CONSTRUCTION NOTES

GENERAL

1. The CONTRACTOR shall be responsible for being familiar with and having a working knowledge of these PLANS, the project area, and all codes, regulations or laws applicable to the project.
2. All construction shall conform to the requirements of the "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION" by North Central Texas Council of Governments (NCTCOG) most recent amendment.
3. The CONTRACTOR shall provide "As Built" plans to the ENGINEER so that the reproducible sheets of the engineering plans may be corrected to reflect "As Built" conditions, as necessary.
4. The OWNER will designate a construction staging area on the Owner's property. The CONTRACTOR shall obtain written permission from the OWNER for specific materials to be stockpiled or specific equipment to be stored, prior to beginning construction.
5. The CONTRACTOR shall not allow soils and debris to enter existing inlets or drainage facilities.
6. The CONTRACTOR shall limit his work to the property as shown on the drawings. Existing on-site facilities shall not be disturbed except as noted on the plans. All disturbed or damaged areas outside the construction limits shall be restored at CONTRACTOR'S expense.
7. The CONTRACTOR shall maintain adequate drainage at all times. All groundwater, seepage, storm water, or water from any source that may occur or accumulate in excavations during the progress of the work shall be removed. All excavations shall be kept entirely free of standing water at all times during the construction work or until otherwise directed by the ENGINEER. All expenses necessary to comply with this requirement shall be born by the CONTRACTOR.
8. The CONTRACTOR shall not dispose wastes or any other materials into streams or waterways. Excess material shall be hauled away each day and not be allowed to accumulate.
9. The CONTRACTOR shall not burn or bury rubbish and waste materials on the project site.
10. The CONTRACTOR shall wet down dry materials to allay dust and prevent blowing dust.
11. All dimensions shown on the plans with respect to pipes are to the centerline of pipe, unless noted otherwise.
12. The CONTRACTOR shall be responsible for notifying the ENGINEER, the City Engineer, the Police and Fire Departments at least 24 hours in advance when any roadway will be closed or reopened.
13. The CONTRACTOR shall be required to provide and maintain all necessary warning and safety devices (flashing lights, barricades, signs, etc. in conformance with the "Texas Manual on Uniform Traffic Control") to protect public safety and health until the work has been completed and accepted by the CITY.
14. The locations of existing utilities shown on these plans are approximate. It is the responsibility of the CONTRACTOR to locate and verify in the field any utilities that may conflict with his construction. The CONTRACTOR shall be responsible for all fees and costs associated with relocating or protecting existing utilities. At least 48 hours prior to beginning construction in the vicinity of existing underground utilities, the CONTRACTOR shall notify all applicable utility companies, line locators and appropriate City departments.
15. The CONTRACTOR must have a set of plans "Approved" by the CITY on this project at all times.
16. Product Manufacturer's name(s) and/or model numbers are used herein to set a standard of quality and are not intended to be a restraint of trade or prevent submittals of other manufacturers' products of equal quality and equal colors, for products so mentioned.
17. The CONTRACTOR shall institute and, throughout the course of this project, maintain a trench safety program as required by current applicable code. The cost for the trench safety program shall not be paid for separately but shall be incidental to other related work items.

GRADING

1. All vegetation and debris shall be removed from areas to be graded, prior to commencing with excavation or filling. The top 3" of topsoil shall be removed and stockpiled prior to the start of grading operations. The location for stockpiling must be approved by the Engineer prior to placing any materials.
2. Material excavated during construction of the pond at the south end of the site, is intended to be used for construction of fill pads throughout the site. Materials suitable for fill shall be stockpiled at a location to be approved by the Engineer.
3. All fills shall be placed in lifts of 6 to 8 inches. Each lift shall be compacted to 95% standard proctor density prior to placement of subsequent lifts. Areas designated on the plans for grading shall be finished to the designed grades +0.1 Foot. Any fill placed beneath areas to be grassed shall be compacted to 90% standard density.
4. All debris or deleterious materials shall be disposed of properly and not be allowed to accumulate. Disposal of such materials shall not be allowed in streams, waterways, drainageways, drainage facilities, or public or private lands except where proper permitting has been obtained. The Contractor shall not burn or bury rubbish or waste materials on the project site without the approval of the engineer of governing authorities.
5. The Contractor shall maintain adequate drainage at all times. Water shall not be allowed to accumulate or remain in excavations.

PAVING & FLATWORK

1. The cost of elevation adjustment of manholes, valves, cleanouts, irrigation heads, pullboxes and water meters shall be subsidiary to the other items of the project. All meters, valves and manholes requiring adjustment shall be cross-referenced by the CONTRACTOR so that they may be easily relocated after paving. All elevation adjustments shall be completed prior to placing the pavement.
2. All dimensions and station locations shown on the plans are to back of curb unless noted otherwise.
3. Sidewalk/pavement interfaces shall be reconstructed to comply with the most recent guidelines of Americans with Disabilities Act (ADA).
4. Sidewalks shall be constructed of 4" thick, 2,500 psi concrete, reinforced with #3 bars on 18" longitudinal centers, 24" lateral centers at locations shown on the drawing. Sidewalk subgrades shall be 1" sand cushion, compacted to 95% standard proctor density. Sidewalk edges shall have a 1/4" rounded edge.
5. Transverse expansion joints shall be placed at intervals of 40' along sidewalks. Expansion joints shall be provided with a pre-molded filler throughout the depth and length of the joint, except that the top 1" of the joint shall be sealed with hot poured rubber sealing compound. 24" long No. 6 smooth dowel bars shall be placed at 12" center to center along the joint. A 1" void shall be formed at one end of the bar by wrapping the bar in a closed end dowel sleeve.
6. Transverse contraction (control) joints shall be placed at intervals of 3' along sidewalks. Form joints with a hand tool or similar device to achieve a 3/8" deep recess with 1/4" rounded edges.

CONCRETE

1. Concrete for the aprons shall be of hard rock aggregate and shall develop a minimum compressive strength of 3,000 psi at 28 days. Maximum size of coarse aggregate shall be 1 1/2". Contractor must obtain approval for his choice of concrete supplier from the ENGINEER prior to beginning work.
2. Concrete shall have a maximum slump of four (4) inches. A water/cement ratio of 0.5 shall not be exceeded to arrive at an acceptable slump for workability purposes.
3. All concrete shall be designed, mixed, transported, and placed in accordance with the latest specifications of the "Standard Specifications for Public Works Construction" by North Central Texas Council of Governments (most recent update).
4. The CONTRACTOR shall trowel finish all placed concrete unless noted otherwise.

REINFORCING STEEL

1. All reinforcing steel shall conform to ASTM A615, Grade 60. Foreign steel is acceptable if mill certificates showing compliance with ASTM are provided.
2. All reinforcement shall be designed and detailed in accordance with the latest edition of the ACI "Manual of Standard Practice for Detailing Concrete Structures" (ACI 315).
3. All reinforcing bar bends shall be made cold.
4. Reinforcing steel shall be free of dirt, loose rust, loose mill scale, paint, oil, grease or any other substance that could prevent development of a good bond.
5. Reinforcement shall be supported using bar chairs to provide the following minimum concrete cover:
   Cast against and permanently exposed to earth 3 in.
   Formed, exposed to earth or weather 2 in
6. Where splicing occurs, bars shall be lapped a minimum of 18 inches.

STORM SEWER

1. All storm sewer pipe shall be reinforced concrete pipe, Class III (RCP), unless noted otherwise. Embedment, backfill and compaction is subsidiary to pipe installation.
2. The CONTRACTOR shall remove and salvage existing pipes where indicated on the plans.
3. The CONTRACTOR shall install proposed storm sewer pipe of the size and types specified (or approved equal) to the lines and grades shown on the plans. Connections shall be made to the specifications of the manufacturer.
4. A concrete collar shall be poured around RCP storm sewer pipes at changes in pipe size and at all field connected laterals.

TRENCH

1. The CONTRACTOR shall institute and, throughout the course of this project, maintain a viable trench safety program at all times, in compliance with Texas House Bill 1569, effective September 1, 1989.
2. The maximum length of open excavation for trenches shall be limited to 100 lineal feet regardless of depth. All trenches shall be backfilled at the end of the day and a drivable surface provided. A drivable surface shall be as determined by the ENGINEER.
3. Areas which have been backfilled to comply with the requirements of paragraph #2, above, but have not been properly compacted, shall be promptly removed at the start of the next working day and compacted in accordance with appropriate sections of the specifications.

EMBEDMENT

1. Embedment of storm sewer pipe and laterals under pavement or subject to vehicular traffic, shall be Class "B+" as specified in "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION" by North Central Texas Council of Governments (NCTCOG) most recent amendment. Select (or granular) material above the crushed stone shall be compacted to a minimum of 90 percent of maximum density as determined by ASTM D 698.
2. Embedment of storm sewer pipe not under pavement or subject to vehicular traffic shall be Class "C".
3. All water and sewer lines which may be adjusted, shall receive Class "B-1" embedment except where concrete encasement is specified.

BACKFILL

1. Backfill under pavement shall have a uniform density of not less than 95% of the maximum density as determined by ASTM D698. Backfill not under pavement shall have a uniform density of not less than 90% of the maximum density as determined by ASTM D698.
2. Backfilling shall be accomplished using friable native material free of boulders, organic material, trash and debris. Backfill shall be placed in 6 to 8 inch lifts each compacted to specified densities.

WATER

1. All water main construction shall conform to the minimum requirements of the Texas State Department of Health Rules and Regulations for public water and sewer systems.
2. New water lines and existing water pipes which are to be removed or relocated shall be replaced with pipes of the same size and material, and of equal or better grade according to the following, unless otherwise specified: water mains 8" or less shall be Class 200, AWWA C900 P.V.C. water pipe; 12" water mains shall be Class 150, AWWA C900 P.V.C. water pipe or AWWA C303 RCCP; water mains larger than 12" shall be AWWA C303 pre-tensioned concrete cylinder water pipe. PVC pipe color shall be blue.
3. Fire hydrants shall be placed not less than 3' nor more than 6' behind the curb. Fire hydrants shall be compression type complying with requirements of AWWA C-502 as manufactured by Mueller.
4. All water mains shall have a minimum cover of 36" below finished grades.
5. All water mains shall be pressure tested in accordance with the NCTCOG Specifications. The CONTRACTOR shall flush and sterilize all water mains. The ~~XXX~~ will take water samples and have laboratory tests performed to prove the water mains to be free of bacteria/micro-organisms.
6. Thrust control shall be provided with the use of retainer glands at all fittings.

SANITARY SEWER

1. All sanitary sewer main construction shall conform to the minimum requirements of the Texas State Department of Health Rules and Regulations for public water and sewer systems and to the Town of Addison plumbing codes and Standards and Specifications for the Town of Addison. Where conflicts occur, the local ordinance shall take precedence.
2. New sanitary sewer lines and existing sewer pipes which are to be removed or relocated shall be replaced with pipes of the same size and material, and of equal or better grade and, unless otherwise specified, shall be SDR 35 PVC (ASTM D-3034).
3. All sanitary sewers shall be constructed to the slopes and grades indicated on the plans.
4. Where sewer manholes are specified, they shall be standard cast-in-place with the diameter specified.
5. Services which are to be connected to the main or to manholes shall be installed at a minimum of 8" above the main flowline. Connections to the manhole shall be accomplished using a manhole coupling or rubber ring water stops as recommended by the pipe manufacturer.

LANDSCAPE, SEEDING & TREES

1. All landscaping in rights-of-way or easements shall be approved by the ENGINEER prior to construction.
2. Damage to existing landscape to remain shall be replaced with like kind and size, material and workmanship (or better) at the CONTRACTOR'S expense.
3. All areas disturbed by work shall be seeded unless otherwise noted on the plans. Payment shall be made for work required inside grading limits and construction limits as shown on plans. All turf areas disturbed outside these limits shall be the responsibility of the CONTRACTOR and shall be reestablished at no cost to the OWNER.
4. The CONTRACTOR shall exercise utmost of caution during all phases of the project to protect existing trees and shrubs.

EROSION PROTECTION DURING CONSTRUCTION

1. The Contractor shall erect and maintain hay bales or silt fences throughout the project during construction to control the loss of material due to erosion.
2. Upon completion of construction, silt fences and hay bales shall be removed and disposed of appropriately. Accumulated silt shall be spread and graded to drain. Graded areas shall be seeded or hydromulched and watered until the grass is established.

FOR CONSTRUCTION

DESIGNED BY: G.E. DRAWN BY: G.E.

NOTE AND REVISIONS
5/10/99 reword sidewalk, staining, and subgrade

SEAL

PREPARED BY:
O'BrienEngineering
13016 Bee Street, Suite 202
Farmers Branch, TX 75234
Ph: 972 241-0336
Fx: 972 241-0370

TF STONE PROJECT
PROPOSED FACILITIES

GENERAL NOTES AND

TOWN OF ADDISON, TEXAS

DATE: 12/02/98

O.E. JOB. NO. 1309801

SHEET NO. 8 OF 8 SHEETS