

DRAINAGE PLAN

ST. LOUIS SOUTHWESTERN RAILROAD

EROSION CONTROL NOTES:

and shall be installed in proper sequence and maintained until permanent protection is established

2. ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE INSTALLED IN ACCORDANCE WITH N.C.T.C.O.G. SPECS 3.12 EROSION & SEDIMENTATION CONTROL GUIDELINES, AND WILL BE INSTALLED IN PROPER SEQUENCE AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED. CONTRACTOR TO FILE A "NOTICE OF INTENT", NOI, WITH THE E.P.A.

3. CONTRACTOR SHALL INSTALL SILT FENCE, HAY BALE DIKE AND INLET PROTECTION AS SHOWN AND AS REQUESTED BY OWNER'S ENGINEER OR CITY IF ADDITIONAL EROSION PROTECTION IS NEEDED.

4. ALL PAVED STREETS SURROUNDING THE PROJECT SHALL BE KEPT CLEAN AT ALL TIMES. NO MUD ACCUMULATION WILL BE ALLOWED IN PUBLIC STREETS. A CRUSHED STONE, VEHICLE WHEEL CLEANING BLANKET WILL BE INSTALLED WHEREVER A CONSTRUCTION ACCESS ROAD INTERSECTS ANY PAVED ROADWAY. SAID BLANKET WILL BE COMPOSED OF 6"-8" THICK CRUSHED STONE (N.T.C.O.G. ITEM 2.1.8.(d) "ROCK FOR FOUNDATION") AND BE AT LEAST 30 FEET WIDE BY 50 FEET LONG.

5. ALL SEDIMENTATION STRUCTURES WILL BE INSPECTED AND MAINTAINED ON A REGULAR BASIS DURING CONSTRUCTION TO PREVENT ANY BLOCKAGES FROM ACCUMULATED SEDIMENT. ADDITIONAL EROSION BARRIERS MAY BE REQUIRED DURING CONSTRUCTION AS SPECIFIED BY ENGINEER OR CITY INSPECTOR.

6. INSTALL SILT CONTROL FENCE FABRIC WITH 2"X 2"X 4' STAKES AT 6' ON CENTER WITH 2"X 1/2" LATHES TO ATTACH THE 6. SEE ARCHITECTURAL LANDSCAPE DRAWINGS FOR DETAILS OF FINISHED GRADING. FABRIC TO THE STAKES. LOCATE SILT CONTROL FENCE TO MINIMIZE SURFACE SOIL EROSION.

7. FILTER FABRIC TO BE BELTECH 751 OR APPROVED EQUAL AND INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

8. THE SITE SHALL AT ALL TIMES BE GRADED AND MAINTAINED SUCH THAT ALL STORM WATER RUN OFF IS DIVERTED TO SOIL 8. ALL REINFORCED CONCRETE STORM DRAIN PIPE SHALL BE CLASS III. EROSION AND SEDIMENT CONTROL FACILITIES.

9. CONTRACTOR SHALL INSTALL PIPE COVER OR FILTER MATERIAL OVER THE END OF STORM SEWER PIPE IMMEDIATELY AFTER INSTALLATION OF PIPE AND PRIOR TO CONSTRUCTION OF INLET BOX AND INLET PROTECTION.

10. CONTRACTOR SHALL ENSURE THAT, DUE TO ANY STOPPAGE IN CONSTRUCTION, ALL EXPOSED ENDS OF STORM SEWERS ARE

COVERED WITH ACCEPTABLE MATERIAL THAT WILL PREVENT SEDIMENT FROM ENTERING SYSTEM.

11. ANY DISTURBED AREA THAT WILL BE LEFT EXPOSED FOR MORE THAN SIXTY (60) DAYS AND NOT SUBJECT TO CONSTRUCTION TRAFFIC SHALL IMMEDIATELY RECEIVE A HYDROMULCH SEEDING WITH A MIXTURE OF BERMUDA AND RYE GRASS REPORT RECOMMENDATIONS. CONFORMING TO TEXAS HIGHWAY DEPARTMENT 1995 STANDARDS.

12. ALL STORM DRAINAGE OUTLETS WILL BE STABILIZED BEFORE THE DISCHARGE POINTS BECOME OPERATIONAL. DUE TO ANY STOPPAGE IN CONSTRUCTION OR AT COMPLETION OF LINE, CONTRACTOR SHALL INSTALL 1/2" PLYWOOD OVER END OF PIPE AND 13. ALL GRADES ARE TO THE TOP OF CURB OR TOP OF PAVEMENT UNLESS OTHERWISE BACKFILL TO SECURELY HOLD IN PLACE (OR STRAW BALES) TO PREVENT SEDIMENT FORM ENTERING PIPE.

13. ALL PROPOSED PARKING AREAS TO BE PAVED AS SOON AS POSSIBLE AFTER SUBGRADE IS PREPARED.

14. STOCKPILES AR NOT TO BE LOCATED WITHIN 50 FEET OF A FLOODPLAIN, SLOPE, ROADWAY OR DRAINAGE FACILITY. THE BASE OF ALL STOCKPILES SHOULD BE PROTECTED BY A HAY BALE BARRIER OR SEDIMENT FENCE.

15. THE MAXIMUM SIDE SLOPES OF ALL EXPOSED SURFACES SHALL NOT EXCEED 3:1 UNLESS OTHERWISE APPROVED BY THE

16. EXISTING TREES SHALL BE PRESERVED WHEREVER POSSIBLE. ALL FILL MATERIAL IS TO BE FREE OF BRUSH, RUBBISH,

TIMBER, LOGS, VEGETATIVE MATTER AND STUMPS IN AMOUNTS THAT WILL BE DETRIMENTAL IN CONSTRUCTING STABLE FILLS. 17. ROCK RIP-RAP SHALL BE INSTALLED IN ACCORDANCE WITH TEXAS HIGHWAY DEPARTMENT 1995 SPECIFICATIONS. THE

MINIMUM THICKNESS OF RIP-RAP LINING SHALL BE 12". STONE SIZES SHALL VARY FROM 6" TO 8" IN DIAMETER.

18. CONTRACTOR SHALL REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROLS ONLY WHEN THERE IS A SUFFICIENT GROWTH OF GROUND COVER TO PREVENT FURTHER EROSION.

MAINTENANCE:

THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RICHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR ADDITIONAL LENGTH AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO PUBLIC RIGHT-OF-WAY MUST BE REMOVED IMMEDIATELY.

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remove topsoil to depth of 3" and stockpile, excavate roads and parking AREAS FOR FILL AT BUILDING PADS WHICH SHALL MAINTAIN FLAT GRADE 5' OUTSIDE OF BUILDING BEFORE SLOPE STARTS. COMPACT FILL TO 95% PROCTOR DENSITY AT OPTIMUM MOISTURE CONTENT OR SOILS REPORT RECOMMENDATIONS (IF GREATER).

2. IN THE CASE OF SLABS ON GRADE, ROUGH PAD WILL BE BROUGHT TO 10" BELOW FINISH SLAB ELEVATION. REVIEW GRADING WITH ENGINEER SO +/- 0.3' ADJUSTMENT MAY BE 3. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE CITY OF CARROLLTON AND OWNER'S MADE TO BALANCE CUT AND FILL IF REQUIRED. EXCESS FILL MAY BE DISPOSED ON SITE AS REPRESENTATIVE 48 HOURS PRIOR TO BEGINNING CONSTRUCTION. DIRECTED BY ENGINEER.

3. SLOPE GRASSED AREAS AND SIDEWALKS AT A MINIMUM OF 1% TO TOP OF CURBS OR EXISTING UTILITIES BEFORE CONSTRUCTION BEGINS. DRAINAGE CHANNEL.

4. CROSS-SECTIONAL SLOPE ON DRIVEWAYS AND PARKING LOTS SHALL BE A MINIMUM OF 1/4" TO 1'-0" (2%).

5. 2-4" DIA P.V.C. DRAINS SHALL BE PLACED UNDER ALL SIDEWALKS WHICH CROSS A DRAINAGE SWALE.

ALL DRAINAGE SWALES SHALL BE SMOOTHLY SLOPING TO THE OUTLET STRUCTURES WITH 1'-6" +/- DEPTH. SIDE SLOPE SHALL BE 1 TO 3 WITH HYDROMULCHED BERMUDA GRASS ALONG SLOPES AND BOTTOM.

PUBLIC STREETS AND FIRE LANES SHALL CONFORM TO CITY STANDARDS AND SOILS REPORT RECOMMENDATIONS.

10. CONSTRUCT FINISHED FLOORS A MINIMUM OF 1'-0" ABOVE THE ADJACENT PAVEMENT. WARP PAVEMENT UP TO WAREHOUSE FLOORS TO PROVIDE SMOOTH TRANSITION AND POSITIVE DRAINAGE AWAY FROM BUILDINGS

11. PAVING SHALL BE DESIGNED IN ACCORDANCE WITH THE CITY STANDARDS OR SOILS

12. ALL DIMENSIONS SHOWN ARE TO THE FACE OF CURB UNLESS OTHERWISE SHOWN.

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1. PAVING SHALL BE DESIGNED IN ACCORDANCE WITH THE CITY STANDARDS AND SOILS REPORT RECOMMENDATIONS, EXCEPT THAT PAVEMENT FOR FIRE LANES, PADS AND DRIVE APPROACH WITHIN THE RIGHT-OF-WAY SHALL BE NOT LESS THAN 6" OF CONCRETE WITH FLEXURAL STRENGTH AT LEAST 650 PSI, REINFORCED WITH #3 @ 24" E.W., ON LIME-STABILIZED SUBGRADE WITH PI<15. IN LIEU OF LIME STABILIZATION, AN EXTRA INCH OF CONCRETE MAY BE USED. TOP 6" SUBGRADE COMPACTED TO 95% OF TEX-113E MAX. DENSITY AT OPTIMUM MOISTURE (\pm 2%.). INSTALL 8" THICK PAVING PAD OF 20' MIN x 20' MIN FOR DUMPSTER.

2. NO PIPES, CURBS, SCREENING WALL OR OTHER OBSTRUCTIONS SHALL BE PERMITTED WITHIN THE $10' \times 10'$ DUMPSTER PAD.

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GENERAL NOTES

1. ALL CONSTRUCTION TO BE IN ACCORDANCE WITH THESE PLANS AND CITY OF CARROLLTON STANDARDS AND N.C.T.C.O.G. SPECIFICATIONS FOR PUBLIC WORKS.

2. BARRICADING, TRAFFIC CONTROL, AND PROJECT SIGNS SHALL CONFORM TO TEXAS DEPARTMENT OF

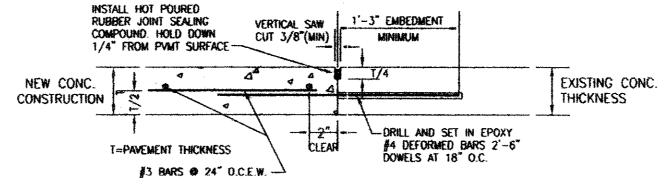
4. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT PUBLIC UTILITY COMPANIES FOR FIELD LOCATION OF CW20-5DR

5. TRENCH SAFETY SYSTEMS SHALL BE PROVIDED BY THE CONTRACTOR AS PROVIDED IN SUBPART P -EXCAVATION, TRENCHING AND SHORING, PART 1926 OF THE CODE OF FEDERAL REGULATIONS WHICH describes safety and health regulations as administered by the U.S. Department of Labor OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (O.S.H.A.) THE STANDARDS SPECIFIED BY THE O.S.H.A. REGULATIONS SHALL BE THE MINIMUM ALLOWED ON THIS PROJECT. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DESIGN AND INSTALL ADEQUATE TRENCH SAFETY SYSTEMS FOR ALL TRENCHES EXCAVATED ON THIS PROJECT.

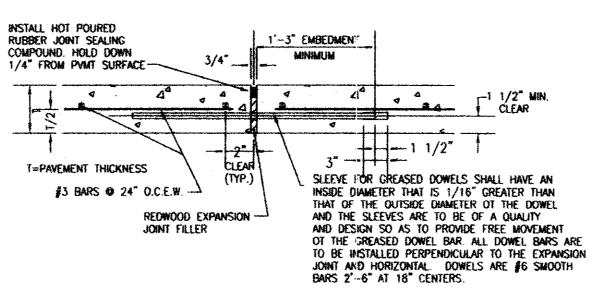
6. BEFORE BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL FURNISH TO THE CITY FOR APPROVAL A TRENCH SAFETY PLAN FOR THIS PROJECT. THE TRENCH SAFETY PLAN MUST BE PREPARED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF TEXAS. IN ADDITION, ALL TRENCH SAFETY SYSTEMS UTILIZED IN THIS PROJECT MUST BE DESIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF TEXAS. THE CONTRACTOR SHALL BE TOTALLY RESPONSIBLE FOR THE SAFETY OF ALL PERSONS INVOLVED IN THE CONSTRUCTION OF THIS PROJECT.

9. CONTRACTOR SHALL VERIFY ALL EXISTING INVERTS AND RIM ELEVATIONS PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER OF ANY VARIANCES.

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CONSTRUCTION JOINT TYPE "B'



EXPANSION JOINT TYPE "A" \SLOCKS\EXP.INT-A 0502

AMXCO SILT STOPE # SF26 FILTER FABRIC OR EQUAL STAKE @ 5' EXISTING OR FINISHED GRADE FILTER FABRIC TO EXTEND INTO TRENCH **EROSION CONTROL SILT FENCE**

EXISTING PAVED PROPOSED ROADWAY ROADWAY OR DRIVEWAY -6" to 8" rock course 100' (MIN.) ENTRANCE ROCK COURSE PLACE ON FILTER FABRIC

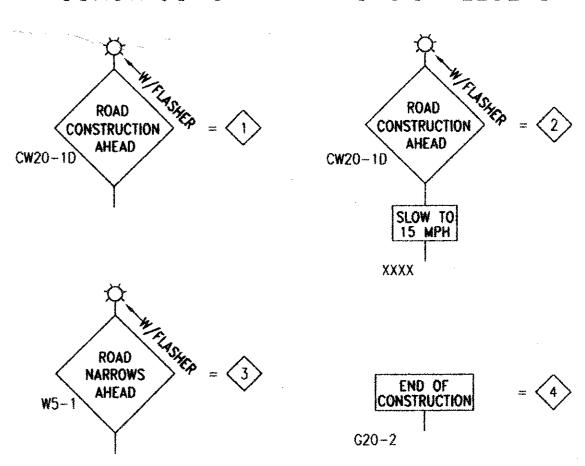
- 50 FEET MINIMUM WHERE THE SOILS ARE SANDS OR GRAVELS, OR 100 FEET WHERE SOILS ARE CLAYS OR SILTS EXCEPT WHERE TRAVEL LENGTH IS LESS ihan_50 or 100 feet respectively.

A STABILIZED CONSTRUCTION ENTRANCE APPLIES TO POINTS OF

CONSTRUCTION INCRESS AND EGRESS WHERE SEDIMENT MAY BE tracked or flow off the construction site. STABILIZED CONSTRUCTION ACCESS

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CONSTRUCTION WARNING SIGN LEGEND:

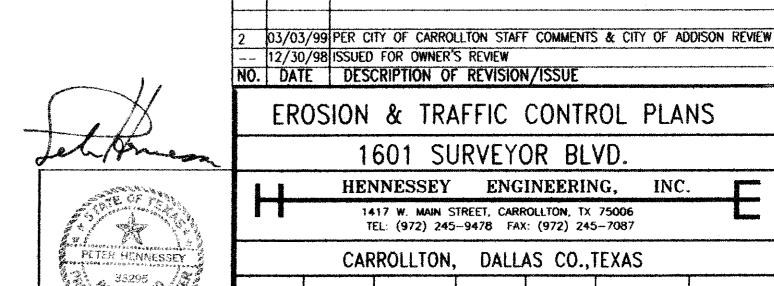


25 YEAR STORM

ZO TEAK STURM									
HYDRAULIC CALCULATIONS (EXISTING) Q= C.I.A.									
DRAINAGE AREA	AREA (ACRES)	t c MIN.	"C" COEF.	INTENSITY I 25	Q (CFS) RUNOFF Q 25				
A1	0.29	15	0.3	6.28	0.55				
A2	0.81	15	0.3	6.28	1.53				
A3	0.95	15	0.3	6.28	1.79				
A4	0.17	15	0.3	6.28	0.32				
B1	0.68	15	0.3	6.28	1.28				
TOTAL					5.47				

100 YEAR STORM

HYDRAULIC CALCULATIONS (DEVELOPED) Q= C.I.A.								
DRAINAGE AREA	AREA (ACRES)	t c MIN.	"C" COEF.	INTENSITY I 100	Q (CFS) RUNOFF Q 100			
A1	0.29	10	0.9	8.82	2.30			
A2	0.81	10	0.65	8.82	4.64			
A3	0.95	10	0.3	8.82	2.51			
A4	0.17	10	0.95	8.82	1.42			
B1	0.68	10	0.3	8.82	1.80			
TOTAL					12.67			



-- 12/30/98 ISSUED FOR OWNER'S REVIEW NO. DATE DESCRIPTION OF REVISION/ISSUE **EROSION & TRAFFIC CONTROL PLANS** 1601 SURVEYOR BLVD.

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CARROLLTON, DALLAS CO., TEXAS DESIGN DRAWN DATE SCALE NOTES FILE

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