONTROLS OR FENCES FROM THOSE SHOWN ON THE APPROVED PLANS WILL REQUIRE A REVISION AND MUST BE APPROVED BY THE REVIEWING ENGINEER. ENVIRONMENTAL SPECIALIST OR CITY ARBORIST AS APPROPRIATE. MAJOR REVISIONS MUST BE APPROVED BY AUTHORIZED COA STAFF. MINOR CHANGES TO BE MADE AS FIELD REVISIONS TO THE EROSION AND SEDIMENTATION CONTROL PLAN MAY BE REQUIRED BY THE ENVIRONMENTAL INSPECTOR DURING THE COURSE OF CONSTRUCTION TO CORRECT CONTROL INADEQUACIES.
- THE CONTRACTOR IS REQUIRED TO PROVIDE A CERTIFIED INSPECTOR THAT IS EITHER A LICENSED ENGINEER (OR PERSON DIRECTLY SUPERVISED BY THE LICENSED ENGINEER) OR CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL (CPESC OR CPESC - IT), CERTIFIED EROSION, SEDIMENT AND STORMWATER - INSPECTOR (CESSWI OR CESSW - IT) OR CERTIFIED INSPECTOR OF SEDIMENTATION AND EROSION CONTROLS (CISEC OR CISEC - IT) CERTIFICATION TO INSPECT THE CONTROLS AND FENCES AT WEEKLY OR BI-WEEKLY INTERVALS AND AFTER ONE-HALF (½) INCH OR GREATER RAINFALL EVENTS TO INSURE THAT THEY ARE FUNCTIONING PROPERLY. THE PERSON(S) RESPONSIBLE FOR MAINTENANCE OF CONTROLS AND FENCES SHALL IMMEDIATELY MAKE ANY NECESSARY REPAIRS TO DAMAGED AREAS. SILT ACCUMULATION AT CONTROLS MUST BE REMOVED WHEN THE DEPTH REACHES SIX (6) INCHES OR ONE-THIRD (⅓) OF THE INSTALLED HEIGHT OF THE CONTROL WHICHEVER IS LESS.
- PRIOR TO FINAL ACCEPTANCE BY THE CITY, HAUL ROADS AND WATERWAY CROSSINGS CONSTRUCTED FOR TEMPORARY CONTRACTOR ACCESS MUST BE REMOVED, ACCUMULATED SEDIMENT REMOVED FROM THE WATERWAY AND THE AREA RESTORED TO THE ORIGINAL GRADE AND REVEGETATED. ALL LAND CLEARING DEBRIS SHALL BE DISPOSED OF IN APPROVED SOIL DISPOSAL SITES.
- ALL WORK MUST STOP IF A VOID IN THE ROCK SUBSTRATE IS DISCOVERED WHICH IS: ONE SQUARE FOOT IN TOTAL AREA, BLOWS AIR FROM WITHIN THE SUBSTRATE, RECEIVES WATER DURING ANY RAIN EVENT, AT THIS TIME IT IS THE RESPONSIBILITY OF THE PROJECT MANAGER TO IMMEDIATELY CONTACT A CITY OF AUSTIN ENVIRONMENTAL INSPECTOR FOR FURTHER INVESTIGATION. IN ADDITION, IF THE PROJECT SITE IS LOCATED WITHIN THE EDWARDS AQUIFER, THE PROJECT MANAGER MUST NOTIFY THE TRAVIS COUNTY GALCONES CANYONLANDS CONSERVATION PRESERVE (BCOP) BY EMAIL AT BCOP@TRAVISCOUNTYTX.GOV. CONSTRUCTION ACTIVITIES WITHIN 50 FEET OF THE VOID MUST STOP.
- TEMPORARY AND PERMANENT EROSION CONTROL: ALL DISTURBED AREAS SHALL BE RESTORED AS NOTED BELOW.
 - ALL DISTURBED AREAS TO BE REVEGETATED ARE REQUIRED TO PLACE A MINIMUM OF SIX (6) INCHES OF TOPSOIL [SEE STANDARD SPECIFICATION ITEM NO. 6015.3(A)] DO NOT ADD TOPSOIL WITHIN THE CRITICAL ROOT ZONE OF EXISTING TREES.
 - TOPSOIL SALVAGED FROM THE EXISTING SITE IS ENCOURAGED FOR USE, BUT IT SHOULD MEET THE STANDARDS SET FORTH IN 6015.
 - AN OWNER/ENGINEER MAY PROPOSE USE OF ONSITE SALVAGED TOPSOIL WHICH DOES NOT MEET THE CRITERIA OF STANDARD SPECIFICATION 6015 BY PROVIDING A SOIL ANALYSIS AND A WRITTEN STATEMENT FROM A QUALIFIED PROFESSIONAL IN SOILS, LANDSCAPE ARCHITECTURE, OR AGRONOMY INDICATING THE ONSITE TOPSOIL IS EQUIVALENT TO AN EQUIVALENT GROWTH MEDIA AND SPECIFYING WHAT, IF ANY, SOIL AMENDMENTS ARE REQUIRED.
 - SOIL AMENDMENTS SHALL BE WORKED INTO THE EXISTING ONSITE TOPSOIL WITH A DISC OR TILLER TO CREATE A WELL-BLENDED MATERIAL.

THE VEGETATIVE STABILIZATION OF AREAS DISTURBED BY CONSTRUCTION SHALL BE AS FOLLOWS:

- TEMPORARY VEGETATIVE STABILIZATION:
- FROM SEPTEMBER 15 TO MARCH 1, SEEDING SHALL BE WITH OR INCLUDE A COOL SEASON COVER CROP (WESTERN WHEATGRASS (PASCOPYRUM SMITHII) AT 5.6 POUNDS PER ACRE, OATS (AVENA SATIVA) AT 4.0 POUNDS PER ACRE, CEREAL RYE GRASS (SECALE CEREALE) AT 45 POUNDS PER ACRE. CONTRACTOR MUST ENSURE THAT ANY SEED APPLICATION REQUIRING A COOL SEASON COVER CROP DOES NOT UTILIZE ANNUAL RYEGRASS (LOLIUM MULTIFLORUM) OR PERENNIAL RYEGRASS (LOLIUM PERENNE). COOL SEASON COVER CROPS ARE NOT PERMANENT EROSION CONTROL.
 - FROM MARCH 2 TO SEPTEMBER 14, SEEDING SHALL BE HULLED WHEATGRASS AT A RATE OF 45 POUNDS PER ACRE OR A NATIVE PLANT SEED MIX CONFORMING TO ITEMS 604S OR 609S.
 - FERTILIZER SHALL BE APPLIED ONLY IF WARRANTED BY A SOIL TEST AND SHALL CONFORM TO ITEM NO. 606S. FERTILIZER FERTILIZATION SHOULD NOT OCCUR WHEN RAINFALL IS EXPECTED OR DURING SLOW PLANT GROWTH OR DORMANCY. QUANTITIES OF FERTILIZER MAY NOT BE APPLIED IN THE CRITICAL WATER QUALITY ZONE.
 - HYDROMULCH SHALL COMPLY WITH TABLE 1, BELOW.
 - TEMPORARY EROSION CONTROL SHALL BE ACCEPTABLE WHEN THE GRASS HAS GROWN AT LEAST 1½ INCHES HIGH WITH A MINIMUM OF 95% TOTAL COVERAGE SO THAT ALL AREAS OF A SITE THAT RELY ON VEGETATION FOR TEMPORARY STABILIZATION ARE UNIFORMLY VEGETATED, AND PROVIDED THERE ARE NO BARE SPOTS LARGER THAN 10 SQUARE FEET.
 - WHEN REQUIRED, NATIVE PLANT SEEDING SHALL COMPLY WITH REQUIREMENTS OF THE CITY OF AUSTIN ENVIRONMENTAL CRITERIA MANUAL, AND STANDARD SPECIFICATIONS 604S OR 609S.

TABLE 1: HYDROMULCHING FOR TEMPORARY VEGETATIVE STABILIZATION

MATERIAL	DESCRIPTION	LONGEVITY	TYPICAL APPLICATIONS	APPLICATION RATES
100% OR ANY BLEND OF WOOD, CELLULOSE, STRAW, AND/OR COTTON PLANT MATERIAL (EXCEPT NO MULCH SHALL EXCEED 30% PAPER)	70% OR GREATER WOOD/STRAW	0-3 MONTHS	MODERATE SLOPES; FROM FLAT TO 3:1	1500 TO 2000 LBS/ACRE
	30% OR LESS PAPER OR NATURAL FIBERS			

PERMANENT VEGETATIVE STABILIZATION:

- FROM SEPTEMBER 15 TO MARCH 1, SEEDING IS CONSIDERED TO BE TEMPORARY STABILIZATION ONLY. IF COOL SEASON COVER CROPS EXIST WHERE PERMANENT VEGETATIVE STABILIZATION IS DESIRED, THE GRASSES SHALL BE MOVED TO A HEIGHT OF LESS THAN ONE-HALF (½) INCH AND THE AREA SHALL BE RE-SEEDING IN ACCORDANCE WITH TABLE 2 BELOW. ALTERNATIVELY, THE COOL SEASON COVER CROP CAN BE MIXED WITH BERMUDAGRASS OR NATIVE SEED AND INSTALLED TOGETHER, UNDERSTANDING THAT GERMINATION OF WARM-SEASON SEED TYPICALLY REQUIRES SOIL TEMPERATURES OF 60 TO 70 DEGREES.
- FROM MARCH 2 TO SEPTEMBER 14, SEEDING SHALL BE WITH HULLED BERMUDA AT A RATE OF 45 POUNDS PER ACRE WITH A PURITY OF 95% AND A MINIMUM PURE LIVE SEED (PLS) OF 0.83. BERMUDA GRASS IS A WARM SEASON GRASS AND IS CONSIDERED PERMANENT EROSION CONTROL. PERMANENT VEGETATIVE STABILIZATION CAN ALSO BE ACCOMPLISHED WITH A NATIVE PLANT SEED MIX CONFORMING TO ITEMS 604S OR 609S.
 - FERTILIZER USE SHALL FOLLOW THE RECOMMENDATION OF A SOIL TEST. SEE ITEM 606S, FERTILIZER, APPLICATIONS OF FERTILIZER (AND PESTICIDE) ON CITY-OWNED AND MANAGED PROPERTY REQUIRES THE YEARLY SUBMITTAL OF A FERTILIZER AND PESTICIDE APPLICATION RECORD, ALONG WITH A CURRENT COPY OF THE APPLICATOR'S LICENSE. FOR CURRENT COPY OF THE RECORD TEMPLATE CONTACT THE CITY OF AUSTIN'S IPM COORDINATOR.
 - HYDROMULCH SHALL COMPLY WITH TABLE 2, BELOW.
- WATER THE SEEDED AREAS IMMEDIATELY AFTER INSTALLATION TO ACHIEVE GERMINATION AND A HEALTHY STAND OF PLANTS THAT CAN ULTIMATELY SURVIVE WITHOUT SUPPLEMENTAL WATER. APPLY THE WATER UNIFORMLY TO THE PLANTED AREAS WITHOUT CAUSING DISPLACEMENT OR EROSION OF THE MATERIALS OR SOIL. MAINTAIN THE SEEDBED IN A MOST CONDITION FAVORABLE FOR PLANT GROWTH. ALL WATERING SHALL COMPLY WITH CITY CODE CHAPTER 6-4 (WATER CONSERVATION), AT RATES AND FREQUENCIES DETERMINED BY A LICENSED IRRIGATOR OR OTHER QUALIFIED PROFESSIONAL, AND AS ALLOWED BY THE AUSTIN WATER UTILITY AND CURRENT WATER RESTRICTIONS AND WATER CONSERVATION INITIATIVES.
- PERMANENT EROSION CONTROL SHALL BE ACCEPTABLE WHEN THE GRASS HAS GROWN AT LEAST 1½ INCHES HIGH WITH A MINIMUM OF 95 PERCENT FOR THE NON-NATIVE MIX, AND 95 PERCENT COVERAGE FOR THE NATIVE MIX SO THAT ALL AREAS OF A SITE THAT RELY ON VEGETATION FOR STABILITY MUST BE UNIFORMLY VEGETATED, AND PROVIDED THERE ARE NO BARE SPOTS LARGER THAN 10 SQUARE FEET.
- WHEN REQUIRED, NATIVE PLANT SEEDING SHALL COMPLY WITH REQUIREMENTS OF THE CITY OF AUSTIN ENVIRONMENTAL CRITERIA MANUAL, ITEMS # 604S AND 609S.

TABLE 2: HYDROMULCHING FOR PERMANENT VEGETATIVE STABILIZATION

MATERIAL	DESCRIPTION	LONGEVITY	TYPICAL APPLICATIONS	APPLICATION RATES
BONDED FIBER MATRIX (BFM)	80% ORGANIC DEBRATED FIBERS	6 MONTHS	ON SLOPES UP TO 2:1 AND EROSION-SOIL TOPSACKER	2500 TO 4000 LBS/ACRE
FIBER REINFORCED MATRIX (FRM)	65% ORGANIC DEBRATED FIBERS 15% REINFORCING FIBERS OR LESS 10% TACKIFIER	UP TO 12 MONTHS	ON SLOPES UP TO 1:1 AND EROSION-SOIL CONDITIONS	3000 TO 4500 LBS/ACRE

10. DEVELOPER INFORMATION:

OWNER
PFLUGER WR & MC & PFLUGER SPOUSAL PHONE #
ADDRESS: 2133 OFFICE PARK DRIVE, SAN ANGELO, TEXAS 76904
OWNER'S REPRESENTATIVE RESPONSIBLE FOR PLAN ALTERATIONS:
GARZAEMC, LLC PHONE #512-298-3284
PERSON OR FIRM RESPONSIBLE FOR EROSION/SEDIMENTATION CONTROL MAINTENANCE:
GENERATIONAL COMMERCIAL PROPERTIES PHONE 512-853-9650
PERSON OR FIRM RESPONSIBLE FOR TREE/NATURAL AREA PROTECTION MAINTENANCE:
GENERATIONAL COMMERCIAL PROPERTIES PHONE 512-853-9650

- THE CONTRACTOR SHALL NOT DISPOSE OF SURPLUS EXCAVATED MATERIAL FROM THE SITE WITHOUT NOTIFYING THE PLANNING AND DEVELOPMENT REVIEW DEPARTMENT AT 974-2278 AT LEAST 48 HOURS PRIOR WITH THE LOCATION AND A COPY OF THE PERMIT ISSUED TO RECEIVE THE MATERIAL.

DEWATERING

PART 1 - GENERAL

- SUMMARY
 - SECTION INCLUDES CONSTRUCTION DEWATERING.
- PREINSTALLATION MEETINGS
 - PREINSTALLATION CONFERENCE: CONDUCT CONFERENCE AT 16TH STREET AND SAN ANTONIO STREET, AUSTIN, TEXAS.
- VERIFY AVAILABILITY OF INSTALLER'S PERSONNEL, EQUIPMENT, AND FACILITIES NEEDED TO MAKE PROGRESS AND AVOID DELAYS.
- REVIEW CONDITION OF SITE TO BE DEWATERED INCLUDING COORDINATION WITH TEMPORARY EROSION-CONTROL MEASURES AND TEMPORARY CONTROLS AND PROTECTIONS.
- REVIEW GEOTECHNICAL REPORT.
- REVIEW PROPOSED SITE CLEARING AND EXCAVATIONS.
- REVIEW EXISTING UTILITIES AND SUBSURFACE CONDITIONS.
- REVIEW OBSERVATION AND MONITORING OF DEWATERING SYSTEM.

1. ACTION SUBMITTALS

- A-SHOP DRAWINGS: FOR DEWATERING SYSTEM, PREPARED BY OR UNDER THE SUPERVISION OF A QUALIFIED PROFESSIONAL ENGINEER.
- INCLUDE PLANS, ELEVATIONS, SECTIONS, AND DETAILS.
- SHOW ARRANGEMENT, LOCATIONS, AND DETAILS OF WELLS AND WELL POINTS; LOCATION OF RISERS, HEADERS, FILTERS, PUMPS, POWER UNITS, AND DISCHARGE LINES; AND MEANS OF DISCHARGE, CONTROL OF SEDIMENT, AND DISPOSAL OF WATER.
- INCLUDE LAYOUTS OF PIEZOMETERS AND FLOW-MEASURING DEVICES FOR MONITORING PERFORMANCE OF DEWATERING SYSTEM.
- INCLUDE WRITTEN PLAN FOR DEWATERING OPERATIONS INCLUDING SEQUENCE OF WELL AND WELL-POINT PLACEMENT COORDINATED WITH EXCAVATION SHORINGS AND BRACINGS AND CONTROL PROCEDURES TO BE ADOPTED IF DEWATERING PROBLEMS ARISE.
- INFORMATIONAL SUBMITTALS
 - FIELD QUALITY-CONTROL REPORTS.
- EXISTING CONDITIONS: USING PHOTOGRAPHS OR VIDEO RECORDINGS, SHOW EXISTING CONDITIONS OF ADJACENT CONSTRUCTION AND SITE IMPROVEMENTS THAT MIGHT BE MISCONSTRUED AS DAMAGE CAUSED BY DEWATERING OPERATIONS. SUBMIT BEFORE WORK BEGINS.
- RECORD DRAWINGS: IDENTIFY LOCATIONS AND DEPTHS OF CAPPED WELLS AND WELL POINTS AND OTHER ABANDONED-IN-PLACE DEWATERING EQUIPMENT.

1.5 QUALITY INSURANCE

- INSTALLER QUALIFICATIONS: AN EXPERIENCED INSTALLER THAT HAS SPECIALIZED IN DESIGN OF DEWATERING SYSTEMS AND DEWATERING WORK.
- FIELD CONDITIONS
 - PROJECT-SITE INFORMATION: A GEOTECHNICAL REPORT HAS BEEN PREPARED FOR THIS PROJECT AND IS AVAILABLE FOR INFORMATION ONLY. THE OPINIONS EXPRESSED IN THIS REPORT ARE THOSE OF A GEOTECHNICAL ENGINEER AND REPRESENT INTERPRETATIONS OF SUBSOIL CONDITIONS, TESTS, AND RESULTS OF ANALYSES CONDUCTED BY A GEOTECHNICAL ENGINEER. OWNER IS NOT RESPONSIBLE FOR INTERPRETATIONS OF CONCLUSIONS DRAWN FROM THIS DATA.

- MAKE ADDITIONAL TEST BORINGS AND CONDUCT OTHER EXPLORATORY OPERATIONS NECESSARY FOR DEWATERING ACCORDING TO THE PERFORMANCE REQUIREMENTS.
- THE GEOTECHNICAL REPORT IS INCLUDED ELSEWHERE IN PROJECT MANUAL.
- SURVEY WORK: EMPLOY A QUALIFIED LAND SURVEYOR OR PROFESSIONAL ENGINEER TO SURVEY ADJACENT EXISTING BUILDINGS, STRUCTURES, AND SITE IMPROVEMENTS; ESTABLISH EXACT ELEVATIONS AT FIXED POINTS TO ACT AS BENCHMARKS; CLEARLY IDENTIFY BENCHMARKS AND RECORD EXISTING ELEVATIONS.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A DEWATERING PERFORMANCE: DESIGN, FURNISH, INSTALL, TEST, OPERATE, MONITOR, AND MAINTAIN DEWATERING SYSTEM OF SUFFICIENT SCOPE, SIZE, AND CAPACITY TO CONTROL HYDROSTATIC PRESSURES AND TO LOWER, CONTROL, REMOVE, AND DISPOSE OF GROUND WATER AND PERMIT EXCAVATION AND CONSTRUCTION TO PROCEED ON DRY, STABLE SUBGRADE.
- DESIGN DEWATERING SYSTEM, INCLUDING COMPREHENSIVE ENGINEERING ANALYSIS BY A QUALIFIED PROFESSIONAL ENGINEER.
- CONTINUOUSLY MONITOR AND MAINTAIN DEWATERING OPERATIONS TO ENSURE EROSION CONTROL, STABILITY OF EXCAVATIONS, PREVENTED SLOPES, PREVENTION OF FLOODING IN EXCAVATION, AND PREVENTION OF DAMAGE TO SUBGRADES AND PERMANENT STRUCTURES.
- PREVENT SURFACE WATER FROM ENTERING EXCAVATION BY GRADINGS, DIKES, OR OTHER MEANS.
- ACCOMPLISH DEWATERING WITHOUT DAMAGING EXISTING BUILDINGS, STRUCTURES, AND SITE IMPROVEMENTS OR EQUIPMENT. CAUTION TO EXCAVATE AND NOT TO UTILIZE ANNUAL RYEGRASS (LOLIUM MULTIFLORUM) OR PERENNIAL RYEGRASS (LOLIUM PERENNE).
- REMOVE DEWATERING SYSTEM WHEN NO LONGER REQUIRED FOR CONSTRUCTION.
- REGULATORY REQUIREMENTS: COMPLY WITH GOVERNING EPA NOTIFICATION REGULATIONS BEFORE BEGINNING DEWATERING. COMPLY WITH WATER- AND DEBRIS-DISPOSAL REGULATIONS OF THE CITY OF AUSTIN.

PART 3 - EXECUTION

- PREPARATION
 - PROTECT STRUCTURES, UTILITIES, SIDEWALKS, PAVEMENTS, AND OTHER FACILITIES FROM DAMAGE CAUSED BY SETTLEMENT, LATERAL MOVEMENT, UNDERMINING, WASHOUT AND OTHER HAZARDS CREATED BY DEWATERING OPERATIONS.
- PREVENT SURFACE WATER AND SUBSURFACE OR GROUND WATER FROM ENTERING EXCAVATIONS, FROM PONDING ON PREPARED SUBGRADES, AND FROM FLOODING SITE OR SURROUNDING AREA.
- PROTECT SUBGRADES AND FOUNDATION SOILS FROM SOFTENING AND DAMAGE BY RAIN OR WATER ACCUMULATION.
 - INSTALL DEWATERING SYSTEM TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, WALKS, AND OTHER ADJACENT OCCUPIED AND USED FACILITIES.

- DO NOT CLOSE OR OBSTRUCT STREETS, WALKS, OR OTHER ADJACENT OCCUPIED OR USED FACILITIES WITHOUT PERMISSION FROM OWNER AND AUTHORITIES. PROVIDE ALTERNATE ROUTES THROUGH AREAS CLOSED OR OBSTRUCTED TRAFFIC WAYS IF REQUIRED BY AUTHORITIES HAVING JURISDICTION.
- PROVIDE TEMPORARY GRADING TO FACILITIES DEWATERING AND CONTROL OF SURFACE WATER.
- PROTECT AND MAINTAIN TEMPORARY EROSION AND SEDIMENTATION CONTROLS, WHICH ARE SPECIFIED IN SECTION 311000 "SITE CLEARING", AND REFLECTED IN THE CIVIL DOCUMENTS DURING DEWATERING OPERATIONS.

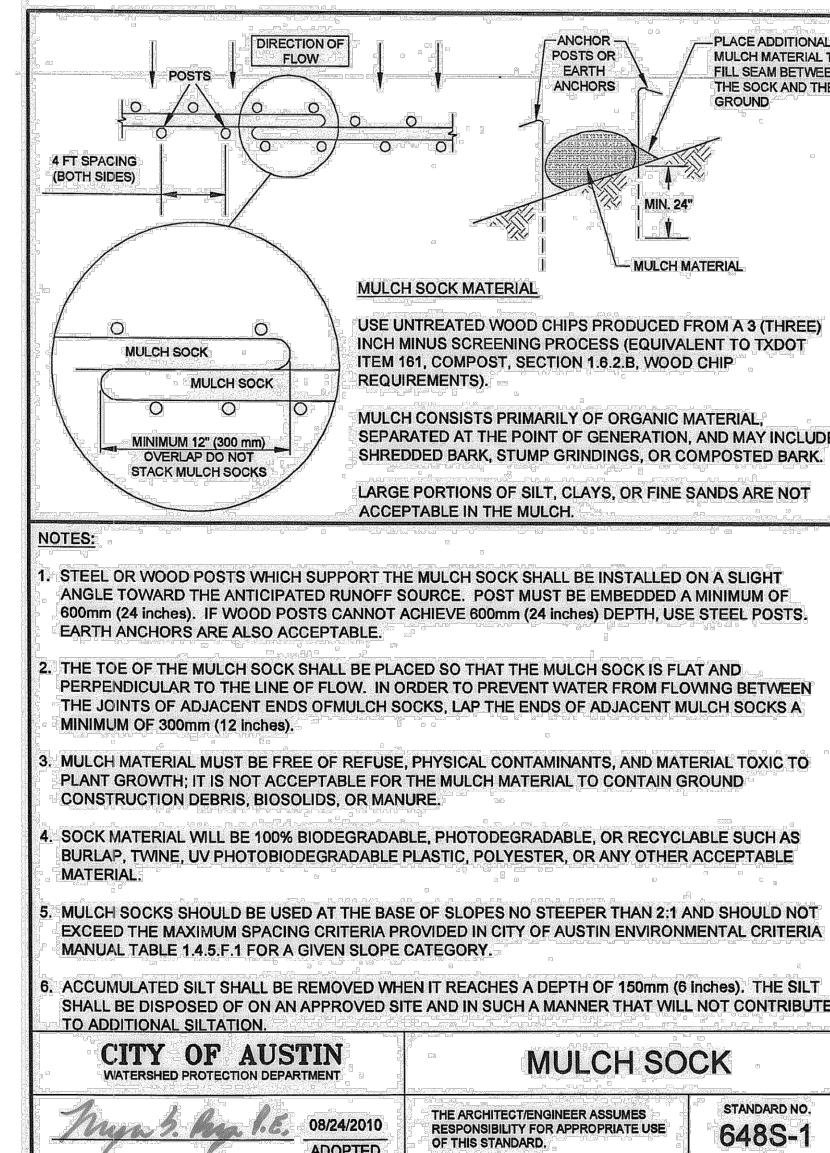
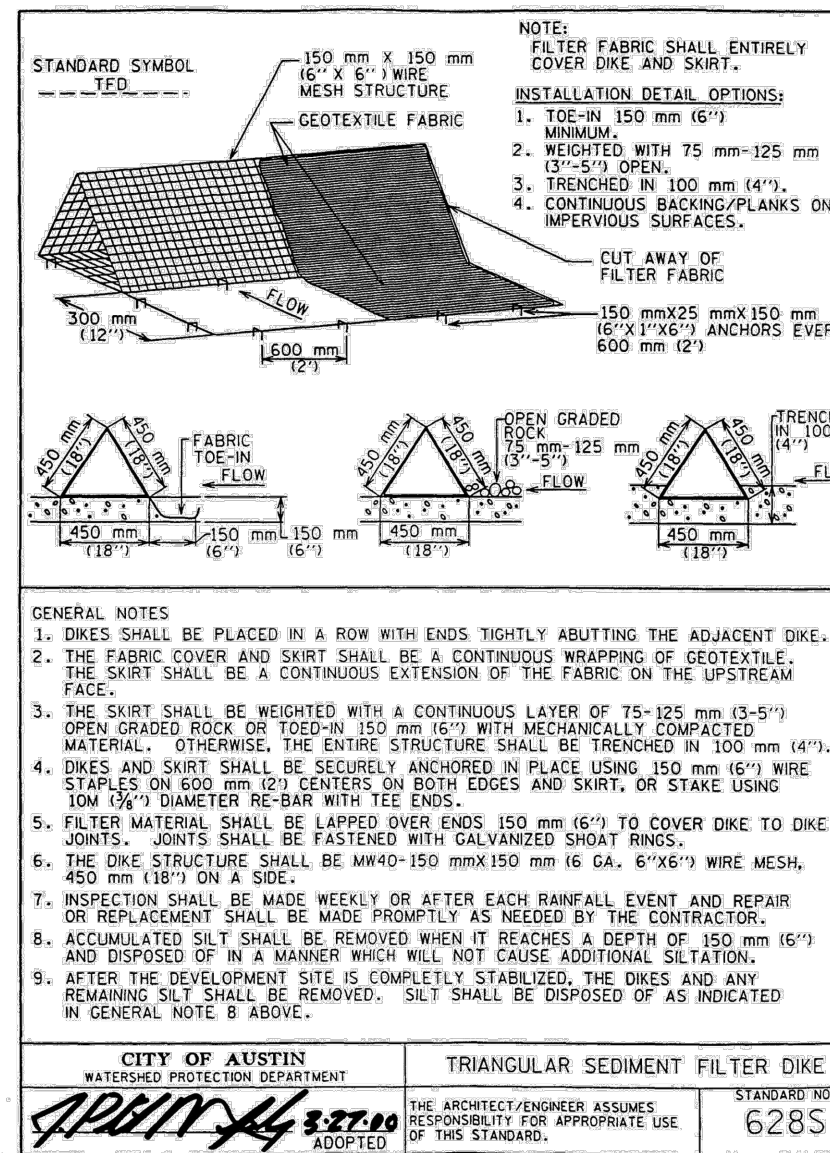
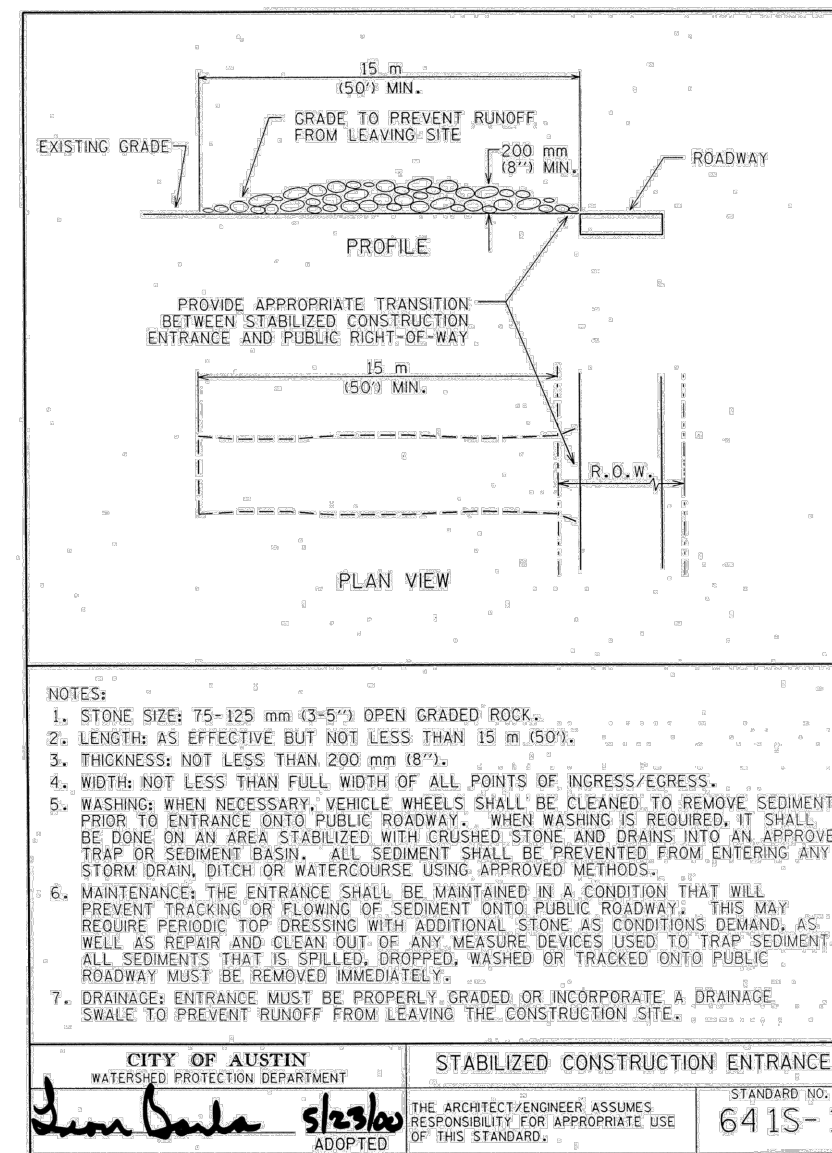
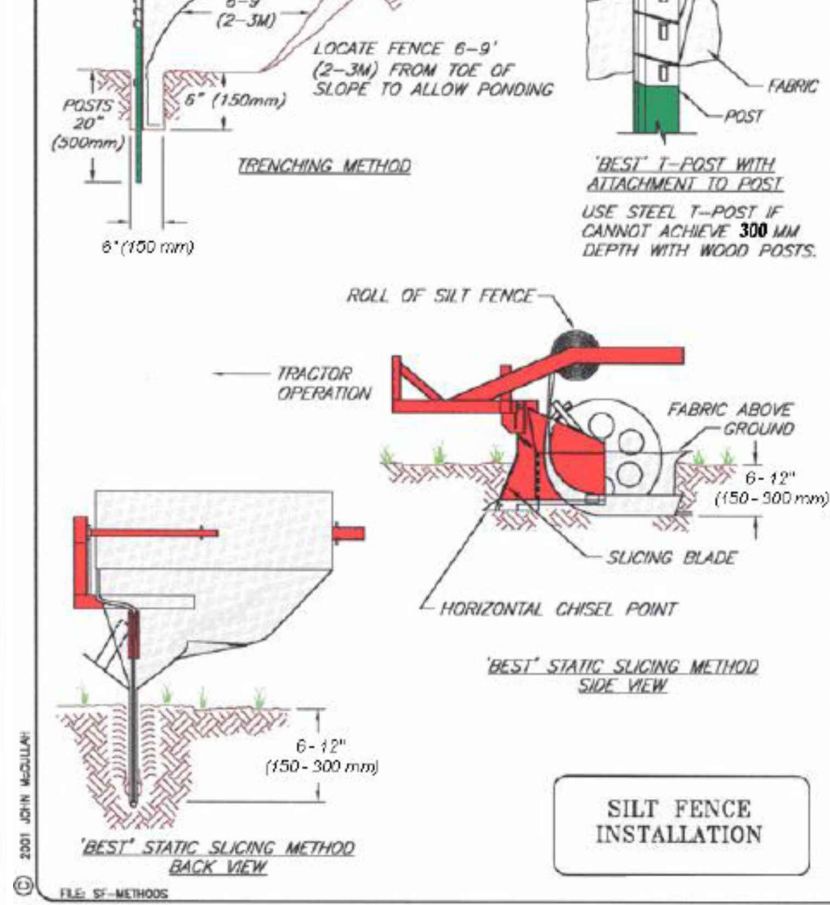
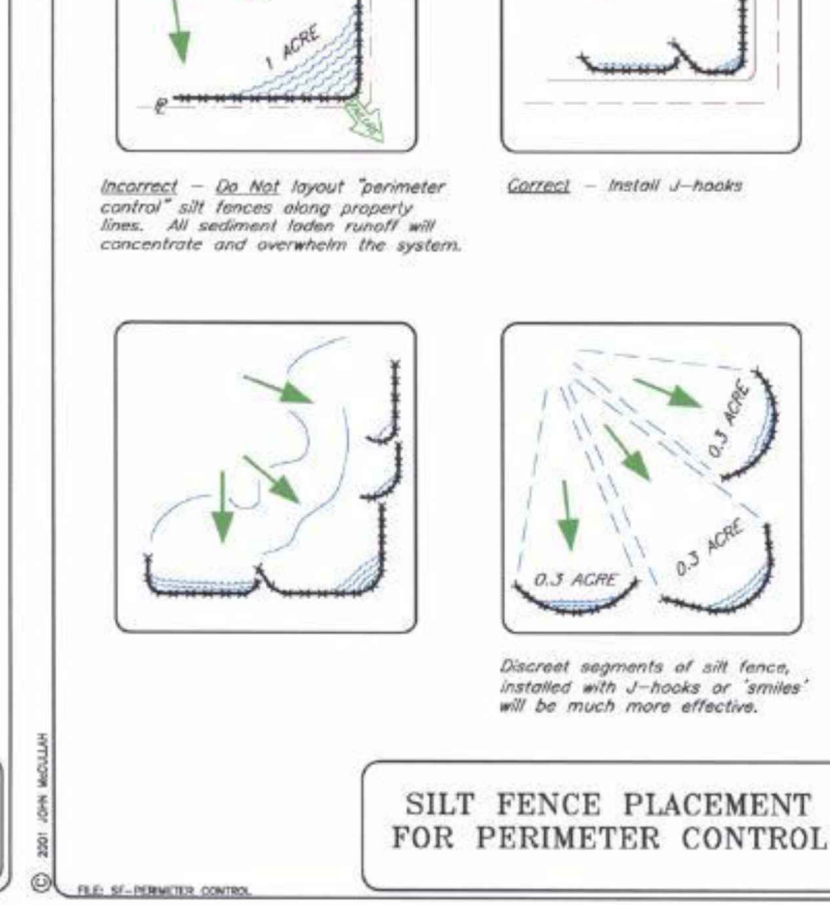
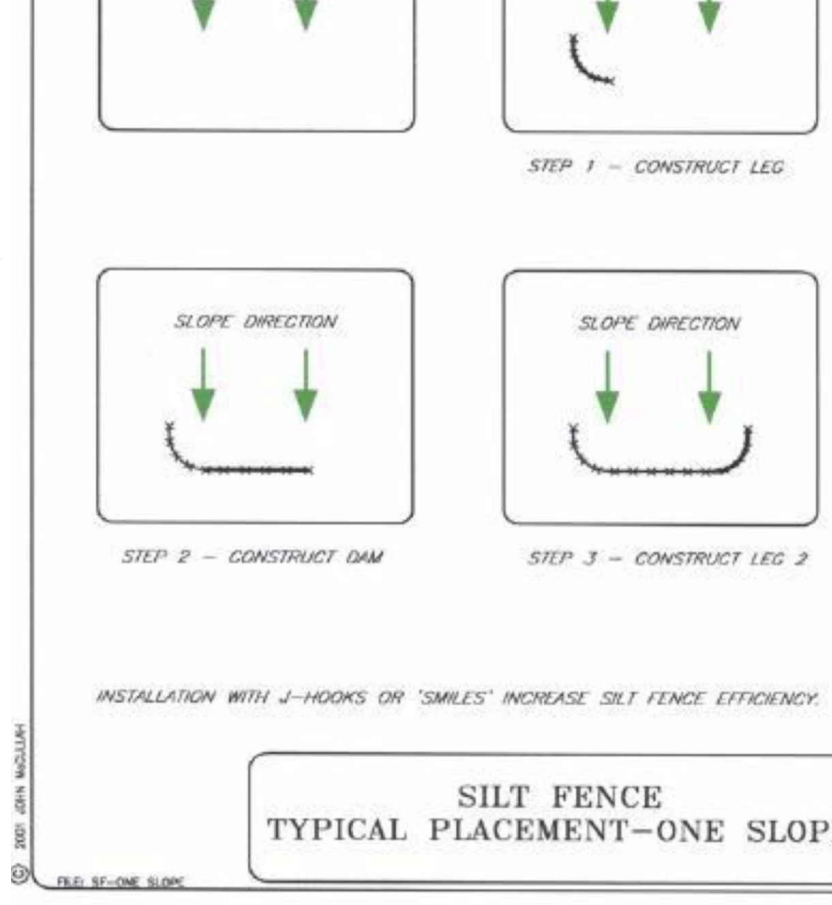
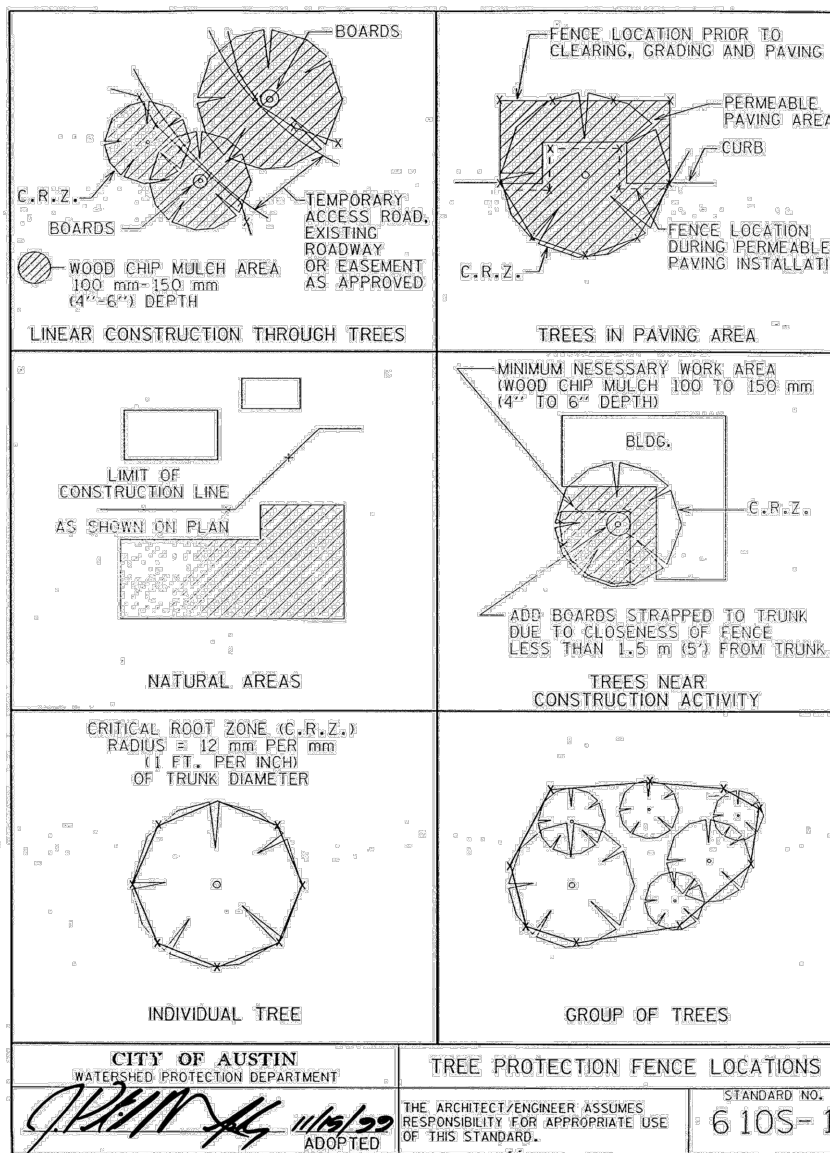
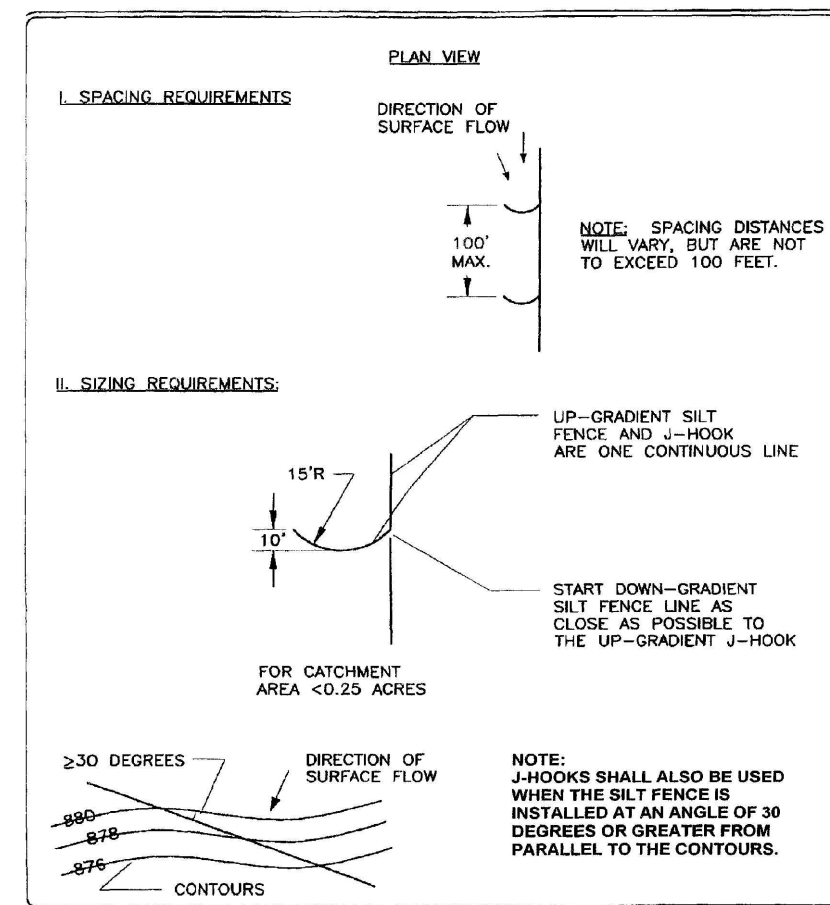
3.2 INSTALLATION

- SPACE WELL POINTS OR RISERS AT INTERVALS REQUIRED TO PROVIDE SUFFICIENT DEWATERING.
- USE FILTERS OR OTHER MEANS TO PREVENT PUMPING OF LINE SANDS OR SILTS FROM THE SUBSURFACE.
- PLACE DEWATERING SYSTEM INTO OPERATION TO LOWER WATER TO SPECIFIED LEVELS TO SPECIFIED LEVELS BEFORE EXCAVATING BELOW GROUND-WATER LEVEL.
- PROVIDE SUMPS, SEDIMENTATION TANKS, AND OTHER FLOW-CONTROL DEVICES AS REQUIRED BY AUTHORITIES HAVING JURISDICTION.
- PROVIDE STANDBY EQUIPMENT ON-SITE, INSTALLED AND AVAILABLE FOR IMMEDIATE OPERATION, TO MAINTAIN DEWATERING ON CONTINUOUS BASIS IF ANY PART OF SYSTEM BECOMES INADEQUATE OR FAILS.
- OPERATION
 - OPERATE SYSTEM CONTINUOUSLY UNTIL DRAINS, SEWERS, AND STRUCTURES HAVE BEEN CONSTRUCTED AND FILL MATERIALS HAVE BEEN PLACED OR UNTIL DEWATERING IS NO LONGER REQUIRED.
 - OPERATE SYSTEM TO LOWER AND CONTROL GROUND WATER TO PERMIT EXCAVATION, CONSTRUCTION OF STRUCTURES, AND PLACEMENT OF FILL MATERIALS ON DRY SUBGRADES. DRAIN WATER-BEARING STRATA ABOVE AND BELOW BOTTOM OF FOUNDATIONS, DRAINS, SEWERS, AND OTHER EXCAVATIONS.
- DO NOT PERMIT OPEN-SUMP PUMPING THAT LEADS TO LOSS OF FINES, SOIL POPPING, SUBGRADE SOFTENING, AND SLOPE INSTABILITY.
- REDUCE HYDROSTATIC HEAD IN WATER-BEARING STRATA BELOW SUBGRADE ELEVATIONS OF FOUNDATIONS, DRAINS, SEWERS, AND OTHER EXCAVATIONS.
- DISPOSE OF WATER REMOVED BY DEWATERING IN A MANNER THAT AVOIDS ENDANGERING PUBLIC HEALTH, PROPERTY, AND PORTIONS OF WORK UNDER CONSTRUCTION OR COMPLETED. DISPOSE OF WATER AND SEDIMENT IN A MANNER THAT AVOIDS INCONVENIENCE TO OTHERS.
- REMOVE DEWATERING SYSTEM FROM PROJECT SITE ON COMPLETION OF DEWATERING. PLUG OR FILL WELL HOLES WITH SAND OR CUT OFF AND CAP WELLS A MINIMUM OF 36 INCHES BELOW OVERLYING CONSTRUCTION.

- FIELD QUALITY CONTROL
 - OBSERVATION WELLS: PROVIDE OBSERVATION WELLS OR PIEZOMETERS, TAKE MEASUREMENTS, AND MAINTAIN AT LEAST THE MINIMUM NUMBER INDICATED; ADDITIONAL OBSERVATION WELLS MAY BE REQUIRED TO AUTHORITIES HAVING JURISDICTION.
- OBSERVE AND RECORD DAILY ELEVATION OF GROUND WATER AND PIEZOMETRIC WATER LEVELS IN OBSERVATION WELLS.
- REPAIR OR REPLACE, WITHIN 24 HOURS, OBSERVATION WELLS THAT BECOME INACTIVE, DAMAGED, OR DESTROYED. IN AREAS WHERE OBSERVATION WELLS ARE NOT FUNCTIONING PROPERLY, SURFACING CONSTRUCTION ACTIVITIES UNTIL RELIABLE OBSERVATIONS CAN BE MADE. ADD OR REMOVE WATER FROM OBSERVATION-WELL ROSETTS TO DEMONSTRATE THAT OBSERVATION WELLS ARE FUNCTIONING PROPERLY.
- FILL OBSERVATION WELLS, REMOVE PIEZOMETERS, AND FILL HOLES WHEN DEWATERING IS COMPLETED.
- SURVEY-WORK BENCHMARKS: RESURVEY BENCHMARKS (WEEKLY) DURING DEWATERING AND MAINTAIN AN ACCURATE LOG OF SURVEYED ELEVATIONS FOR COMPARISON WITH ORIGINAL ELEVATIONS. PROMPTLY NOTIFY ARCHITECT IF CHANGES IN ELEVATIONS OCCUR OR IF CRACKS, SAGS, OR OTHER DAMAGE IS EVIDENT IN ADJACENT CONSTRUCTION.
- PROVIDE CONTINUAL OBSERVATION TO ENSURE THAT SUBSURFACE SOILS ARE NOT BEING REMOVED BY THE DEWATERING OPERATION.
- PREPARE REPORTS OF OBSERVATIONS.

3.5 PROTECTION

- PROTECT AND MAINTAIN DEWATERING SYSTEM DURING DEWATERING OPERATIONS.
- PROMPTLY REPAIR DAMAGES TO ADJACENT FACILITIES CAUSED BY DEWATERING.



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PFLUGER WR & MC & PFLUGER SPOUSAL

CITY OF AUSTIN
APPROVED
DATE 12/17/2021
J. D. Mankowski

PROJECT NO.: 113598-00002