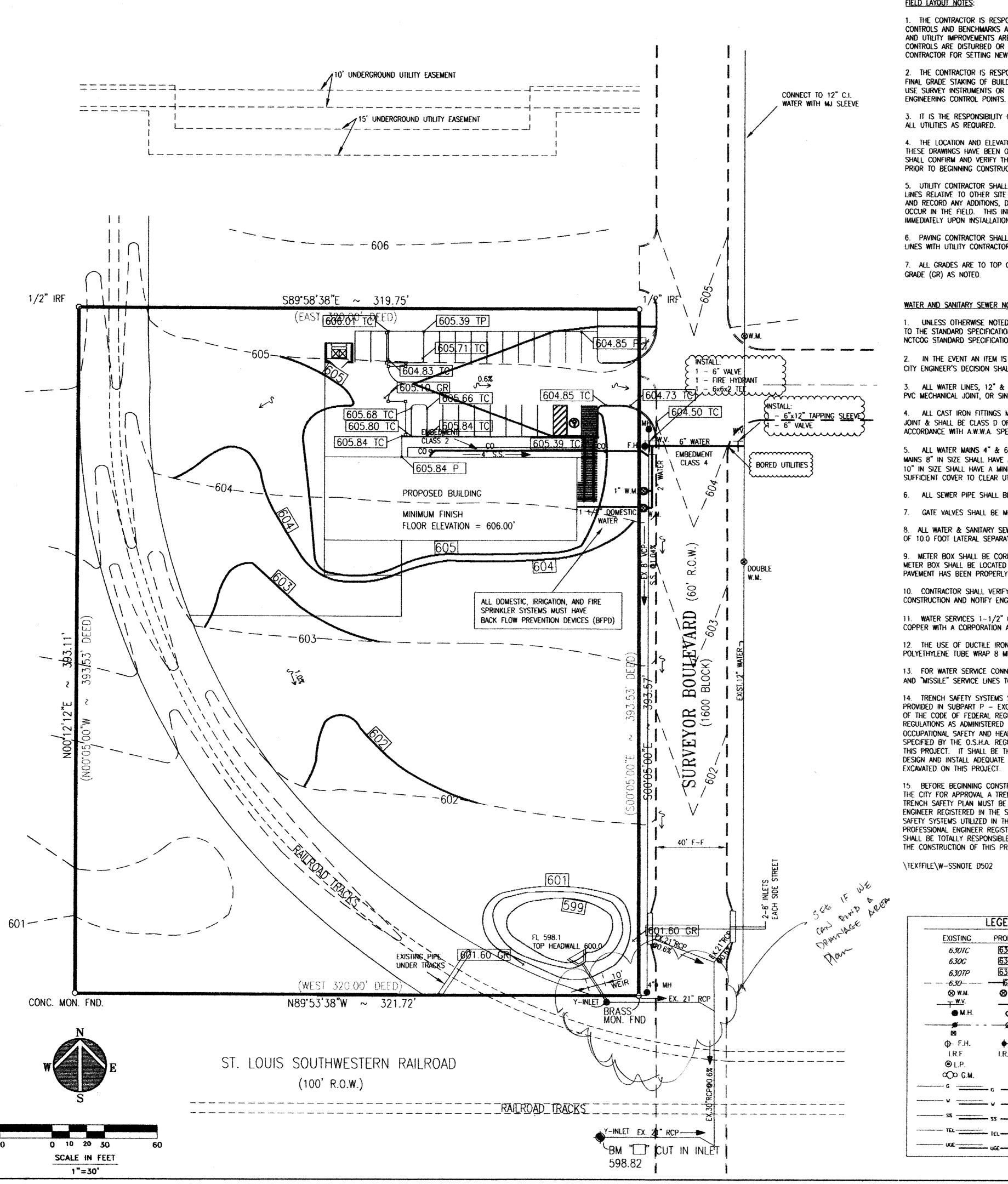


10' UNDERGROUND UTILITY EASEMENT

AND THE GENERAL DESCRIPTION OF SECURITION OF SECURITIES OF SECURITION OF

GENERAL NOTES:



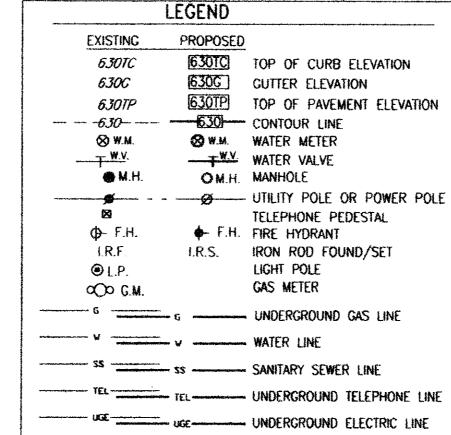
FIELD LAYOUT NOTES:

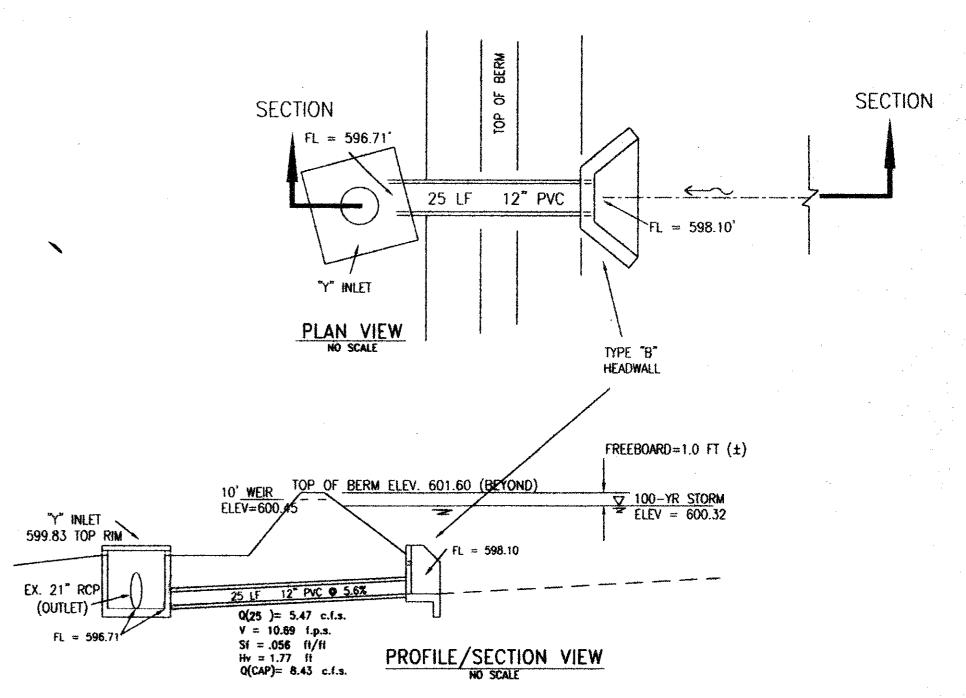
- 1. THE CONTRACTOR IS RESPONSIBLE FOR PRESERVING THE HORIZONTAL CONTROLS AND BENCHMARKS AS SET BY THE ENGINEER UNTIL DRAINAGE, PAVEMENT AND UTILITY IMPROVEMENTS ARE ACCEPTED BY THE OWNER. IN THE EVENT CONTROLS ARE DISTURBED OR DESTROYED, THE ENGINEER MAY CHARGE THE CONTRACTOR FOR SETTING NEW CONTROLS.
- 2. THE CONTRACTOR IS RESPONSIBLE PROVIDING ROUGH GRADE STAKING AND FINAL GRADE STAKING OF BUILDING PADS AND PAVEMENT. THE CONTRACTOR SHALL USE SURVEY INSTRUMENTS OR LASERS FOR LAYOUT OF DETAILS FROM THE
- 3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PRESERVE AND PROTECT ALL UTILITIES AS REQUIRED.
- 4. THE LOCATION AND ELEVATIONS OF THOSE EXISTING PUBLIC UTILITIES SHOWN IN THESE DRAWINGS HAVE BEEN OBTAINED FROM PUBLIC RECORDS. THE CONTRACTOR SHALL CONFIRM AND VERIFY THE ELEVATION AND LOCATION OF THOSE UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
- 5. UTILITY CONTRACTOR SHALL RECORD THE LOCATIONS OF ALL WATER AND SEWER LINES RELATIVE TO OTHER SITE FEATURES, SUCH AS PARKING AND BUILDING LINES, AND RECORD ANY ADDITIONS, DELETIONS OR REVISIONS TO THESE PLANS WHICH OCCUR IN THE FIELD. THIS INFORMATION IS TO BE FURNISHED TO THE ENGINEER IMMEDIATELY UPON INSTALLATION.
- 6. PAVING CONTRACTOR SHALL COORDINATE LOCATION OF ALL WATER AND SEWER LINES WITH UTILITY CONTRACTOR AND MARK LOCATIONS ON CURBS.
- 7. ALL GRADES ARE TO TOP OF CURB (TC), TOP OF PAVEMENT (TP) OR FINISHED GRADE (GR) AS NOTED.

WATER AND SANITARY SEWER NOTES:

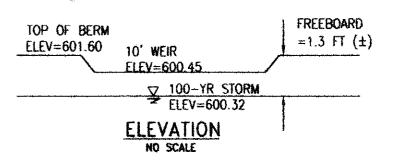
- UNLESS OTHERWISE NOTED, ALL MATERIAL & CONSTRUCTION SHALL CONFORM TO THE STANDARD SPECIFICATIONS OF THE CITY OF ADDISON, TEXAS AND THE NCTCOG STANDARD SPECIFICATIONS FOR PUBLIC WORKS.
- 2. IN THE EVENT AN ITEM IS NOT COVERED IN THE CITY'S SPECIFICATIONS, THE CITY ENGINEER'S DECISION SHALL APPLY.
- ALL WATER LINES, 12" & UNDER, MUST BE DUCTILE IRON OR A.W.W.A. C900 PVC MECHANICAL JOINT, OR SINGLE RUBBER GASKET TYPE.
- 4. ALL CAST IRON FITTINGS MUST BE OF THE MECHANICAL JOINT TYPE OR SLIP JOINT & SHALL BE CLASS D OR CLASS 250 ON SIZES 12" OR SMALLER IN ACCORDANCE WITH A.W.W.A. SPECIFICATIONS C111.64.
- 5. ALL WATER MAINS 4" & 6" IN SIZE SHALL HAVE A MINIMUM COVER OF 42". MAINS 8" IN SIZE SHALL HAVE A MINIMUM COVER OF 48", MAINS LARGER THAN 10" IN SIZE SHALL HAVE A MINIMUM COVER OF 60", AND ALL MAINS SHALL HAVE SUFFICIENT COVER TO CLEAR UTILITIES.
- 6. ALL SEWER PIPE SHALL BE VITRIFIED CLAY OR PVC SDR 35 SEWER PIPE.
- 7. GATE VALVES SHALL BE MUELLER BRAND OR APPROVED EQUAL.
- 8. ALL WATER & SANITARY SEWER MAINS & SERVICES SHALL HAVE A MINIMUM OF 10.0 FOOT LATERAL SEPARATION.
- 9. METER BOX SHALL BE CORRUCATED METAL BOX WITH CAST IRON TOP & LID. METER BOX SHALL BE LOCATED ADJACENT TO CURB & INSTALLED AFTER PARKING PAVEMENT HAS BEEN PROPERLY BACKFILLED.
- 10. CONTRACTOR SHALL VERIFY ALL EXISTING INVERT ELEVATIONS PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER OF ANY VARIANCES.
- 11. WATER SERVICES 1-1/2" OR LESS SHALL BE "AS SHOWN", TYPE "K" COPPER WITH A CORPORATION AT THE MAIN AND CURB STOP.
- 12. THE USE OF DUCTILE IRON PIPE WILL REQUIRE CATHODIC PROTECTION AND POLYETHYLENE TUBE WRAP 8 MIL THICK AND SEAMLESS.
- 13. FOR WATER SERVICE CONNECTIONS, CONTRACTOR SHALL EXPOSE THE MAIN AND "MISSILE" SERVICE LINES TO AVOID OPEN CUTS.
- 14. 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.
- 15. 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.

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DETENTION POND OUTLET DETAIL



OVERFLOW WEIR

OVERFLOW WEIR: LENGTH OF WEIR COEFF. OF WEIR HEAD ABOVE WEIR (FOR Qp)	FEET FEET		10 0.7 0.49	FROM Qw = $2/3 * Cw * (2/g)^5 * Lw * Hw^3/2$
OUTLET ORIFICE DIAMETER ELEVATION FLOW LINE PIPE OUTFLOW FROM BASIN	INCHES FEET CFS	Di Eo Qo	12 598.10 5.04	ORIFICE PLATE IN HEADWALL, ORIFICE AREA AO Q=C*Ao*(2gH)^0.5 FOR C=0.61 WHERE H=(Ew-Eo-(Di/12/2)), IN FEET
OUTLET PIPE: DIAMETER OF PIPE AREA OF PIPE SLOPE MAX. VELOCITY OF FLOW, PIPE MAX. QUANTITY OF FLOW, PIPE VELOCITY HEAD (V*V/2G)	INCHES SQ. FT. FT/FT FT/SEC CFS FEET	Dp Ap S Vp Qp Hv	12 0.785 0.056 10.69 8.43 1.77	MANNING'S EQUATION, FOR n=0.013 $Ap = (3.142 * D^2/4) / 144$ $Vm = 1.486 / n * (D/48)^0.667 * S^0.5$ $Qm = V * A$ $H = V^2/64.4$

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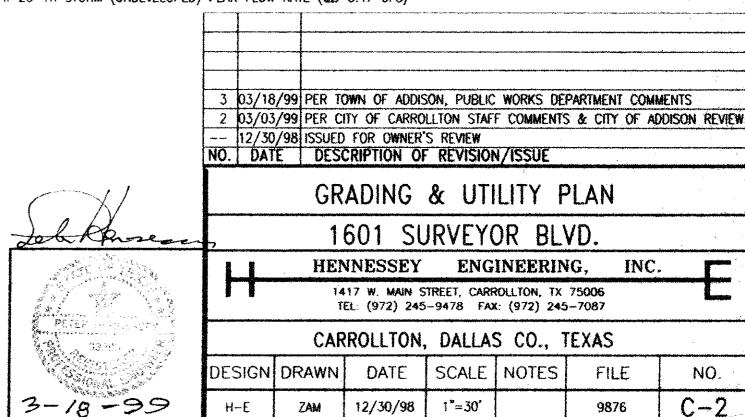
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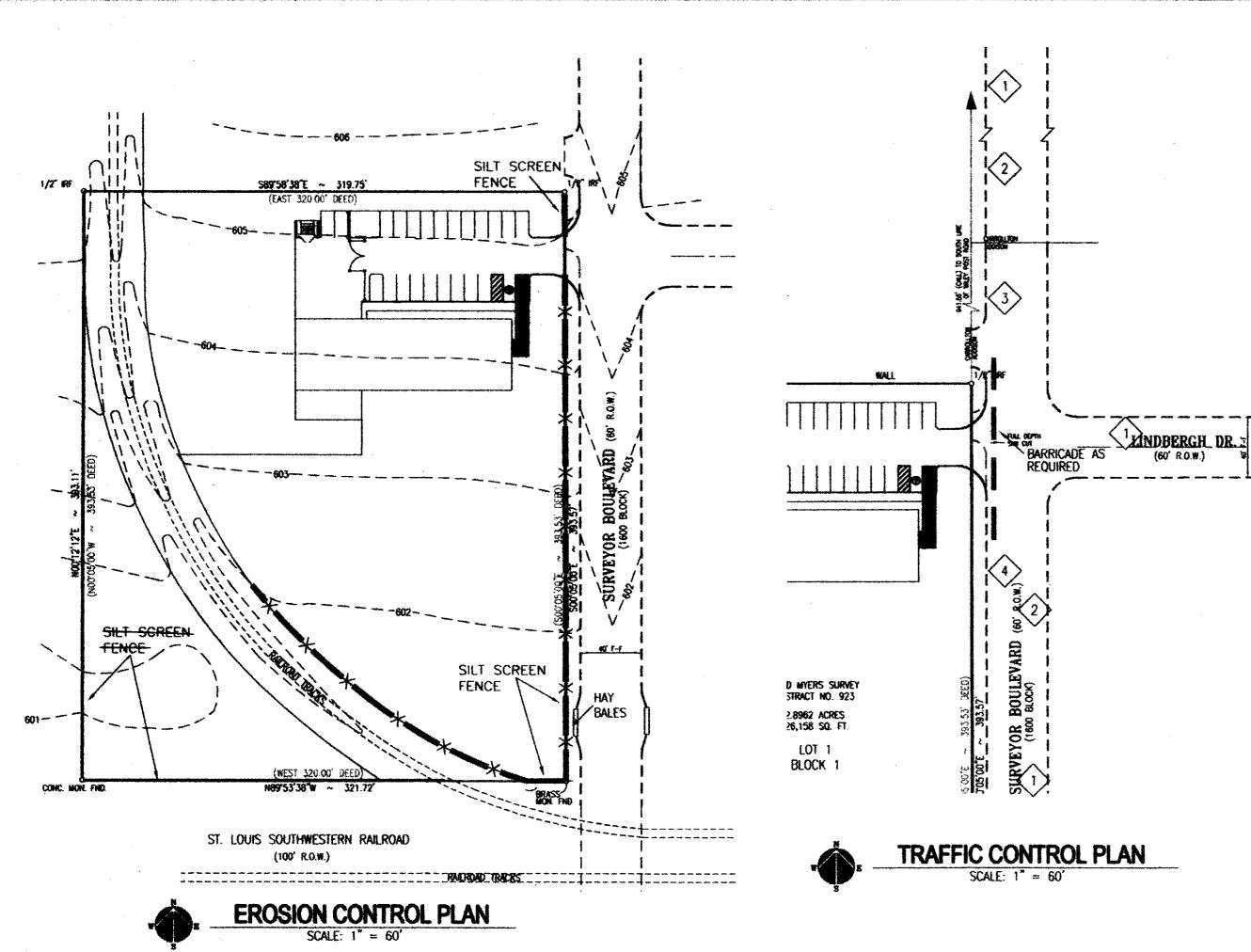
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DETENTION POND STAGE-STORAGE TABLE

WATER ELEV. 598.1	SURF AREA 0	HEIGHT INCR., H	AVG. SURF. AREA, A	INCR. IN VOL. (A*H)	CUMULATIVE VOLUME SUM(A*H)
599.0	1667	0.9	833.5	750.15	750.15
600.0	2581	1.0	2124	2124	2874.15
601.0	3529	1.0	3055	3055	5929.15

DETENTION CRITERIA: 100-YR STORM (DEVELOPED) PEAK FLOW RATE DETAINED TO RELEASE (Q100=12.67 CFS) AT 25-YR STORM (UNDEVELOPED) PEAK FLOW RATE (Qx=5.47 CFS)







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.

F:\WORKS\TEXTFILE\GRADNOTE.TXT

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

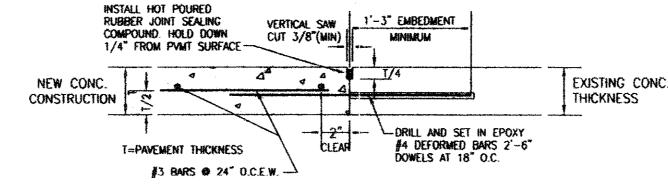
4. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT PUBLIC UTILITY COMPANIES FOR FIELD LOCATION OF CW20-5DR

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.

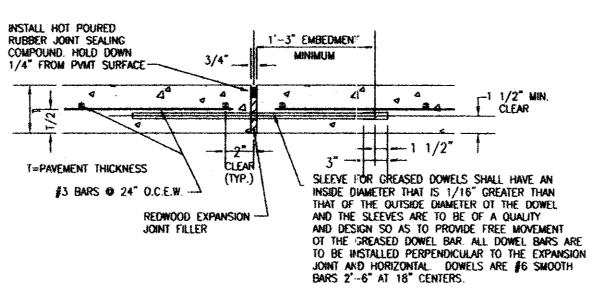
6. BEFORE BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL FURNISH TO THE CITY FOR APPROVAL A TRENCH SAFETY PLAN FOR THIS PROJECT. THE TRENCH SAFETY PLAN MUST BE PREPARED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF TEXAS. IN ADDITION, ALL TRENCH SAFETY SYSTEMS UTILIZED IN THIS PROJECT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

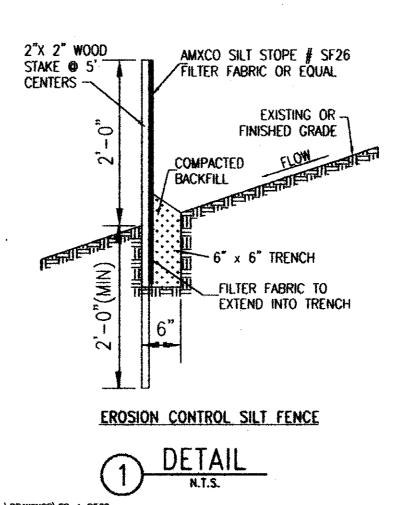
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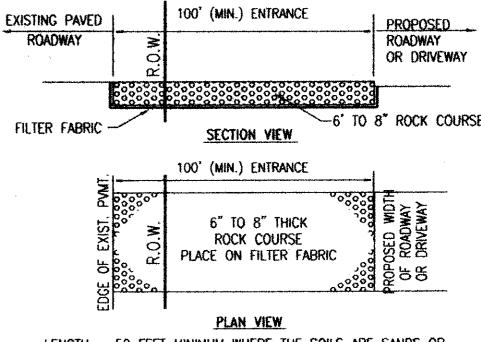


CONSTRUCTION JOINT TYPE "B'



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





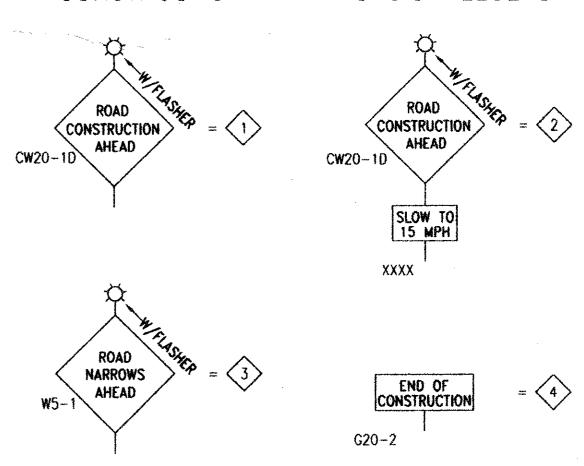
- 50 FEET MINIMUM WHERE THE SOILS ARE SANDS OR GRAVELS, OR 100 FEET WHERE SOILS ARE CLAYS OR SILTS EXCEPT WHERE TRAVEL LENGTH IS LESS ihan_50 or 100 feet respectively.

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

\DRAWINGS\EC-2 D502

CONSTRUCTION WARNING SIGN LEGEND:

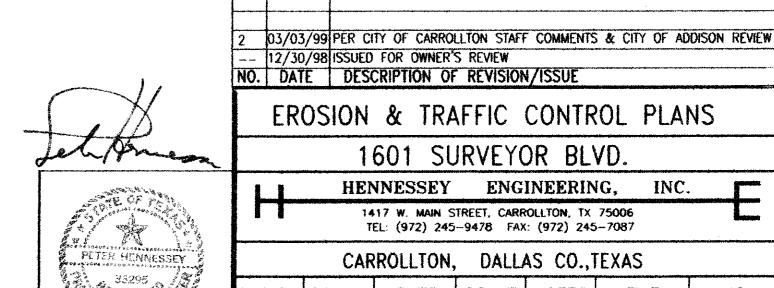


25 YEAR STORM

ZO IEAR STORM							
HYDRAI	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

(20 ILAN SIQNM					
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



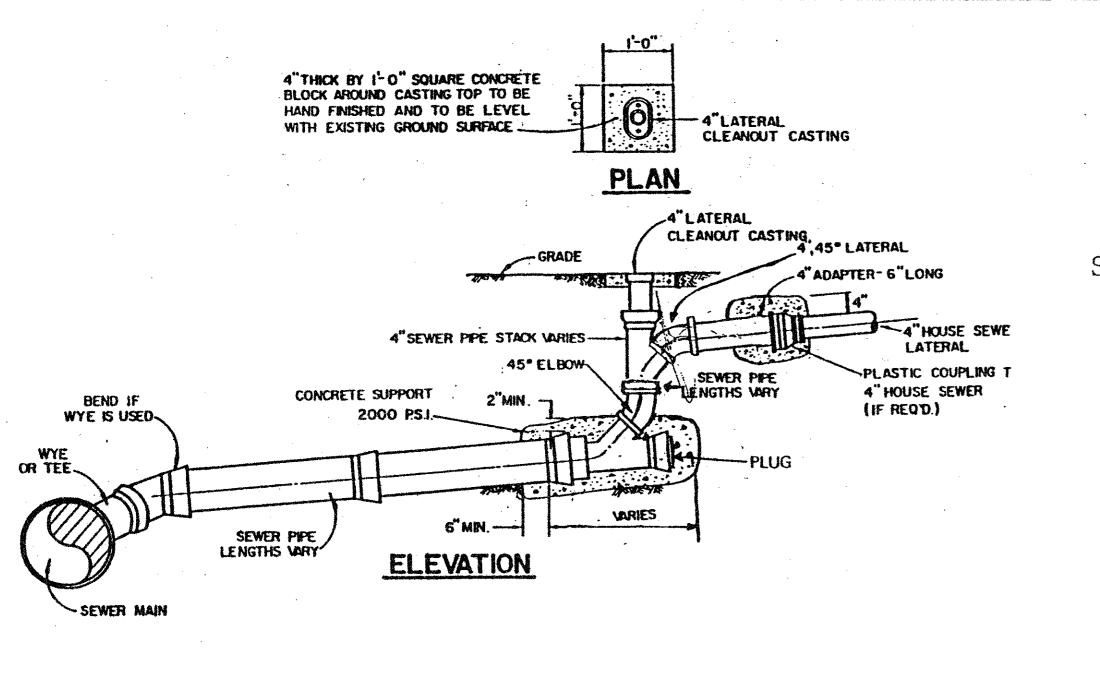
-- 12/30/98 ISSUED FOR OWNER'S REVIEW NO. DATE DESCRIPTION OF REVISION/ISSUE **EROSION & TRAFFIC CONTROL PLANS** 1601 SURVEYOR BLVD. HENNESSEY ENGINEERING, INC. 1417 W. MAIN STREET, CARROLLTON, TX 75006

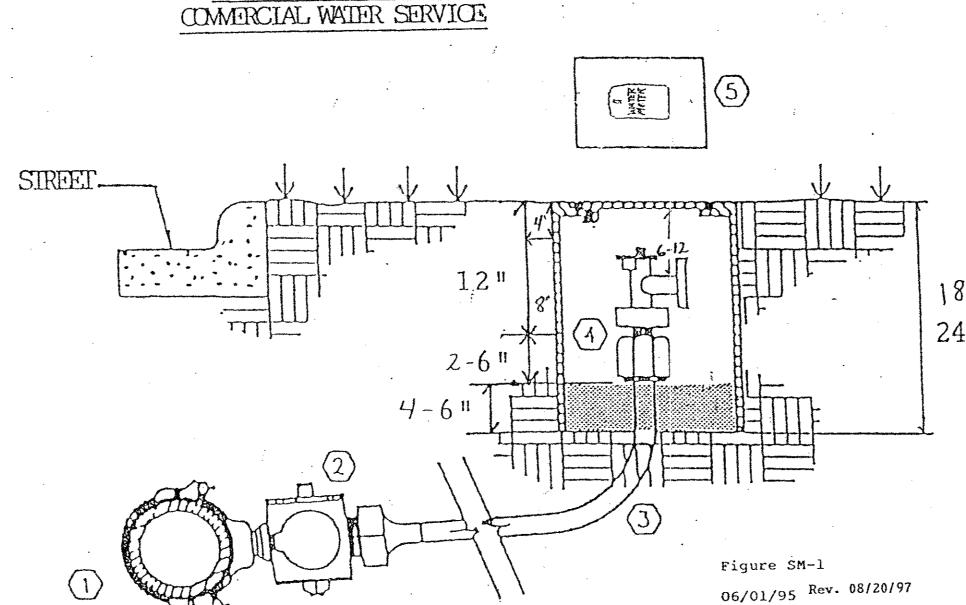
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TEL: (972) 245-9478 FAX: (972) 245-7087 CARROLLTON, DALLAS CO., TEXAS DESIGN DRAWN DATE SCALE NOTES FILE

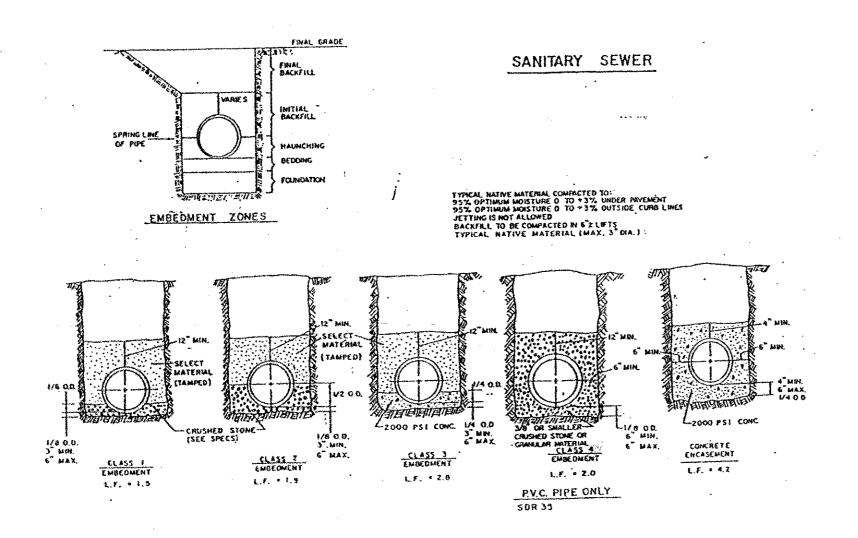
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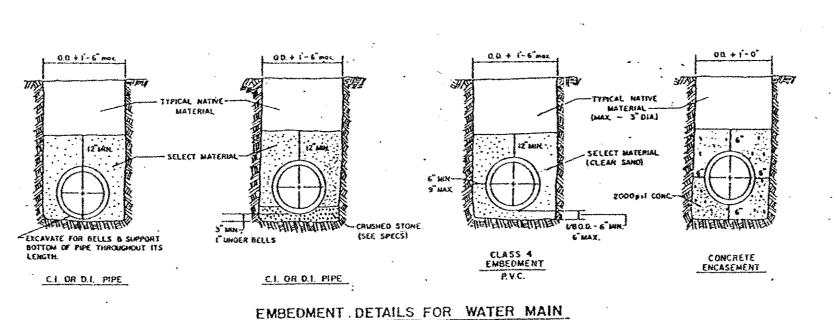
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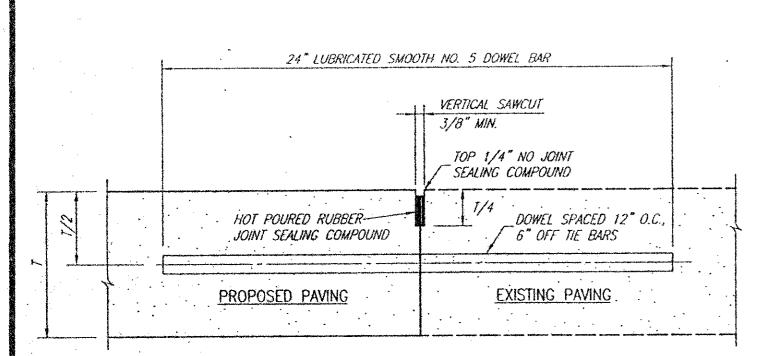




TOWN OF ADDISON

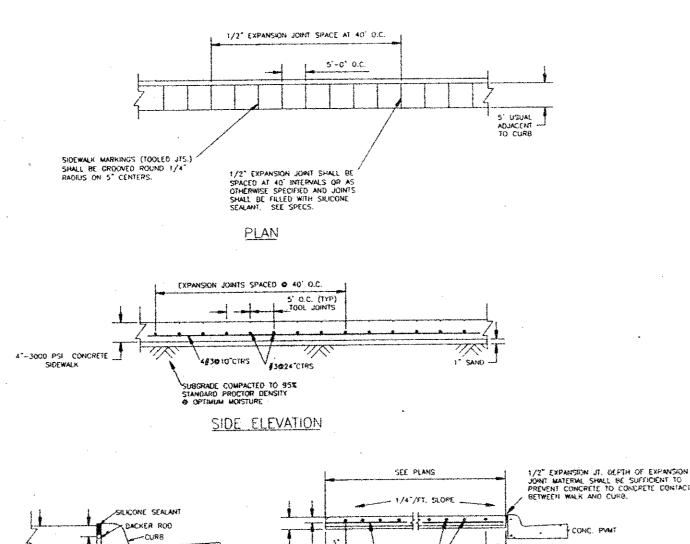






DOWEL BARS SHALL BE DRILLED INTO PAVEMENT HORIZONTALLY BY USE OF A MECHANICAL RIG. DRILLING BY HAND IS NOT ACCEPTABLE. PUSHING DOWEL BARS INTO GREEN CONCRETE IS NOT ACCEPTABLE.

CONNECTION TO EXISTING PAVEMENT NOT TO SCALE



SECTION EXPANSION JOINT DETAIL CONCRETE SIDEWALK

Backslow Prevention Assemblies:

- All water services (except large fire services) shall have the appropriate BPA installed immediately after the meter. If there are space limitations or other considerations that would preclude installation in that location, the BPA may be installed inside a building or other location, but there may be no taps or tees into the service between the meter and the BPA. This must be approved by the Town of Addison Public Works Department prior to installation.
- All BPA's must be on the most current List of Approved Backflow Prevention Assemblies as published by the USC-FCCCHR.
- The appropriate BPA will be determined by the Town of Addison Utility Division, using the most current edition of the Manual of Cross-Connection Control as published by USC-FCCCHR as a guideline. Final determination rests with the Town of Addison.
- The plumber, contractor, and/or owner is responsible for having the BPA tested upon installation and initiation of service by a Tester certified according to TNRCC Rules for the specific type of installation, i.e. FireLine, General, etc. Thereafter, it will be the responsibility of the party paying the water bill, to have the BPA tested as prescribed by the Town of Addison Utility Division based on type of device and Degree of Hazard. Reduced Pressure Zone Assemblies shall be tested at least annually.
- All BPA's shall be installed according to manufacturer's specifications regarding
- Teflon tape is necessary to facilitate removal of plugs for future testing of the device. Plumber's putty or pipe dope is unacceptable for this installation.
- Above ground installation is the preferred method, but if the device is placed in a meter box, the box must be of sufficient size to provide the proper clearances for accessing, Assemblies be permitted in a meter box or vault, or any other below grade installation.

TOWN OF ADDISON WATER SERVICE

Sizes 3/4" - 2"

Contractors and/or plumbers are responsible for compliance with the following specifications:

- A. Meters shall be set within the Utility easement and clear of vehicular traffic flow and/or parking spaces. Curb stops are to be set 6"-12" below finished grade.
- B. To prevent the inflow of mud or silt into the box, 4-6" of washed pea gravel shall be placed under the meter inside the box, allowing for 2-6" of open space below the meter. Meter box shall be minimum 18"deep. (see Figure SM-1)
- C. Meter boxes shall be large enough to allow access to, and operation of, all meter nuts/flanges/bolts, and the curb stop without obstruction.
- D. Boxes that are vulnerable to vehicular traffic shall have load bearing frames and lids with reader door designed to withstand the anticipated load.
- E. Meters shall conform to Town specifications as to make and type, (See General
- . An approved Backflow Prevention Assembly shall be installed on all water services after the meter, with a nipple between the meter and the Assembly of sufficient length to allow placement in separate boxes, both being accessible for testing and repairs. It shall be the responsibility of the contractor to have the Assembly tested upon installation by a TNRCC certified tester, who shall provide the original of the test report to the Town of Addison Utility Division prior to final, continuous connection to the City's water supply.
- G. All companion flanges shall be elliptical brass, and all bolts & nuts shall be 316 stainless steel.
- H. Meters shall be set level in all directions.

Requirements for Water Service)

- 1. 2" meters shall have a laying length of 17"; 1.5" meters shall have a laying length of 13". Meters may be "compact," but the difference shall be made up with a strainer upstream, or a spool with test port downstream from the meter. 5/8" x 3/4" meters shall have 7 1/3" laying length, 3/4" meters shall have 9" laying length, and 1" meters shall have 10 3/4" laying length. (Approval of Utility Inspector)
- J. A meter deposit is required for all meters prior to initiation of service. Application and deposit will be made to the Town of Addison Utility Billing Department by the party responsible for the water bill. (Call 450-7081)

TOWN OF ADDISON 3/4" - 2" WATER SERVICE APPROVED MATERIALS and PROCEDURES

- 1. Double-strap bronze tapping saddle with CC. (AWWA taper) threads: Mueller #BR2B, Ford #202B, or McDonald #3825.
- 2. Corporation stop with AWWA taper thread (CC) by conductive compression connection: Mueller H-15013 or B25008 (1.5", 2"), Mueller H-15008 or H-25008 (3/4", 1"), Ford FB1000 or F1000 (1.5", 2", -6-G, -7-G, respectively), (3/4",1", -3-G, -4-G, respectively), McDonald 4701T or 4701BT
- 3. Pipe and meter size shall be determined by owner with approval of Building Inspection or Public Works/Engineering Departments: Piping shall be continuous type "K" copper from corporation to curb stop.
- 4. 90 degree angle curb stop with lock-wing: Mueller H-14277 or B24276 (1.5°, 2°), Ford KV43-666W-G or FV43-777W-G (1.5", 2"), Mueller H-14277 or B24258 (3/4", 1"), Ford KV43-332W-G or KV43-444W-G (3/4", 1"), McDonald 4646BT or 4606BT. All companion flanges (1.5", 2") shall be brass.
- 5. Meter boxes shall be of sufficient size to accommodate the curb stop, meter, and all connections. They shall have a cover with reader lid. Boxes may be stacked to achieve sufficient depth (see "B&C" above).
- 6. In-line surb-stops, meter yokes/setters, and/or meter risers may be considered on a case by case basis dependent on situation and subject to approval of Utility Inspector and/or Utility Foreman. No hand valves will be allowed on the inlet side of the meter.
- 7. The type of Backflow Prevention Assembly required shall depend upon the degree of hazard
- 8. The tapping saddle and corporation stop must be poly-wrapped (8 mil) and hand backfilled with sand to a depth of 12". Additional backfill may be done by machine, with material free of rocks and clods exceeding three (3) inches in diameter. CAUTION!! Inspection must be called for and completed prior tobackfill, or tap must be re-exposed by the contractor so that inspection may be completed by the Town's representative.

See Figure SM-1 for detail.

01/31/96 revised 08/20/97

GENERAL CONSTRUCTION NOTES

- A. Prior to commencing construction, the owner or their authorized representative, shall convene a preconstruction conference among the Town of Addison, the Consulting Engineer(s), Contractor(s), Utility Companies, and any other affected parties, at least 48 hours prior to the beginning of construction. Contact Mike Murphy, Assistant Director of Public Works at 972-450-2878, or Dave Wilde, Public Works Inspector
- B. The contractor shall obtain a right-of-way permit from the Town of Addison for working within the public
- C. The contractor is responsible to contact any Utility Companies to locate existing facilities in or near the work areas. These include, but may not be limited to the following:

The Town of Addison TU/LSG Southwestern Bell TCI Cable AT&T

> MCI Brooks Cable Explorer Pipeline

- D. Any existing pavement, curb, and/or sidewalks damaged or removed due to construction activity shall be repaired by the contractor at their expense.
- Lot pins shall be installed after construction and prior to final acceptance. Concrete monuments shall be placed as shown on the final plat and iron pins shall be placed at block corners, curve points, and angle points in public right-of-way. Concrete monuments shall be six (6) inches in diameter and twenty-four (24) inches long. An iron rod one-half inch in diameter shall be embedded at least three (3) inches into the monument at the exact intersection point of the monument. The monument shall be set at such an elevation that after construction, the top of the monument will be not less than twelve (12) inches below finished
- F. The contractor shall stamp a 2-inch "W" and a 2-inch "S" in the curb at the location of the water and sewer service lines, respectfully.
- G. At intersections that have valley drainage, the crown of the intersecting streets will culminate in a distance of forty (40) feet from the intersecting curb line, unless otherwise noted.
- H. Temporary of permanent barricades shall remain at all points of ingress or egress to prevent public use until such street receives final acceptance.
- 1. During construction, the owner shall provide a qualified geotechnical lab to perform material testing during the construction, at the request of the Town of Addison.
- The utility contractor shall submit to the Town of Addison, an approved trench safety plant sealed by a professional engineer registered in the state of Texas, for the installation of utilities greated than five (5) feet

The contractor shall submit material sheets to the Town of Addison for approval, prior to approval

- L. All existing and proposed improvements (valves, manholes, fire hydrants, water meters, etc.) shall be adjusted to finished grade by the contractor
- M. Any adjacent properties affected by the construction shall be restored to pre-construction condition, or

TOWN OF ADDISON SPECIFICATION # FH-95-1 FIRE HYDRANTS

All fire hydrants installed for use in the Town of Addison shall meet or exceed AWWA Standard C 502-85 or the latest revision thereof. Rated working pressure shall be at least 150psi, test pressure shall be 300psi, and hydrant shall be capable of flowing 1000gpm (class A). All hydrants shall be manufactured in the United States and shall be manufacturer's best grade. Hydrant shall be warranted by the manufacturer for a minimum of 5 years. In addition, all hydrants shall include the following design criteria:

General Design

- A. 3-way style consisting of 2 opposing hose nozzles separated by 1 pumper nozzle, dry barrel type.
- B. A clearly visible arrow and the word "OPEN" shall be cast in relief on the top of the hydrant. The hydrant shall be opened by turning the operating nut counter-clockwise.
- C. Operating nut shall be all bronze, one piece, pentagon measuring 1 1/2" from point to flat and at least 1 1/2"
- D. Manufacturer name, size of main valve, and year of manufacture shall be cast in relief on the upper barrel section, and clearly visible to aid in the identification of repair parts.
- E. Lower barrel shall have ground line markings cast in relief and clearly visible approximately 2" below flange to aid in proper installation.
- F. "Traffic model" with upper and lower barrels joined approximately 2" above ground line by a separate and

breakable "swivel" flange providing for 360 degree rotation of upper barrel for proper nozzle facing.

G. Shoe and barrel castings shall be fabricated of ASTM A-126, Class B Gray iron or Ductile Iron ASTM A-536, but no combination thereof, assuring uniform strength of all cast components.

- Hose nozzles shall be 2 1/2" 7.5" NS, pumper nozzle shall be 4" pumper gauge (40480) after the manner of City of Dallas and City of Carrollton Standards. Nozzle section shall allow for field replacement of damaged threads without special tools, excavation, or disturbing the ground joint line. Nozzles shall be fastened by mechanical means and secured to prevent nozzles from turning or backing out. Nozzle caps shall be provided with 1- 1/2" pentagon nuts at least 1 1/4" in height, a recess provided at the inner end of thread for gasket retention, and secured to the hydrant with non-kinking type chain made from stock not less than 1/8" in diameter. Center line of lowest nozzle shall be at least 18" above ground line.
- B. Main valve closure shall be compression type, opening against line pressure and closing with the pressure. Main valve shall be 5 %" in diameter. A bronze seat ring shall thread into a bronze drain ring (or shoe bushing). This bronze shall be low-zinc (less than 16%) to minimize galvanic corrosion. Design shall allow for removal of seat, drain valve mechanism, internal rod, and all working parts through the top of the hydrant without disturbing the ground line joint or the nozzle section of the hydrant.
- C. Lubrication of the upper stem threads, operating nut threads, upper and lower thrust collar bearing surfaces, and O-ring stem seals shall be accomplished automatically as the hydrant is operated. Lubricant shall be low viscosity, non toxic, FDA approved oil. Oil reservoir shall be separated from waterway by two (2) O-
- D. The "traffic model" safety flange shall employ unweakened stainless steel hex head bolts (AWWA C 502, Sec. 3.2.17), and fasteners of sufficient strength to bear all test and operating pressures. The stem shall be 2-piece, not less than 1 W" in diameter (excluding threaded or machined areas) and shall be connected by a breakable stem coupling. The weakened portion of the coupling shall be below the coupling pins to eliminate failure due to excessive torque. All screws, pins, bolts, or fasteners used in conjunction with the coupling shall be stainless steel. The coupling shall be of metal similar to that of stem to eliminate failure due to electrolysis and corrosion. The coupling joint shall be located below the top of the lower barrel to prevent vehicle wheel or other forces being applied to stem which would open the valve mechanism.
- E. Drain system shall consist of two (2) valves feeding two (2) external discharges. Drain system shall be so designed as to provide for both automatic and intentional force flushing at full line pressure. Drain valve mechanism and outlet shall be all bronze.
- F. The interior surfaces of the shoe and lower main valve components shall be apoxy coated in combliance with AWWA Standard C-550. The shoe and lower barrel shall be connected by stainless steel boits, nuts. and fasteners of sufficient size and strength to bear all pressures and forces that the hydrant is subject to, including corrosion, for its warranted life.

Painting and Delivery

- A. Hydrants shall be delivered with 2 coats of primer on upper barrel (AWWA C-502 Sec. 4.2.3). Interior and exterior shall be painted as in AWWA C-502 Sec. 4, excluding the interior of shoe which shall be as noted in Sec. 2.F of this specification.
- B. Hydrants shall be complete in all details when supplied. Due and customary care shall be used in preparation for shipment to eliminate damage in handling or transit. Hydrants must be drained and completely closed before shipment.
- C. Manufacturer shall supply an Affidavit of Compliance verifying that the hydrant and all materials used in its construction conform to the applicable requirements of the most current form of AWWA C502 and these supplementary specifications, that all specified tests have been performed, and that all test

CONCRETE SIDEWALK GENERAL NOTES:

1. Reinforced concrete sidewalk shall be 5 or 7 feet wide, a minimum of four (4) inches thick and shall be 3000 psi at 28 days (5 sack mix). Unless noted otherwise.

- 2. Chamfer all exposed edges of concrete (1/4) inch.
- 3. All bar dimensions are given as center to center of bars and are located as shown.
- 4. All reinforcing steel shall be No. 3 on 18 inch centers longitudinally, 24 inch centers transversaly and shall conform to the requirements of ASTM A-615, Grade 60.
- 5. 1" thick min. fine, washed sand cushion shall be free from organic materials or clays and shall be used for grade adjustment.
- 6. Subgrade shall be compacted to a density not less than 95% at optimum moisture.
- 7. Tooled joints (contraction joints) shall be on five (5) foot center and shall be round one-fourth (1/4) inch radius.

8. A one-half (1/2) inch expansion joint shall be placed every eight (8) tooled joints, and where works abut old work, or where new work is constructed adjacent to other concrete, a one-half inch expansion joint shall be used where sidewalk is adjacent to curb, the expansion joint shall be made of pre-molded bituminous expansion joint filler or redwook with silicone sealant. See specs.

9. Sidewalks shall be finished by lightly brooming surface transversely to direction of main traffic or where adjacent sidewalks differ from this standard, new sidewalks shall conform to adjacent sidewalk (e.g. exposed aggregate).

10. Cross slope walk one-fourth (1/4) inch per foot towards curb or as shown on the drawings to provide drainage.

STANDARD DETAIL SHEET CITY OF ADDISON, TEXAS 1601 SURVEYOR BOULEVARD HENNESSEY ENGINEERING, INC. 1417 W. MAIN STREET #100, CARROLLTON, TX 75006 TEL: (972) 245-9478 FAX: (972) 245-7087 DESIGN DRAWN

clearances, orientation, etc.

- Stainless steel or brass plugs shall be placed in all test cocks after testing. The use of
- testing, and repair of the device. All above ground installations shall be protected from freezing with apparatus designed for such use. In no case shall Reduced Pressure Zone