# PWSD#2 NOTES

- 1. ALL WATER MAINS, VALVES, FITTINGS, HYDRANTS, AND RELATED ITEMS ARE TO BE INSTALLED IN ACCORDANCE WITH THE CURRENT PWSD#2 OF ST. CHARLES COUNTY GUIDELINES AND
- SPECIFICATIONS AS APPROVED BY MODNR REVIEW NO. 6050805-13 2. PWSD#2 REQUIRES ONE (1) WEEK NOTICE BEFORE THE START OF CONSTRUCTION
- 3. ALL METER PITS MUST BE INSTALLED IN GREEN SPACE PER PWSD#2 SPECIFICATIONS 4. ALL FIRE HYDRANTS MUST BE PAINTED CHROME YELLOW PER PWSD#2 SPECIFICATIONS
- 5. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY CITY OR MODOT PERMITS NECESSARY TO WORK ALONG THE ROADWAYS. COPIES OF THESE PERMITS MUST BE PROVIDED TO THE PWSD#2 PRIOR TO ANY CONSTRUCTION.
- 6. ALL OFFSITE RESTORATION MUST BE RESTORED WITH SOD UNLESS OTHERWISE REQUESTED BY THE PROPERTY OWNER.
- 7. THE TWO (2) CONNECTIONS TO EXISTING WATER MAIN MUST BE CONNECTED PER THE PWSD#2 SPECIFICATION.
- 8. C 900 DR 18 PVC IS REQUIRED FOR ALL WATER MAINS.

## CITY OF DARDENNE PRAIRIE NOTES

### PAVEMENT DETAILS

- 1. ALL PORTLAND CEMENT CONCRETE SHALL BE AN EASTERN MISSOURI PAVEMENT CONSORTIUM (EMPC) APPROVED MIX DESIGN." ADD THE FOLLOWING CONCRETE MIX SPECIFICATIONS TO THE PLANS.
- 2. ALL STREET PAVEMENT SHALL MEET 2019 EMPC CONCRETE MATERIAL SPECIFICATIONS (28-DAY COMPRESSIVE STRENGTH SHALL BE A MINIMUM OF 4,000 PSI AS DETERMINED IN ACCORDANCE WITH ACI 318).
- 3. ALL CONCRETE MIX DESIGNS SHALL BE SUBMITTED TO THE EASTERN MISSOURI PAVEMENT CONSORTIUM AND SHALL HAVE A UNIQUE NAME DESIGNATED BY THE CONCRETE SUPPLIER. THIS UNIQUE NAME MUST MATCH THE NAME ON THE CONCRETE DELIVERY TICKET OR THE CONCRETE SHALL BE REJECTED.
- 4. THE 28-DAY COMPRESSIVE STRENGTH FOR SIDEWALK CONCRETE SHALL BE 3,000 PSI (SIDEWALK CONCRETE MIX DESIGNS SHALL INCLUDE "-S" IN TITLE AND SHALL BE PRE-APPROVED BY EMPC).
- 5. MORTAR BAR EXPANSION (ASTM C1567) TESTS ARE REQUIRED. THE MORTAR BAR EXPANSION SHALL BE A MAXIMUM OF 0.1% AT 16 DAYS WHEN TESTED PER ASTM C1567. A MODIFIED ASTM C1567 MAY BE USED PROVIDED THE PROPOSED COMBINATION OF MATERIALS, CEMENT, SECONDARY CEMENTITIOUS, COARSE AGGREGATE, FINE AGGREGATE, AND WATER IS TESTED. THIS MODIFIED MORTAR BAR EXPANSION TEST MUST BE A MAXIMUM OF 0.10% AT 16 DAYS. ONE TEST MAY BE APPLIED TO ANY MIX DESIGN WHERE THE RATIO AND SOURCE OF CEMENT TO SCM AND COARSE TO FINE AGGREGATES ARE THE SAME.
- 6. WATER CEMENT RATIO SHALL NOT EXCEED 0.43. ONLY POTABLE WATER SHALL BE USED. THE MINIMUM WATER CEMENT RATIO SHALL BE 0.28.
- 7. AIR ENTRAINMENT SHALL MEET THE REQUIREMENTS SET FORTH IN THE CURRENT ASTM C260. THE PERCENTAGE OF AIR CONTENT BY VOLUME SHALL BE 6.5% PLUS/MINUS 1.5%. MIXES SHALL BE DESIGNED FOR 6.5% AIR CONTENT.
- 8. ALL CONCRETE DELIVERIES SHALL BE ACCOMPANIED BY DOCUMENTATION WHICH INCLUDES THE PLANT NAME, DESIGN W/C RATIO, ACTUAL W/C BATCHED, BATCH WEIGHTS PER CUBIC YARD, TOTAL BATCHED WEIGHT OF ALL MATERIALS FOR QUANTITY DELIVERED, TIME BATCHED, DESIGN SLUMP, WATER WITHHELD (2) GAL/YD MAXIMUM), ALLOWABLE SLUMP RANGE, MOISTURE CORRECTION FOR AGGREGATES, AND DOSAGES OF ALL APPROVED ADMIXTURES.
- 9. ADMIXTURES: ALL ADMIXTURES PROPOSED FOR USE IN THE EMPC CONCRETE SHALL BE LISTED ON THE MODOT PAL. CONCRETE MIXES APPROVED FOR USE ON PROJECTS SHALL INCLUDE REQUIRED ADMIXTURES IN ACCORDANCE WITH THE CURRENTLY APPROVED EMPC MIX DESIGN. REQUESTS FOR USE OF ADMIXTURES LISTED AS OPTIONAL ON SPECIFIC MIX DESIGNS SHALL BE SUBMITTED TO THE OWNER AND APPROVED BY THE OWNER PRIOR TO USE ON THE PROJECT.
- 10. SEE HTTP://WWW.EMPCPAVEMENT.ORG/SPEC FOR A COMPLETE SPECIFICATIONS LISTING, WHICH SHALL GOVERN ALL PROPOSED PUBLIC PAVEMENT CONSTRUCTION FOR ACCEPTANCE BY THE CITY OF DARDENNE PRAIRIE. 11. ADDITIONAL EMPC MIX DESIGN REQUIREMENTS CAN BE FOUND AT
- WWW.EMPCPAVEMENT.ORG 12. THE EMPC SPECIFICATION IS A CONCRETE MIX SPECIFICATION ONLY. THE MANUFACTURING PROCESS, DELIVERY, CONVEYANCE, AND PLACEMENT ON THE JOB SITE SHALL MEET THE "ST. CHARLES COUNTY STANDARD SPECIFICATIONS

## TREE PROTECTION NOTES:

- THE PROTECTION AREA AROUND TREES SHALL INCLUDE ALL LAND WITHIN THE CANOPY DRIP LINE. THIS AREA SHALL REMAIN FREE OF ALL GRADING AND FILLING
- 2. CONSTRUCTION SITE ACTIVITIES SUCH AS PARKING, MATERIAL STORAGE, SOIL STOCK PILING, AND CONCRETE WASH-OUT SHALL NOT BE PERMITTED WITHIN TREE PROTECTION AREAS.
- 3. TREE PROTECTION AREAS SHALL BE CLEARLY IDENTIFIED PRIOR TO ANY LAND DISTURBANCE. METHODS THAT MAY BE USED INCLUDE SNOW FENCE, POLYETHYLENE, CHAIN LINK FENCE, OR CONSTRUCTION STAKES PLACED EVERY FIFTEEN (15) FEET. DESIGNATED AREAS SHALL REMAIN CLEARLY MARKED THROUGHOUT CONSTRUCTION AND UNTIL THE PROTECTED AREA HAS BEEN
- 4. SIGNS SHALL BE USED TO DESIGNATE TREE PROTECTION AREAS. SIGNS ARE TO BE POSTED VISIBLY ON ALL SIDES OF THE PRESERVATION AREA AND MUST BE VISIBLE THROUGHOUT THE DEVELOPMENT PROCESS. MINIMUM SIZE FOR THE SIGNS IS 24" X 36" AND SHOULD STATE THE FOLLOWING: "TREE PROTECTION AREA

## CITY OF DARDENNE PRAIRIE NOTES

#### **GENERAL NOTES**

- 1. ALL STREETLIGHT FACILITIES SHALL BE OWNED AND MAINTAINED BY THE
- INVERNESS HOMEOWNERS ASSOCIATES. 16' TAPERED POLE SEE SHEET C40. 2. STREETLIGHTS ON CORA MARIE DRIVE WILL BE OWNED AND MAINTAINED BY INVERNESS HOMEOWNERS ASSOCIATES. 16' TAPERED POLE - SEE SHEET C40.
- 3. ALL TRAFFIC SIGNALS, SIGNPOST, BACKS, AND BRACKET ARMS SHALL BE PAINTED BLACK USING CARBOLINE RUSTBOND PENETRATING SEALER SG AND CARBOLINE 133 HB PAINT (OR EQUIVALENT AS APPROVED BY CITY AND/OR MODOT).
- 4. A COPY OF ALL SOIL BORING, SOIL COMPACTIONAND STREET BASE COMPACTION TEST RESULTS AND REPORTS SHALL BE PROVIDED TO THE CITY ENGINEER.
- 5. COMPACTED GRANULAR BACKFILL SHALL BE REQUIRED IN ALL TRENCH EXCAVATION WITHIN PUBLIC OR PRIVATE STREET RIGHTS-OF-WAY OR AREAS

WHERE STREET RIGHTS-OF-WAY ARE ANTICIPATED TO BE DEDICATED FOR PUBLIC

- USE. UNDER AREAS TO BE PAVED, THE COMPACTED GRANULAR BACKFILL SHALL BE PLACED WITHIN TWO (2) FEET OF THE FINSIHED SURFACE. 6. THE CONTRACTOR SHALL ASSUME COMPLETE REPSONIBILITY FOR CONTROLLING
- ALL SILTATION AND EROSION OF THE PROJECT AREA.
- 7. THE CONTRACTOR SHALL USE WHATEVER MEANS NECESSARY TO CONTROL EROSION AND SILTATION INCLUDING. BUT NOT LIMITED TO. STAKED STRAW BALES AND/OR SILTATION FABRIC FENCES (POSSIBLE METHODS OF CONTROL ARE DETAILED IN THE PLAN).
- EROSION CONTROLSHALL COMMENCE WITH GRADING AND BE MAINTAINED THROUGHOUT THE PROJECT UNITL ACCEPTANCE OF THE WORK BY THE OWNER
- AND/OR THE CITY OF DARDENNE PRAIRIE THE CONTRACTOR'S RESPONSIBILITIES INCLUDE ALL DESIGN AND IMPLEMENTATION AS REQUIRED TO PREVENT EROSION AND THE DEPOSITING OF
- 10. THE OWNER AND/OR THE CITY OF DARDENNE PRAIRIE MAY. AT THEIR OPTION. DIRECT THE CONTRACTOR IN HIS METHODS AS DEEMED FIT TO PROTECT PROPERTY AND IMPROVEMENTS.
- I1. ANY DEPOSITING OF SILTS OR MUD ONTO NEW OR EXISTING PAVEMENT OR IN NEW OR EXISTING STORM SEWERS OR SWALES SHALL BE REMOVED AFTER EACH RAIN AND AFFECTED AREAS CLEANED TO THE SATISFACTION OF THE OWNER AND/OR THE CITY OF DARDENNE PRAIRIE.
- 12. CHECK DAMS: IT IS RECOMMENDED TO INCORPORATE TEMPORARY CHECK DAMS INTO THE SWPPP IN AREAS OF CONCENTRATED FLOWS.

## Check Dam Spacing

Ditch Slope	Check Dam Maximum Spacing (ft)	
(%)	Check Dam Only	Check Dam with Sediment Trap
9		25
8		30
6	25	40
5	30	50
4	40	60
3	50	80
2	75	

## CITY OF OFALLON NOTES

#### **SANITARY SEWER NOTES**

- 1. ALL SANITARY SEWER INSTALLATION IS TO BE IN ACCORDANCE WITH M.S.D. STANDARDS AND SPECIFICATIONS EXCEPT AS MODIFIED BY THE CITY OF O'FALLON ORDINANCES.
- 2. BRICK SHALL NOT BE USED IN THE CONSTRUCTION OF SANITARY SEWER STRUCTURES. PRE-CAST CONCRETE STRUCTURES ARE TO BE USED UNLESS
- OTHERWISE APPROVED BY THE CITY OF O'FALLON. 3. CONNECTIONS AT ALL SANITARY STRUCTURES ARE TO BE MADE WITH A-LOCK **JOINT OR EQUAL.**
- ALL SANITARY LATERALS SHALL BE A MINIMUM OF 4" RESIDENTIAL, 6" COMMERCIAL DIAMETER PIPE.
- ALL SANITARY MAINS SHALL BE A MINIMUM OF 8" DIAMETER PIPE.
- ALL SANITARY SEWER LINE WITH A SLOPE GREATER THAN 20% WILL REQUIRE CONCRETE CRADLE OR CONCRETE COLLAR AT EACH PIPE JOINT. SANITARY LINE WITH A SLOPE GREATER THAN 50% WILL REQUIRE A SPECIAL APPROVED
- DESIGN AS SHOWN ON DETAIL SHEET. 7. ALL MANHOLES BUILT WITHIN THE 100 YEAR FLOOD PLAIN MUST HAVE LOCK
- TYPE WATERTIGHT MANHOLE COVERS.
- 8. ALL SANITARY SEWER MAINS MUST HAVE A MINIMUM OF 42" COVER. 9. WHEN SANITARY MAINS CROSS OVER STORM LINE THE SANITARY MAIN MUST
- BE DUCTILE IRON PIPE FOR 10 FEET ON EACH SIDE OF THE CROSSING. 10. ENCASE WITH CONCRETE BOTH SANITARY AND STORM SEWER AT CROSSING
- WHEN STORM SEWER IS WITHIN 18 INCHES ABOVE SANITARY SEWER. ADD CONCRETE CRADLE TO ONLY RCP STORM SEWER AND ENCASE FLEXIBLE STORM SEWER WHEN IT IS MORE THAN 18 INCHES ABOVE SANITARY LINE. SHOW ON PROFILE SHEET.
- 11. THE SANITARY SEWERS SHOULD RUN DIAGONALLY THROUGH THE SIDE YARDS TO MINIMIZE ANY ADDITIONAL UTILITY EASEMENTS REQUIRED.
- 12. ALL SANITARY SEWER STRUCTURES SHALL BE WATERPROOFED ON THE **EXTERIOR IN ACCORDANCE TO MISSOURI DNR SPECIFICATIONS 10CSR-8.120**
- 13. ALL SANITARY SEWER PIPE SHALL BE SDR35 OR EQUAL. ALL SANITARY SEWER LATERALS SHALL BE SCHEDULE 40.
- 14. ALL SANITARY SEWER MANHOLES AND PIPES WILL BE TESTED TO THE FOLLOWING SPECIFICATIONS. ASTM C1244, STANDARD TESTING METHOD FOR CONCRETE SEWER MANHOLE BY NEGATIVE AIR PRESSURE (VACUUM). LATEST REVISION ASTM F1417, STANDARD TESTING METHOD FOR INSTALLATION ACCEPTANCE OF PLASTIC GRAVITY SEWER LINES USING LOW PRESSURE AIR,
- 15. ADD 1" MINUS ROCK BACK FILL TO ALL SANITARY SEWER AND ALL OTHER UTILITIES THAT LIE WITHIN THE 1:1 SHEAR PLANE OF THE ROAD.
- 16. OUTSIDE (BEYOND) THE PAVEMENT LIMITS, EXCAVATIONS SHALL BE JETTED WITH WATER AND ALLOWED TO SET FOR A LENGTH OF TIME SATISFACTORY OF THE CITY ENGINEER.
  - a. JETTING. GRANULAR MATERIALS AND EARTH MATERIALS ASSOCIATED WITH NEW CONSTRUCTION BEYOND THE PAVEMENT MAY BE JETTED, TAKING CARE TO AVOID DAMAGE TO NEWLT LAID SEWERS. THE JETTING SHALL BE PERFORMED WITH A PROBE ROUTE ON NOT GREATER THAN SEVEN-AND-ONE-HALF-FOOT CENTERS WITH THE JETTING PROBE CENTERED OVER AND PARALLEL WITH THE DIRECTION OF THE PIPE. TRENCH WIDTHS GREATER THAN TEN (10) FEET WILL REQUIRE MULTIPLE PROBES EVERY SEVEN-AND-ONE-HALF-FOOT CENTERS.
    - i. DEPTH. TRENCH BACKFILL LESS THAN EIGHT (8) FEET IN DEPTH SHALL BE PROBED TO A DEPTH EXTENDING TO HALF THE DEPTH OF THE TRENCH BACKFILL, BUT NOT LESS THAN THREE (3) FEET. TREHCH BACKFILL GREATER THAN EIGHT (8) FEET IN DEPTH SHALL BE PROBED TO HALF THE DEPTH OF THE TRENCH **BACKFILL BUT NOT GREATER THAN EIGHT (8) FEET.**
    - ii. EQUIPMENT. THE JETTING PROBE SHALL BE A METAL PIPE WITH AN EXTERIOR DIAMETER OF ONE AND ONE-HALF (1.5) TO TWO (2)
    - iii. METHOD. JETTING SHALL BE PERFORMED FROM THE LOW SURFACE TOPOGRAPHIC POINT AND PROCEED TOWARD THE HIGH POINT, AND FROM THE BOTTOM OF THE TRENCH BACKFILL TOWARDS THE SURFACE. THE FLOODING OF EACH JETTING PROBE SHALL BE STARTED SLOWLY ALLOWING SLOW SATURATION OF THE SOIL. WATER IS NOT ALLOWED TO FLOW TRENCH.
    - iv. SURFACE BRIDGING. THE CONTRACTOR SHALL IDENTIFY THE LOCATIONS OF THE SURFACE BRIDGING (THE TENDENCY OF THE UPPER BACKFILL CRUST TO ARCH OVER THE TRENCH RATHER THAN COLLAPSE AND CONSOLIDATE DURING THE JETTING PROCESS). THE CONTRACTOR SHALL BREAK DOWN THE BRIDGED AREAS USING AN APPROPRIATE METHOD SUCH AS WHEELS OR BUCKET OF A BACKHOE. WHEN THE SURFACE CRUST IS COLLAPSED, THE VOID SHALL BE BACKFILLED WITH THE SAME MATERIAL USED AS TRENCH BACKFILL AND REJETTED. COMPACTION OF THE MATERIAL WITHIN THE SUNKEN/JETTED AREA SHALL BE COMPACTED SUCH THAT NO FURTHER SURFACE SUBSIDENCE OCCURS.

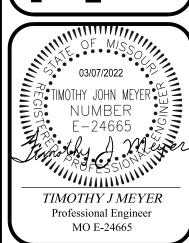
# CITY OF DARDENNE PRAIRIE NOTES

1. SEDIMENT AND EROSION CONTROL SHALL NOT BE LIMITED TO THE MEASURES SHOWN

- ON THE PLANS. THE CONTRACTOR, WITH THE APPROVAL OF THE CITY ENGINEER. SHALL UTILIZE BEST MANAGEMENT PRACTICES TO PREVENT SEDIMENT FROM ENTERING ADJACENT PROPERTIES, ROADWAYS, STORM SEWERS, AND DRAINAGEWAYS. ALL FILLED PLACES UNDER PROPOSED STORM AND SANITARY SEWER LINES AND/OR
  - PAVED AREAS INCLUDING TRENCH BACKFILLS WITHIN AND OFF THE ROAD RIGHT-OF-WAY SHALL BE COMPACTED TO 90 PERCENT OF MAXIMUM DENSITY AS DETERMINED BY THE "MODIFIED AASHTO T-180 COMPACTION TEST" (ASTM D-1557). ALL TESTS SHALL BE VERIFIED BY A SOILS ENGINEER CONCURRENT WITH GRADING AND BACKFILLING **OPERATIONS**
  - 3. ALL FILLED PLACES IN PROPOSED AND EXISTING CITY STREETS SHALL BE COMPACTED FROM THE BOTTOM OF THE FILL UP TO 90 PERCENT MAXIMUM DENSITY AS DETERMINED BY THE "MODIFIED AASHTO T-180 COMPACTION TEST" (ASTM D-1557). PAVED AREAS IN CUTS SHALL MEET THE SAME COMPACTION REQUIREMENTS. ALL TESTS SHALL BE VERIFIED BY A SOILS ENGINEER CONCURRENT WITH GRADING OPERATIONS.
  - I. ALL TRUCKING OPERATIONS SHALL FOLLOW THE APPROVED TRUCKING HAUL ROUTE. CONCRETE TRUCKS SHALL HAVE PROPER WASHOUTS, AS APPROVED BY THE CITY ENGINEER. CITY, COUNTY AND STATE ROADS SHALL BE CLEANED AND KEPT CLEAR OF
  - MUD, SEDIMENT, AND ANY OTHER DEBRIS AT ALL TIMES THROUGHOUT CONSTRUCTION. 5. ALL ON-SITE TRASH, LITTER, DISCARDED BUILDING MATERIALS, OTHER CONSTRUCTION SITE WASTES, AND DEBRIS, EITHER EXISTING OR FROM CONSTRUCTION, MUST BE REMOVED AND PROPERLY DISPOSED OF OFF-SITE.
  - . DEBRIS AND FOUNDATION MATERIAL FROM ANY EXISTING ON-SITE BUILDING OR STRUCTURE WHICH IS SCHEDULED TO BE RAZED FOR THIS DEVELOPMENT MUST BE PROPERLY DISPOSED OF OFF-SITE.
  - . CONTRACTOR SHALL PROVIDE SUFFICIENT TEMPORARY TOILET FACILITIES TO SERVE THE NUMBER OF WORKERS ON THE SITE.
  - B. CONTRACTOR SHALL PROVIDE THE CITY ENGINEER INFORMATION CONCERNING STORAGE AND HANDLING OF ALL HAZARDOUS AND TOXIC SUBSTANCES BROUGHT ONTO THE SITE. THE CONTRACTOR WILL ADHERE TO APPLICABLE FEDERAL AND STATE REGULATIONS CONCERNING STORAGE AND DISPENSERS, SPILL PREVENTION CONTROL, AND COUNTERMEASURE PLANS FOR CLEAN-UP.
  - ANY WELLS AND/OR SPRINGS WHICH MAY EXIST ON THIS PROPERTY SHOULD BE LOCATED AND SEALED IN A MANNER ACCEPTABLE TO THE CITY ENGINEER.
  - 10. SOFT SOILS IN THE BOTTOM AND BANKS OF ANY EXISTING OR FORMER POND SITES OR TRIBUTARIES OR ANY SEDIMENT BASINS, TRAPS, OR OTHER ESC MEASURES SHOULD BE REMOVED, SPREAD OUT AND PERMITTED TO DRY SUFFICIENTLY TO BE USED AS FILL. NONE OF THIS MATERIAL SHOULD BE PLACED IN PROPOSED PUBLIC RIGHT-OF-WAY LOCATIONS OR ON ANY STORM SEWER LOCATION. ANY OTHER WET SOILS THAT ARE OUTSIDE THE OPTIMUM MOISTURE RANGE TO OBTAIN THE PROPER COMPACTION SHALL BE AIR DRIED SUFFICIENTLY BEFORE USE AS FILL.
  - 11. A PRE-CONSTRUCTION CONFERENCE MUST BE SCHEDULED WITH THE CITY ENGINEER PRIOR TO THE START OF EACH CONSTRUCTION PHASE OF LAND DISTURBANCE ACTIVITY. THE PERMITTEE WILL BE RESPONSIBLE FOR NOTIFYING ALL CONTRACTORS, UTILITY CREWS, AND OTHER ENTITIES THAT WILL PERFORM WORK AT THE SITE TO BE IN ATTENDANCE.
  - 12. The City Engineer shall be notified at Engineer@dardenneprairie.org a MINIMUM OF 48 HOURS PRIOR TO THE COMMENCEMENT OF CLEARING, GRADING, AND/OR PRIOR TO THE COMMENCEMENT OF CONSTRUCTION TO ARRANGE FOR AN INSPECTION
  - 13. ALL EXCAVATIONS, GRADING, OR FILLING SHALL HAVE A FINISHED GRADE NOT TO **EXCEED A 3:1 SLOPE (33%).**
  - 14. TEMPORARY SILTATION CONTROL MEASURES (STRUCTURAL) SHALL BE MAINTAINED UNTIL VEGETATIVE COVER IS ESTABLISHED AT A DENSITY SUFFICIENT TO PROVIDE **EROSION CONTROL ON THE SITE.**
  - 15. CONTRACTOR SHALL PROVIDE DUST CONTROL, AS DETERMINED BY THE CITY ENGINEER. 16. UPON COMPLETION OF STORM SEWERS. SILTATION CONTROL SHALL BE PROVIDED AROUND ALL OPEN SEWER INLETS AND SHALL REMAIN UNTIL THE DISTURBED DRAINAGE AREAS HAVE BEEN PROPERLY STABILIZED.
  - 17. WHERE NATURAL VEGETATION IS REMOVED DURING GRADING. VEGETATION SHALL BE RE-ESTABLISHED IN SUCH A DENSITY AS TO PREVENT EROSION. 18. TEMPORARY VEGETATION OR OTHER APPROVED SURFACE STABILIZATION METHODS
  - SHALL BE ESTABLISHED WITHIN 14 DAYS WHEN THE SOIL DISTURBANCE HAS CEASED ON AREAS GREATER THAN 2,000 SQ. FT.
  - 19. PERMANENT GRASS MUST BE ESTABLISHED AT A DENSITY SUFFICIENT TO PROVIDE EROSION CONTROL ON THE SITE WITHIN 30 DAYS OF THE COMPLETION OR SUSPENSION OF GRADING OPERATIONS.
  - 20. IT IS CRITICAL THAT TEMPORARY AND PERMANENT SURFACE STABILIZATION BE PROVIDED AS SOON AS POSSIBLE TO REDUCE EROSION AT THE SOURCE. THERE ARE SEVERAL ACCEPTABLE METHODS TO STABILIZE BARE GROUND: REVEGETATION BY SEEDING OR SODDING, MULCHING, EROSION CONTROL BLANKETS, SOIL BINDERS, ROCK TOPPING, STRUCTURAL TOPPING SUCH AS CONCRETING, ETC. TEMPORARY SEED AND SURFACE STABILIZATION METHODS CAN BE USED IF THE AREA WILL BE DISTURBED LATER IN THE DEVELOPMENT. THE AREA SHOULD BE PERMANENTLY REVEGETATED OR SURFACED WHEN NO FURTHER LAND DISTURBANCE WILL OCCUR.
  - 21. BARE GROUND MUST BE STABILIZED BY REVEGETATION, MULCHING, EROSION CONTROL BLANKETS AND NETTING, SOIL BINDERS, ROCK SURFACING, STRUCTURAL TOPPING, OR OTHER APPROVED TECHNIQUES.
  - 22. THE FOLLOWING PROVISIONS SHALL APPLY TO SURFACE STABILIZATION: a. SURFACE STABILIZATION MUST EFFECTIVELY STABILIZE AT LEAST 70% OF THE TOTAL
  - DISTURBED SITE AREA.
  - b. SURFACE STABILIZATION MAY BE SUSPENDED FROM PORTIONS OF THE PROJECT AREA WHICH HAVE AN ACTIVE BUILDING PERMIT. UPON COMPLETION OF THE BUILDING ACTIVITY, THE SITE MUST BE PERMANENTLY STABILIZED.
  - c. NON-DEGRADABLE MATS SHALL BE USED ONLY AS A PERMANENT INSTALLATION. AND IN AREAS THAT WILL NOT BE MOWED.
  - d. SURFACE STABILIZATION SHALL BE SCHEDULED AS PROVIDE IN THE TABLE BELOW: Soil Stabilization Schedule

Soil Disturbance Activity or Condition	Required Stabilization Time
Soil disturbance has ceased in areas greater than 2,000 square feet.	14 days
After construction of dikes, swales, diversions, and other concentrated flow areas	5 days
When slopes are steeper than 3 horizontal to1 vertical	7 days
When slopes are greater than 3% and longer than 150 feet.	14 days
Perimeter controls around soil stockpiles.	End of workday
Stabilization or covering of inactive stockpiles.	30 days
When land disturbance is completed, permanent soil stabilization must be installed.	30 days

- 23. TEMPORARY SEEDING AND MULCHING SHALL BE APPLIED TO ALL CLEARED. UNVEGETATED, OR SPARSELY VEGETATED SOIL SURFACES WHERE VEGETATIVE COVER
- IS REQUIRED FOR LESS THAN 1 YEAR. 24. TEMPORARY SEEDING SHALL GERMINATE TO A DENSITY OF AT LEAST 70% OF THE TOTAL
- DISTURBED SITE AREA. 25. TEMPORARY SEEDING MAY BE USED FOR DIVERSIONS, DAMS, TEMPORARY SEDIMENT BASINS, TEMPORARY ROAD BANKS, TOPSOIL STOCKPILES, AND ANY OTHER EXPOSED AREAS OF A CONSTRUCTION SITE, WHICH MEET VELOCITY AND OTHER REQUIREMENTS FOR ITS USE.
- 26. TEMPORARY SEEDING MAY BE SUSPENDED FROM INDIVIDUAL LOTS LOCATED IN THE PROJECT AREA. WHICH HAVE AN ACTIVE BUILDING PERMIT. UPON COMPLETION OF THE BUILDING ACTIVITY. THE SITE SHALL BE PERMANENTLY VEGETATED.
- 27. SEEDED AREAS SHALL BE RE-FERTILIZED 4 WEEKS AFTER INITIAL SEEDING. ALL AREAS IDENTIFIED AS BARE AND SPARSE (LESS THAN 30% GROUND COVER) DURING THE INSPECTION SHALL BE RE-SEEDED AND MULCHED. GRASS SHALL NOT BE CUT UNTIL 4 INCHES OF GROWTH OCCURS.
- 28. SEED MUST BE CLEAN, RELATIVELY FREE OF WEED SEED AND OTHER CONTAMINANTS, AND COMPLY WITH THE FEDERAL SEED ACT AND THE MISSOURI STATE SEED LAW. SEED THAT HAS BECOME WET, MOLDY, OR OTHERWISE DAMAGED IN TRANSIT OR STORAGE IS NOT ACCEPTABLE. TURF MIXES CAN BE USED WITH NO MORE THAN 10% KENTUCKY BLUEGRASS AND AT LEAST 20% PERENNIAL RYE.
- 29. SEEDBED PREPARATION IS ESSENTIAL FOR THE SEED TO GERMINATE AND GROW. FOR BROADCAST SEEDING AND DRILLING, LOOSEN THE TOP 3 TO 6 INCHES OF SOIL. LIME AND FERTILIZER SHOULD BY INCORPORATED BY DISKING. IF RECENT TILLAGE OR GRADING OPERATIONS HAVE RESULTED IN A LOOSE SURFACE. ADDITIONAL TILLAGE MAY NOT BE REQUIRED. IF RAINFALL CAUSED THE SOIL SURFACE TO BECOME SEALED OR CRUSTED, SURFACE TILLING WILL BE REQUIRED PRIOR TO SEEDING.



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