

**GENERAL NOTES**

1. ALL ELEVATIONS SHOWN ARE BASED ON CITY OF WICHITA DATUM (MEAN SEA LEVEL ELZV. - 1187.4 = CITY DATUM).

2. CONTRACTOR WILL BE REQUIRED TO PROVIDE A MINIMUM ADVANCE NOTICE OF FORTY-EIGHT(48)HOURS TO UTILITY COMPANIES PRIOR TO STARTING ANY EXCAVATION AS FOLLOWS:

|   |                     |
|---|---------------------|
| KANSAS ONE CALL   | 887-2470            |
| THE CONTRACTOR MUST NOTIFY THE FOLLOWING IN CASE OF AN EMERGENCY: |                     |
| Cox Communications  | 282-370 or 263-2661 |
| SBC   | 1-800-870-2390      |
| Kansas Gas Service  | 1-888-492-4900      |
| Westar  | 1-800-333-1153      |
| Aquila  | 1-800-303-0752      |
| City of Wichita(Water & Sewer)                                    | 268-4555            |

THE CONTRACTOR SHALL NOTIFY PIPELINE COMPANIES AT LEAST 24 HOURS IN ADVANCE OF ANY WORK BEING PERFORMED ACROSS AND/OR ADJACENT TO PIPELINES.

3. COST OF EXCAVATION, HAULING AND DUMPING OF EXCESS EXCAVATION SHALL BE SUBSIDIARY TO OTHER ITEMS OF WORK.

4. THE CONTRACTOR SHALL NOTIFY THE INSPECTOR FOR THIS PROJECT 48 HOURS PRIOR TO BEGINNING CONSTRUCTION. THE CONTRACTOR SHALL NOT START WORK ON THE PROJECT UNTIL THE PROJECT INSPECTOR ASSIGNED TO THE PROJECT IS PRESENT ON SITE. ANY WORK DONE WITHOUT INSPECTION WILL BE REQUIRED TO BE UNCOVERED FOR INSPECTION.

5. THE CONTRACTOR SHALL GIVE ALL PROPERTY OWNERS AND/OR TENANTS OF DEVELOPED PROPERTY DIRECTLY ADJUTING THE CONSTRUCTION OF THIS PROJECT A MINIMUM OF TEN (10) DAYS ADVANCE NOTICE PRIOR TO START OF CONSTRUCTION.

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING PROPERTY RIGHTS. THE CONTRACTOR WILL BE REQUIRED TO REESTABLISH ANY PROPERTY RIGHTS WHICH ARE DAMAGED OR DESTROYED BY HIS CONSTRUCTION OPERATIONS. SUCH RIGHTS SHALL BE REESTABLISHED BY A LICENSED LAND SURVEYOR IN ACCORDANCE WITH STATE LAWS.

7. THE CONTRACTOR SHALL RESTORE ALL DITCHES, SHALES, ROAD SHOULDERS, ENTRANCES AND BANK LINES TO THEIR ORIGINAL SLOPES AND GRADES EXCEPT AS SHOWN OTHERWISE.

8. INTERURBAN TRAFFIC GENERATED OUTSIDE THE PROJECT AREA SHALL BE CARRIED THROUGH CONSTRUCTION.

9. UNDERGROUND UTILITY SERVICE LINES AND OVERHEAD UTILITY POLE LINES ARE TO BE ADJUSTED AS NECESSARY BY OTHERS PRIOR TO CONSTRUCTION UNLESS THE PLANS SPECIFICALLY IDENTIFY A UTILITY TO BE ADJUSTED BY ITS OWNER DURING CONSTRUCTION. EXISTING UTILITIES AND THEIR LOCATION, AS SHOWN ON THE PLANS, REPRESENT THE BEST INFORMATION OBTAINABLE FOR DESIGN. LOCATION INFORMATION HAS BEEN OBTAINED FROM THE VARIOUS UTILITY COMPANIES AND IS EITHER FROM COMPANY RECORD DRAWINGS OR COMPANY PROVIDED FIELD LOCATIONS. THE CONTRACTOR WILL BE REQUIRED TO WORK AROUND EXISTING UTILITIES WITHIN THE RIGHT-OF-WAY WHICH DO NOT CONFLICT WITH PROPOSED CONSTRUCTION.

10. RUBBLE FROM THE REMOVAL OF MISCELLANEOUS STRUCTURES AND EXCESS EXCAVATION WHICH IS TO BE WASTED SHALL BE DISPOSED OF ON SITES TO BE PROVIDED BY THE CONTRACTOR. THESE SITES SHALL BE APPROVED BY THE ENGINEER AS TO SUITABILITY, APPEARANCE AND SITE LOCATION. LOCATIONS, THAT IN THE OPINION OF THE ENGINEER, WILL LEAVE AN UNSIGHTLY APPEARANCE, WILL NOT BE APPROVED. ALL DISPOSAL SITES MUST BE APPROVED BY THE KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT. MATERIAL EITHER STOCKPILED OR DISPOSED OF IN A FLOODPLAIN WOULD REQUIRE A KANSAS STATE BOARD OF AGRICULTURE PERMIT. ANY MATERIAL DUMPED IN WATERS OF THE UNITED STATES OR WETLANDS IS SUBJECT TO U.S. CORPS OF ENGINEERS PERMITTING REGULATIONS. ANY MATERIAL BURIED OR STOCKPILED BEYOND APPROVED CONSTRUCTION LIMITS WOULD REQUIRE ADDITIONAL ARCHAEOLOGICAL INVESTIGATIONS UNLESS BURIED IN A PREVIOUSLY APPROVED BORROW LOCATION.

11. PROPERTIES WITHIN THE PROJECT LIMITS MAY HAVE UNDERGROUND SPRINKLER SYSTEMS IN THE PUBLIC RIGHT-OF-WAY WHICH CONFLICT WITH NEW CONSTRUCTION. CONTRACTOR WILL BE REQUIRED TO REMOVE SUCH IMPROVEMENTS SHOULD THEY NOT BE REMOVED BY THEIR OWNER AT THE TIME OF CONSTRUCTION OF THE PROJECT. THE CONTRACTOR WILL BE REQUIRED TO SALVAGE ALL SPRINKLER HEADS AND/OR VALVES AND GIVE SUCH MATERIAL TO THEIR OWNER. PORTIONS OF UNDERGROUND SPRINKLER SYSTEMS NOT IN CONFLICT WITH NEW CONSTRUCTION SHALL BE PROTECTED FROM DAMAGE AND SHALL REMAIN IN PLACE. ALL WORK IN CONNECTION WITH UNDERGROUND SPRINKLER SYSTEMS SHALL BE CONSIDERED AS SUBSIDIARY TO THE CONTRACT PAY ITEMS OF WORK.

12. ALL PROPOSED STUBS AND PLUGGED PIPES SHALL BE LOCATED WITH GREEN PLASTIC TAPE.

14. THE CONTRACTOR MUST EXAMINE THE CONSTRUCTION SITE PRIOR TO BIDDING AND BE SATISFIED AS TO THE WORK SHOWN FOR COMPLETION. AFTER BIDS HAVE BEEN RECEIVED, THE CONTRACTOR SHALL NOT ASSEY THAT THERE WAS A MISUNDERSTANDING OF THE QUANTITIES OF WORK OR OF THE NATURE FOR THE WORK TO BE COMPLETED.

15. EXISTING UTILITIES AND THEIR LOCATION, AS SHOWN ON THE PLANS, REPRESENT THE BEST INFORMATION AVAILABLE FOR DESIGN. LOCATION INFORMATION HAS BEEN OBTAINED FROM THE VARIOUS UTILITY COMPANIES AND IS EITHER FROM COMPANY RECORD DRAWINGS OR COMPANY PROVIDED FIELD LOCATIONS. THE PLAN LOCATIONS ARE NOT GUARANTEED. ADDITIONAL EXISTING UTILITIES MAY ALSO BE ENCOUNTERED. THE CONTRACTOR WILL BE REQUIRED TO WORK AROUND EXISTING UTILITIES WHICH ARE ENCOUNTERED ON THIS PROJECT. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION DURING TRENCHING OPERATIONS TO AVOID DAMAGING THESE LINES. ANY LINES DAMAGED SHALL BE REPLACED OR REPAIRED IMMEDIATELY AS DIRECTED BY THE ENGINEER AT THE CONTRACTOR'S EXPENSE.

17. THE CONTRACTOR SHALL CONTAIN HIS OPERATIONS TO PERMIT TRAFFIC THROUGH AND ACROSS CONSTRUCTION AT EXISTING ROADWAYS AT ALL TIMES. THE CONTRACTOR SHALL ERECT WARNING SIGNS, FLASHING LIGHTS, AND BARRICADES IN COMPLIANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES TO ENSURE SAFETY AS DIRECTED IN THE GENERAL CONDITIONS. THE CONTRACTOR SHALL LIMIT THE EXTENT OF TRENCH TO REMAIN OPEN OVERNIGHT AND WEEKENDS TO LESS THAN 50 FEET.

16. ALL LAWN/TURF AREAS DISTURBED BY CONSTRUCTION OF THE PROPOSED IMPROVEMENTS SHALL BE RESTORED WITH THE SAME GRASS/SOD AS EXISTING. RESTORATION OF DISTURBED AREAS SHALL INCLUDE, BUT NOT BE LIMITED TO, TOP SOIL PREPARATION, SEEDING, MULCH, AND/OR RESEEDING. ALL SEEDING/SODDING WORK SHALL BE IN ACCORDANCE WITH THE CITY OF WICHITA STANDARD SPECIFICATIONS AND THE CITY OF WICHITA ADMINISTRATIVE REGULATION NO. AP78 WHICH GOVERNS CLEANUP AND RESTORATION OR REPLACEMENT FOLLOWING CONSTRUCTION. ALL COSTS FOR THIS WORK SHALL BE SUBSIDIARY TO THE LUMP SUM PRICE BID FOR "SITE RESTORATION".

19. CUTS MADE TO PAVED SURFACES ON PUBLIC PROPERTY WILL BE REPAIRED BY THE CITY'S CONTRACTOR AND CHARGED AGAINST THE OWNER/APPLICANT. UNIT REPAIR PRICES ARE AVAILABLE FROM THE CITY AT 268-4418. A SURCHARGE MAY BE APPLICABLE. CALL 268-4418 FOR DETAILS. REPAIR COSTS TO BE PAID PRIOR TO RELEASE OF WATER SERVICE IF WATER SERVICE IS AFFECTED.

# STORM WATER SEWER IMPROVEMENTS

FOR

## DONOVAN TRUCK SERVICE CENTER AND USED CAR AND TRUCK SALES LOCATED AT 5920 & 5980 W. HYNDRYX AVE.

WICHITA, KANSAS

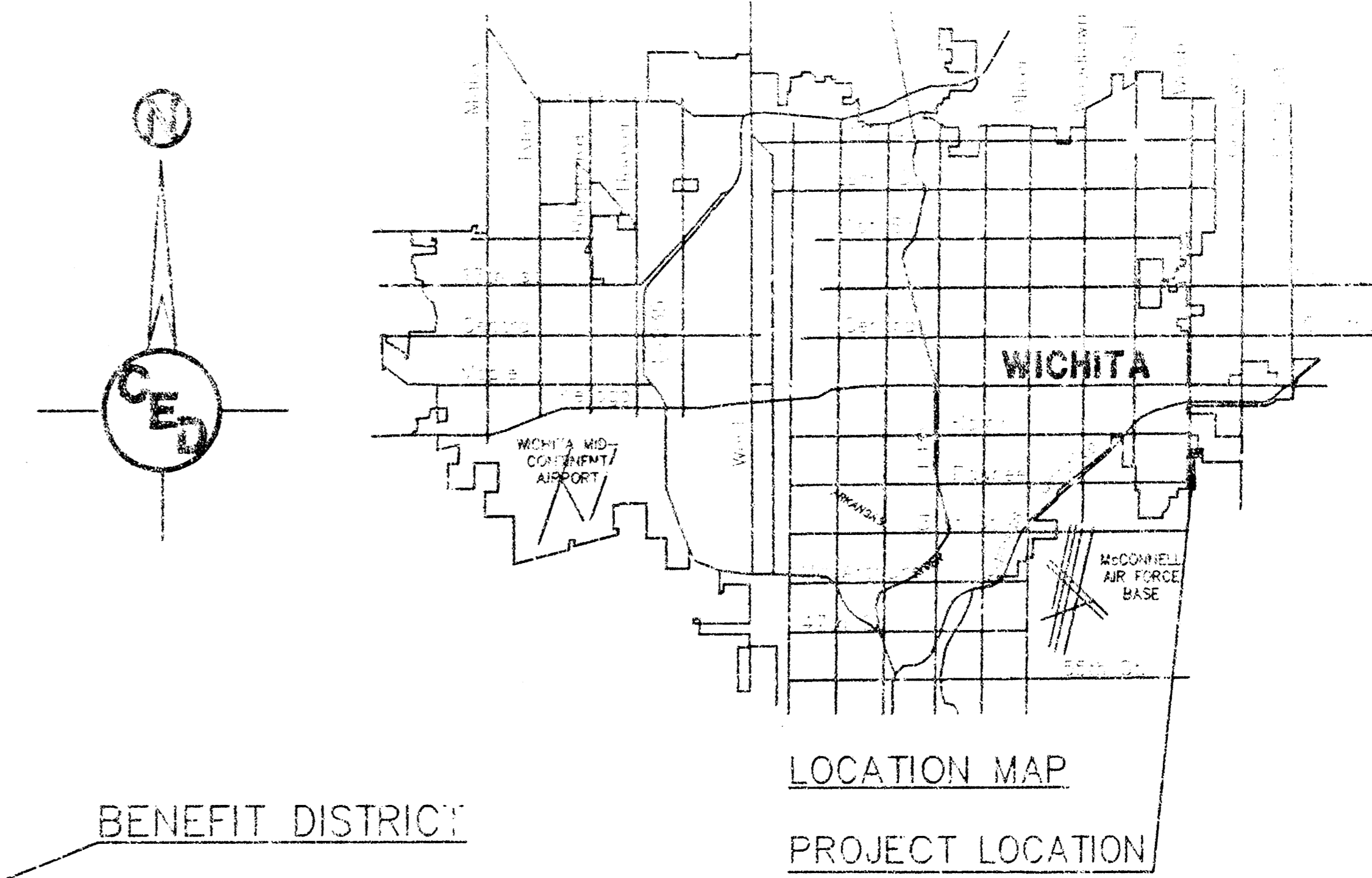
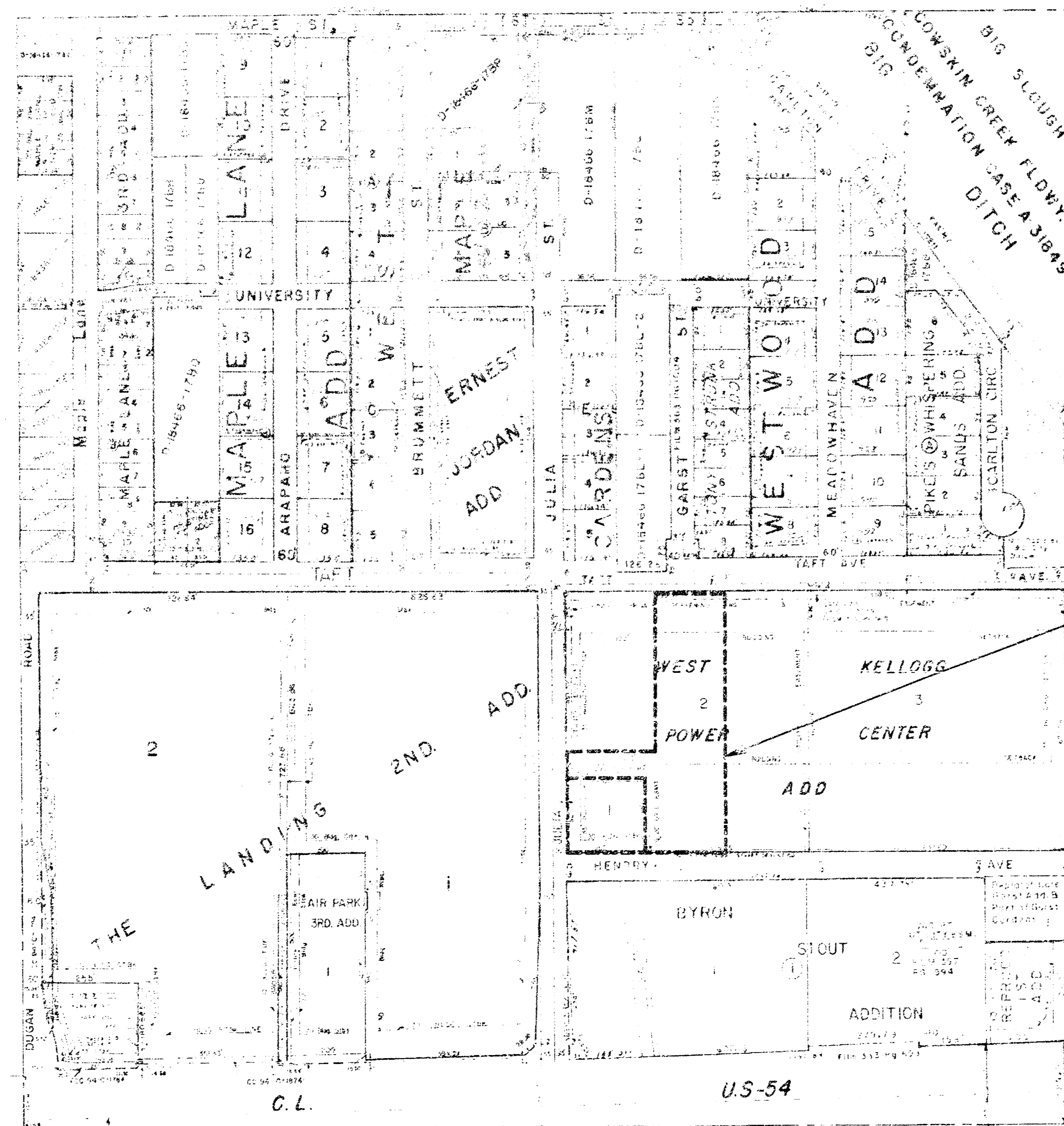
COW PRIV. PROJ. NO. 1616 PPS (607861)

JAMES L. ARMOUR, P.E., CITY ENGINEER

DECEMBER 2005

**INDEX OF SHEETS**

1. Title Sheet
2. Erosion Control & Site Plan
3. SWS No. 1 Plan/Profile
4. SWS No. 2 Plan/Profile
5. SWS No. 2A Plan/Profile
6. 2 1/4' Area Inlet Detail
7. Section: Shallow Type 'B' Vn Detail



BENEFIT DISTRICT

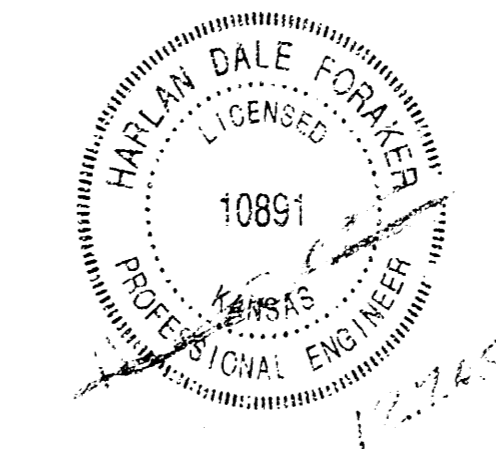
LOCATION MAP  
PROJECT LOCATION

APPROVED AS NOTED  
BY CITY ENGINEER OF WICHITA

|                     |                      |
|---------------------|----------------------|
| Sanitary Sewers     | _____                |
| Storm Sewers        | _____ <i>11/8/06</i> |
| Driveway Approaches | _____                |
| Water Mains         | _____                |
| Paving              | _____                |

**NOTE TO CONTRACTOR**

INSPECTION AND TESTING FOR THIS PROJECT IS TO BE PROVIDED BY A LICENSED CONSULTING ENGINEERING FIRM UNDER CONTRACT WITH THE OWNER/DEVELOPER. SAID INSPECTION TO BE IN ACCORDANCE WITH THE CITY OF WICHITA STANDARD CONSTRUCTION ENGINEERING PRACTICES AND CERTIFIED BY A LICENSED PROFESSIONAL ENGINEER. NO WORK SHALL BE PERFORMED IN DEDICATED EASEMENTS OR THE PUBLIC RIGHT-OF-WAY BY THE CONTRACTOR WITHOUT SUCH INSPECTION NOR SHALL ANY WORK BE COMMENCED IN DEDICATED EASEMENTS OR PUBLIC RIGHT-OF-WAY WITHOUT WRITTEN AUTHORIZATION BY THE CITY ENGINEER.



PROJECT LOCATED IN THE  
N.E.1/4, SEC. 27, T.27S., R.1W.  
WICHITA, SEDGWICK COUNTY, KANSAS

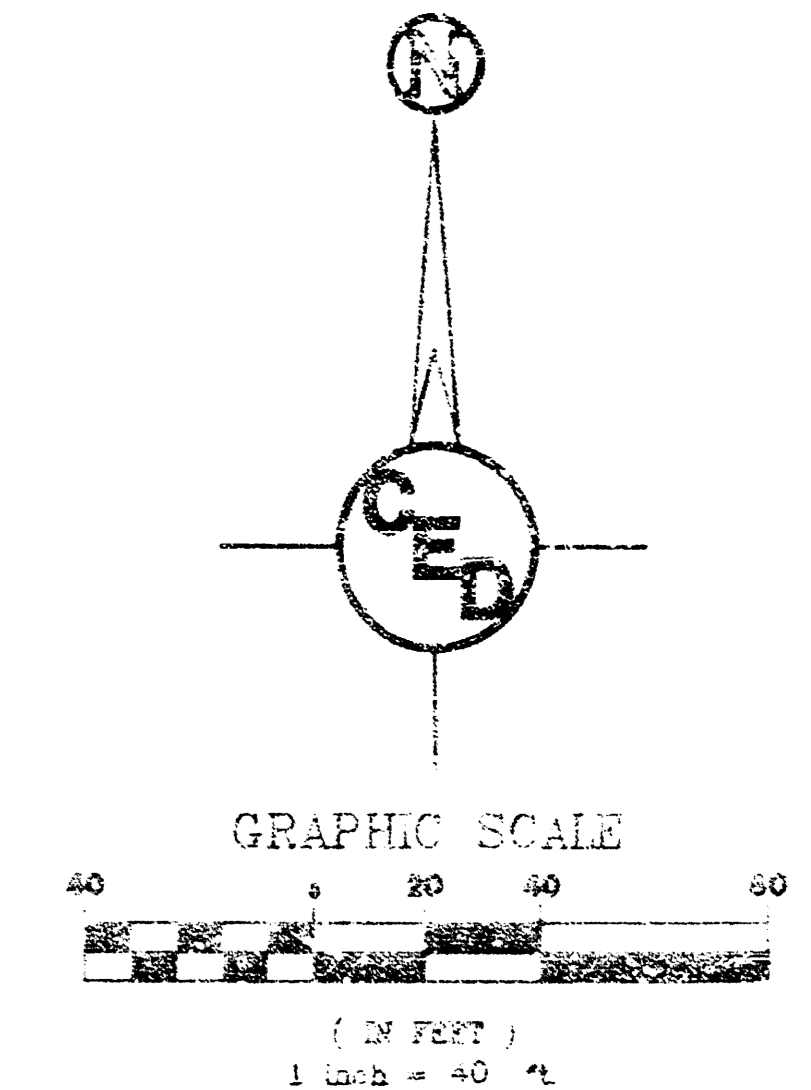
AS CONSTRUCTED 2-01-06  
C.O.W. PROJ. NO.: \_\_\_\_\_ PPS (607861)  
**CERTIFIED ENGINEERING DESIGN, P.A.**  
810 WEST DOUGLAS, SUITE C  
WICHITA, KANSAS 67203  
PH: (316) 262-8808  
FAX: (316) 262-1669

|             |         |
|-------------|---------|
| <b>CEED</b> | SHEET 1 |
|             | TOTAL 6 |

# EROSION CONTROL & SITE PLAN

## DONOVAN TRUCK SERVICE CENTER

### Wichita, Kansas



**Material Specification:** Bore area inlet barriers should be constructed of wheat straw, cut straw, prairie hay or ornamental hay that is free of weeds, diseased portions by the Kansas State Board of Agriculture. The stakes used to anchor the bores should be a hardwood material with the following minimum dimensions: 2" square (rounded) by 4' long.

**Placement:** Bore area inlet barriers should be placed directly around the perimeter of a drop inlet. When a bore area inlet barrier is located near an inlet that has steep, spooned slopes, the storage capacity behind the barrier is drastically reduced. Timely removal of sediment must occur for a barrier to operate properly in this location.

**Excavation Method:** Excavate a trench around the perimeter of the area inlet that is at least 4" deep by a bore's width wide. Place the bores in the trench, making sure that they are butted tightly. Some bores may need to be shortened to fit into the trench around the area inlet. Two stakes should be driven through each bore, approximately 2" to 4" in from the bore ends. Stakes should be driven at least 12" into the ground. Once all the bores have been installed and anchored, place the excavated soil against the receiving side of the bore and compact it. The compacted soil should be no more than 3" to 4" deep.

**Note:** When a bore area inlet barrier is placed in a shallow median ditch, make sure that the top of the bore is not higher than the road surface. In this configuration, water may spread onto the roadway causing a hazardous condition.

**List of common placement installation mistakes to avoid:** Bores should be placed directly against the perimeter of the area inlet. This allows overlapping water to flow directly into the inlet instead of onto nearby soil causing scour. Bore area inlet barriers must be dug into the ground. Bores at ground level do not work because they allow water to flow under the barrier.

**Installation and Maintenance:** Bore area inlet barriers should be inspected every 7 days and within 24 hours of a rainfall 1/2" or more. The following is a list of questions that should be addressed during each inspection:

Does water flow under the bore inlet barrier?  
 Does water flow through spaces between adjoining bores?  
 Are bores damaged?  
 Are bores noncompliant due to age and/or water damage?  
 Does sediment need to be removed from behind the bore inlet barrier?

STRAW BALE BARRIERS FOR AREA INLETS  
(SEE DETAIL SHEET)

| SUMMARY OF TEMPORARY SEEDING QUANTITIES |               |                  |             |
|---|---------------|------------------|-------------|
| TYPE OF APPLICATION                     | SEEDING RATE  | SEEDING QUANTITY | REMARKS     |
| Grass Seed                              | 125 lbs./acre | 125 lbs./acre    | As Required |
| Fertilizer                              | 100 lbs./acre | 100 lbs./acre    | As Required |
| Mulching                                | 3/4 - 1       | As Required      | As Required |

**TEMPORARY SEEDING**

**GENERAL:** All areas disturbed by construction, excluding the paved or surfaced areas and areas of undisturbed native soil or other desirable vegetation shall be fertilized (when required), seeded, and mulched. Soil preparation shall conform to the Best Management Practices for Erosion and Sediment Control.

Temporary seeding shall be done during any time of the year that the soil can be cultivated. After the temporary seeding has been completed on the entire project, the permanent seeding or sodding shall be done during the normal seeding season.

It shall not be required to till the area to bare ground prior to temporary or permanent seeding, if temporary cover has provided stable slopes with no erosion, seed the permanent grasses into the existing cover. If there has been erosion that requires repair prior to seeding, then it may be necessary to regrade the area, resulting in bare ground.

**FERTILIZER:** A rate and application rate that equals or exceeds the required minimum rate per acre of N, P, O, K listed in Summary of Seeding Quantities will be acceptable.

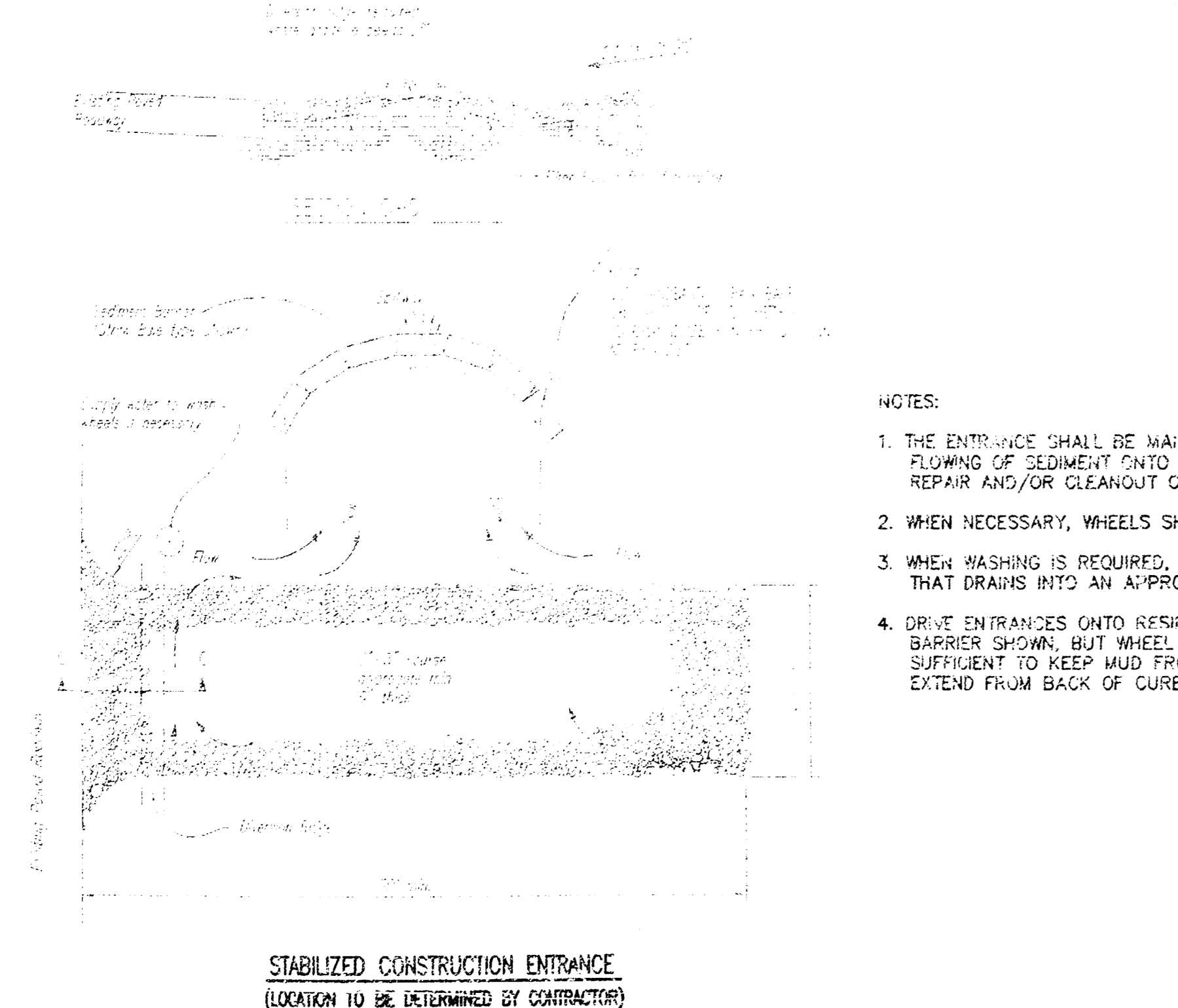
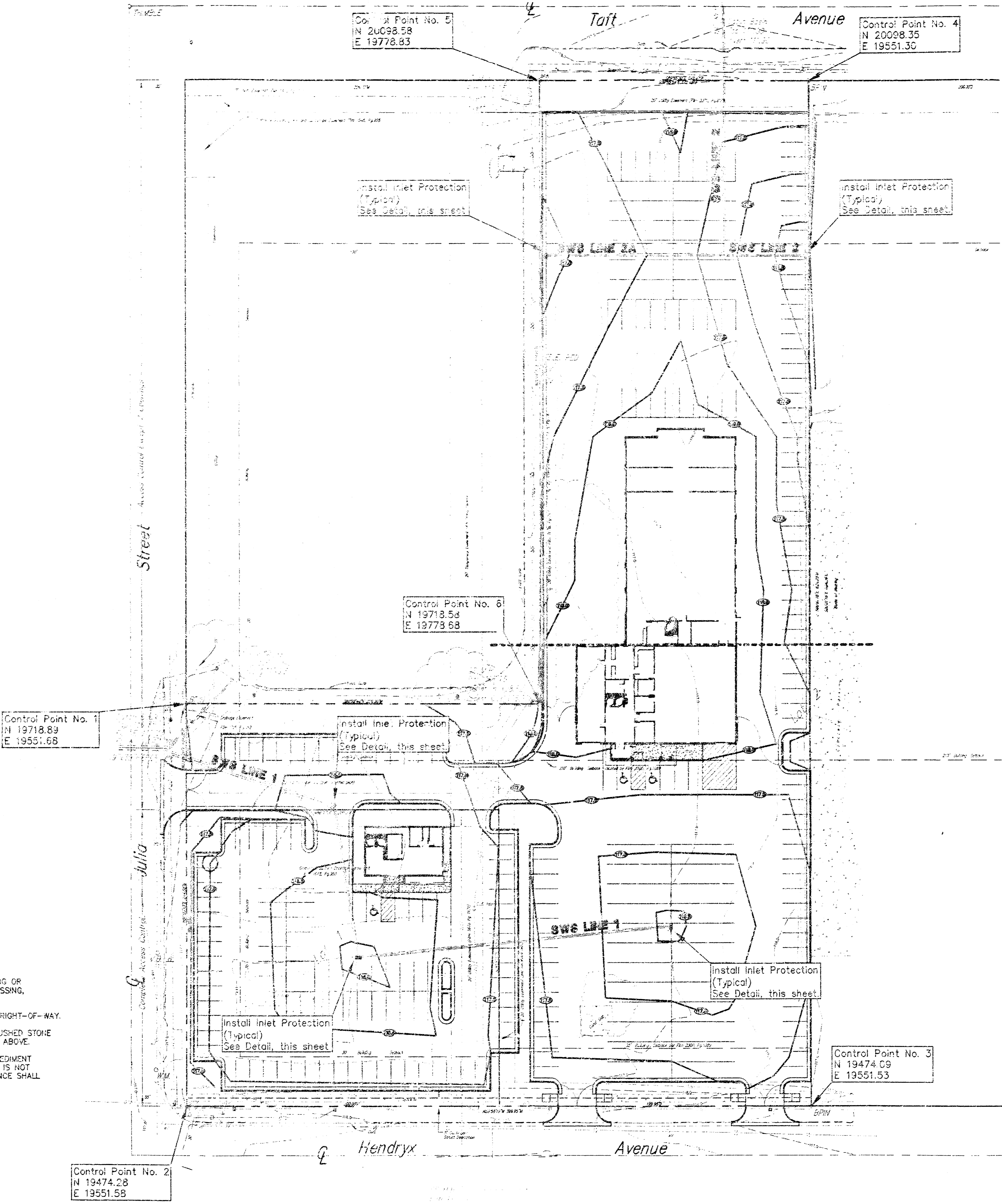
**MULCHING:** Mulch shall be spread uniformly over all disturbed areas and purchased in the soil, unless otherwise noted on the plans. The rate of application per acre, thickness in place, for the various mulching materials are as follows:

|                              |               |               |  |
|------------------------------|---------------|---------------|--|
| Prairie Hay Mulching         | 1 3/4 - 2 1/4 | Tons per Acre | = 1-1/2" loose depth spread uniformly over acre. |
| Bromegrass Mulching          | 1 3/4 - 2 1/4 | Tons per Acre | = 1-1/2" loose depth spread uniformly over acre. |
| Wheat or Oats Straw Mulching | 1 1/2 - 2     | Tons per Acre | = 3" loose depth spread uniformly over acre.     |
| Wood Chip Mulching           | 4 - 5         | Tons per Acre | = 1-2" loose depth spread uniformly over acre.   |
| Wood Fiber Mulching          | 3/4 - 1       | Tons per Acre | = spread uniformly over acre.                    |

Other vegetative mulches (Acceptable only with the Engineer's concurrence).

The above rates are a guide. It will be at the discretion of the Engineer to determine what rate is sufficient for adequate protection of newly seeded areas.

The amount of mulch in the bid quantities is estimated. The total mulch required shall be determined in the field. The bid item for mulching shall be paid for by one of the following ways:



- NOTES:**
- THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
  - WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
  - WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN, AS SHOWN ABOVE.
  - DRIVE ENTRANCES ONTO RESIDENTIAL LOTS WILL NOT BE REQUIRED TO HAVE THE SEDIMENT BARRIER SHOWN, BUT WHEEL WASHING MAY BE REQUIRED IF STABILIZED ENTRANCE IS NOT SUFFICIENT TO KEEP MUD FROM BEING TRACKED ONTO ADJACENT STREET. ENTRANCE SHALL EXTEND FROM BACK OF CURB TO DWELLING.

| HORIZONTAL CONTROL POINTS |                          |   |
|---------------------------|--------------------------|---|
| C.P. NO. 1                | N 19718.89<br>E 19551.68 | NW Corner of Donovan Property @ Julia St. 1/2" Rebar w/ Baughman Cap  |
| C.P. NO. 2                | N 19474.28<br>E 19551.68 | SW Corner of Donovan Property, 1/2" Rebar w/ Savoy Cap (Set)          |
| C.P. NO. 3                | N 19474.09<br>E 19551.53 | SE Corner of Donovan Property, 1/2" Rebar w/ Baughman Cap             |
| C.P. NO. 4                | N 20098.35<br>E 19551.30 | NE Corner of Donovan Property, 1/2" Rebar w/ Baughman Cap             |
| C.P. NO. 5                | N 20098.58<br>E 19778.83 | NW Corner of Donovan Property @ Taft Ave., 1/2" Rebar w/ Baughman Cap |
| C.P. NO. 6                | N 19718.58<br>E 19778.68 | Inside Corner of Donovan Property, 1/2" Rebar w/ Baughman Cap         |

DONOVAN TRUCK SERVICE CENTER  
**EROSION CONTROL & SITE PLAN**  
 LOCATED AT 5920 AND 5980 W. HENDRYX AVE., WICHITA, KS  
 CED PROJ. NO.: 20051333

**CERTIFIED ENGINEERING DESIGN, P.A.**

810 WEST DOUGLAS, SUITE C  
 WICHITA, KANSAS 67203  
 PH. (316) 262-8808 FAX. (316) 262-1669

|               |                            |          |
|---------------|----------------------------|----------|
| DESIGNED: HDF | SCALE: 1"=20'              | SHEET    |
| DRAWN: CKW    | DATE: 11/05                | 2        |
| CHECKED: HDF  | CED FILE: Donovan-Base.dwg | TOTAL: 6 |

**Savoy Company, P.A.**  
 Land Surveyors

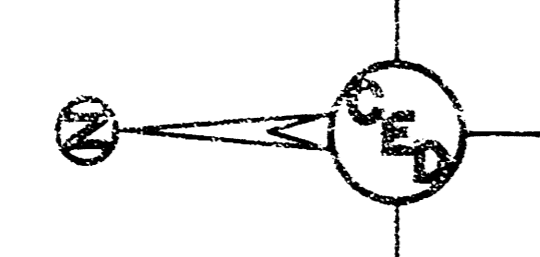
PROJECT NO. 5555310 A

1111 (114) 2-3-1015  
 1141 (114) 261-3275  
 815 S. Emporia, Suite 104, Wichita, KS 67202  
 www.savoyco.com

17 OCT 05



UTILITIES SHOWN REPRESENT THE BEST INFORMATION AVAILABLE FOR DESIGN. ADDITIONAL UTILITIES MAY BE PRESENT ON THIS PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION, DEPTH AND SIZE OF ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE LIABLE FOR ANY DAMAGE CAUSED BY THE FAILURE TO DO SO.



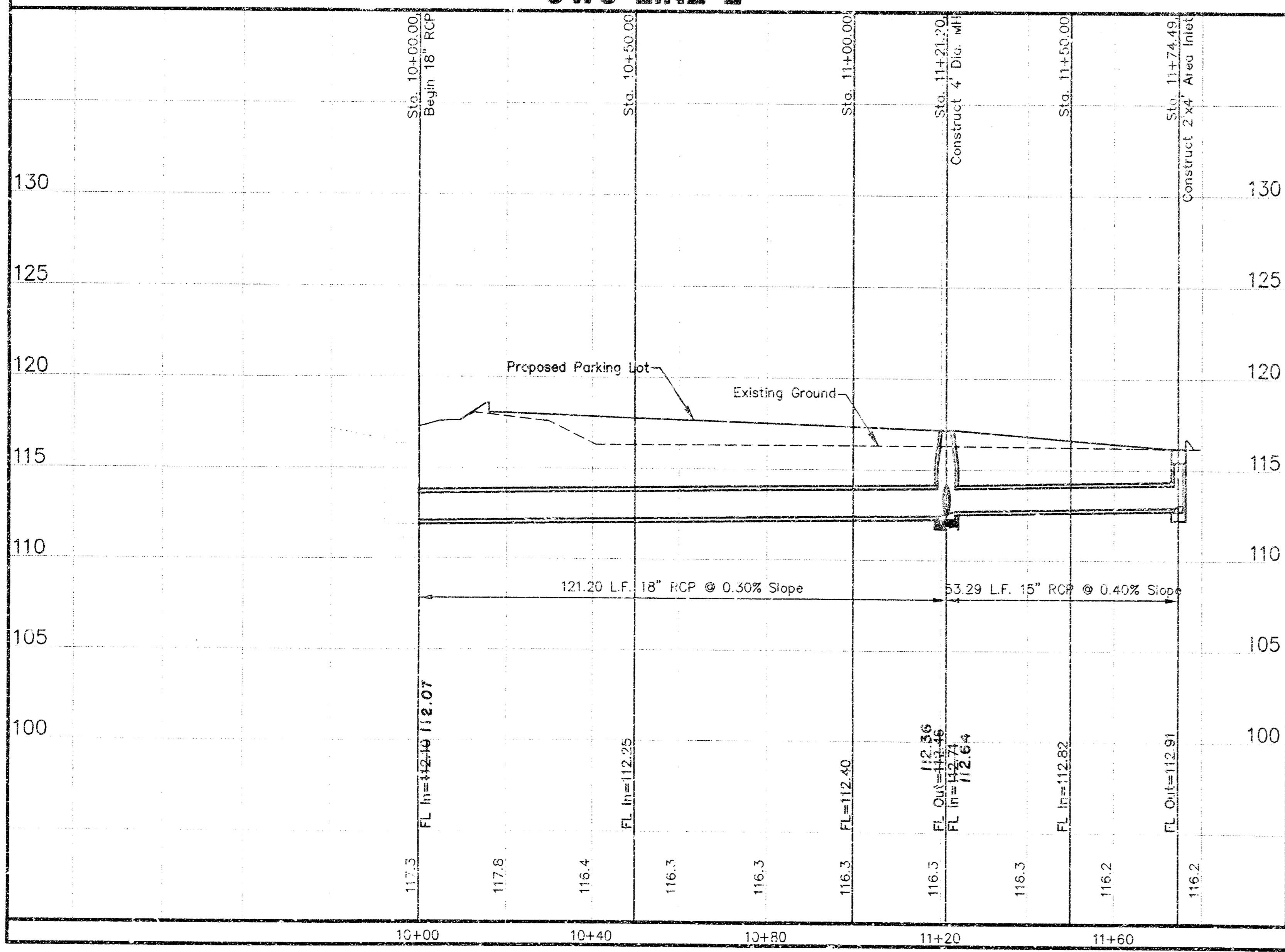
Taft Ave.

Sta. 10+00.00, Begin SWS No. 2  
Begin 18" RCP @ Existing Curb  
inlet. Contractor Shall Core Inlet  
Wall and Seal New 18" RCP to  
inlet Wall with Quick-Set  
Hydraulic cement.  
FL In=112.82  
N 20112.55  
E 19895.31

Sta. 11+74.49, End SWS No. 2,  
Construct 2'x4' Area Inlet  
Top Elev.=115.94  
FL Out 15"(W)=112.91  
N 19991.42  
E 19949.54

Sta. 11+21.20, SWS No. 2=  
Sta. 20+00.00, SWS No. 2A  
Construct Special Shallow  
Typ. 24" Dia. sht.  
Rim Elev.=117.23  
FL In 15"(E)=112.71  
FL Out 18"(N)=112.46  
FL In 15"(W)=112.71  
N 19991.45  
E 19895.24

**SWS LINE 2**

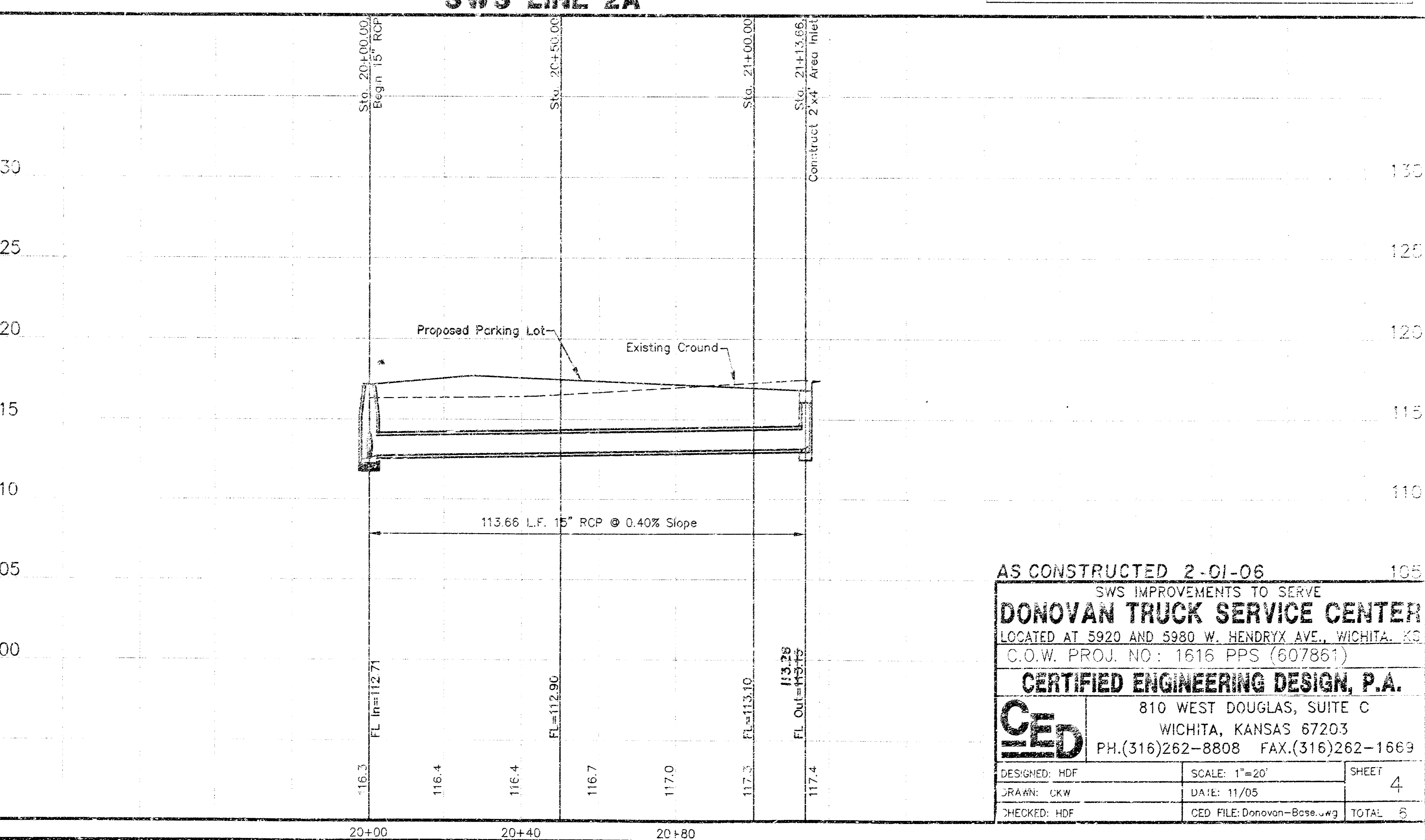


GRAPHIC SCALE  
0 10 20 30  
( IN FEET )  
1 inch = 20 ft.

Sta. 20+00.00, SWS No. 2A=  
Sta. 11+09.21, SWS No. 2  
Proposed Special Shallow Typ.  
24" Dia. sht.  
Rim Elev.=117.23  
FL In 15"(E)=112.71  
FL Out 18"(N)=112.46  
FL In 15"(W)=112.71  
N 19991.45  
E 19895.24

Sta. 21+13.95, End SWS No. 2A  
Construct 2'x4' Area Inlet  
Top Elev.=118.70  
FL Out 15"(W)=113.15  
N 19991.51  
E 19782.59

**SWS LINE 2A**

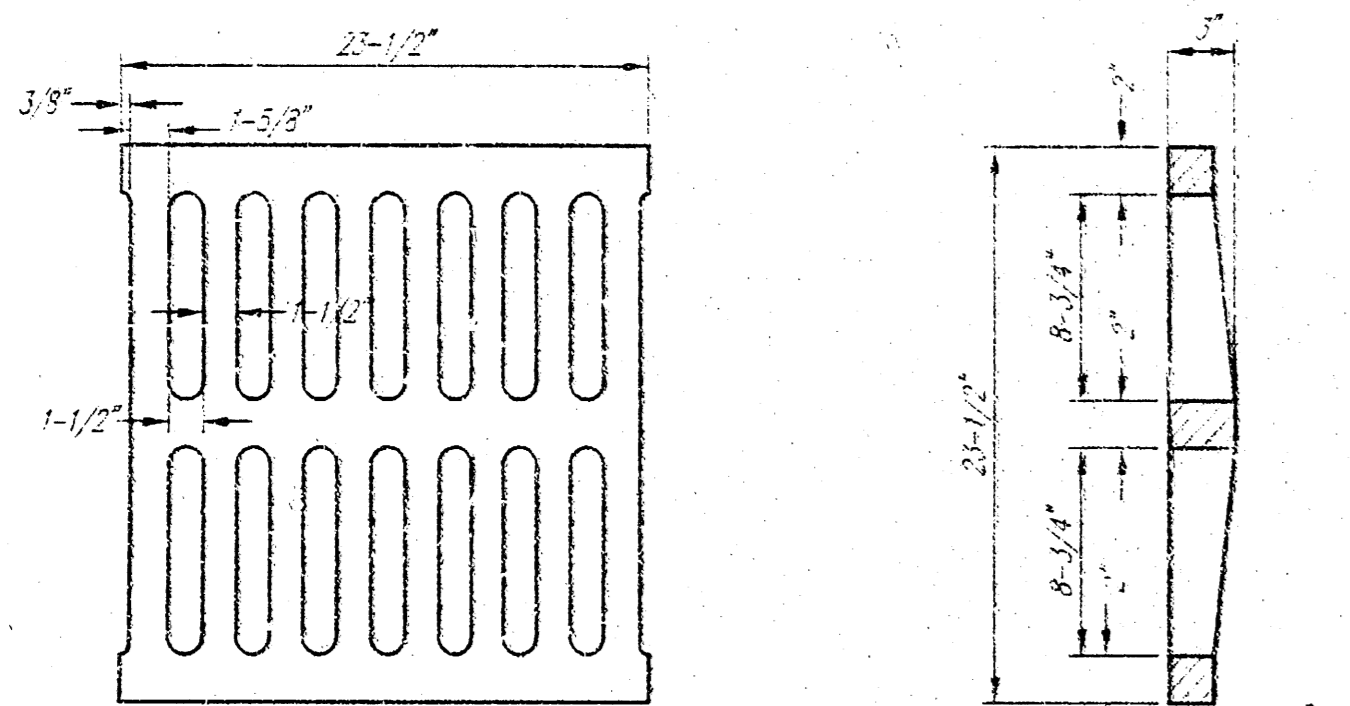
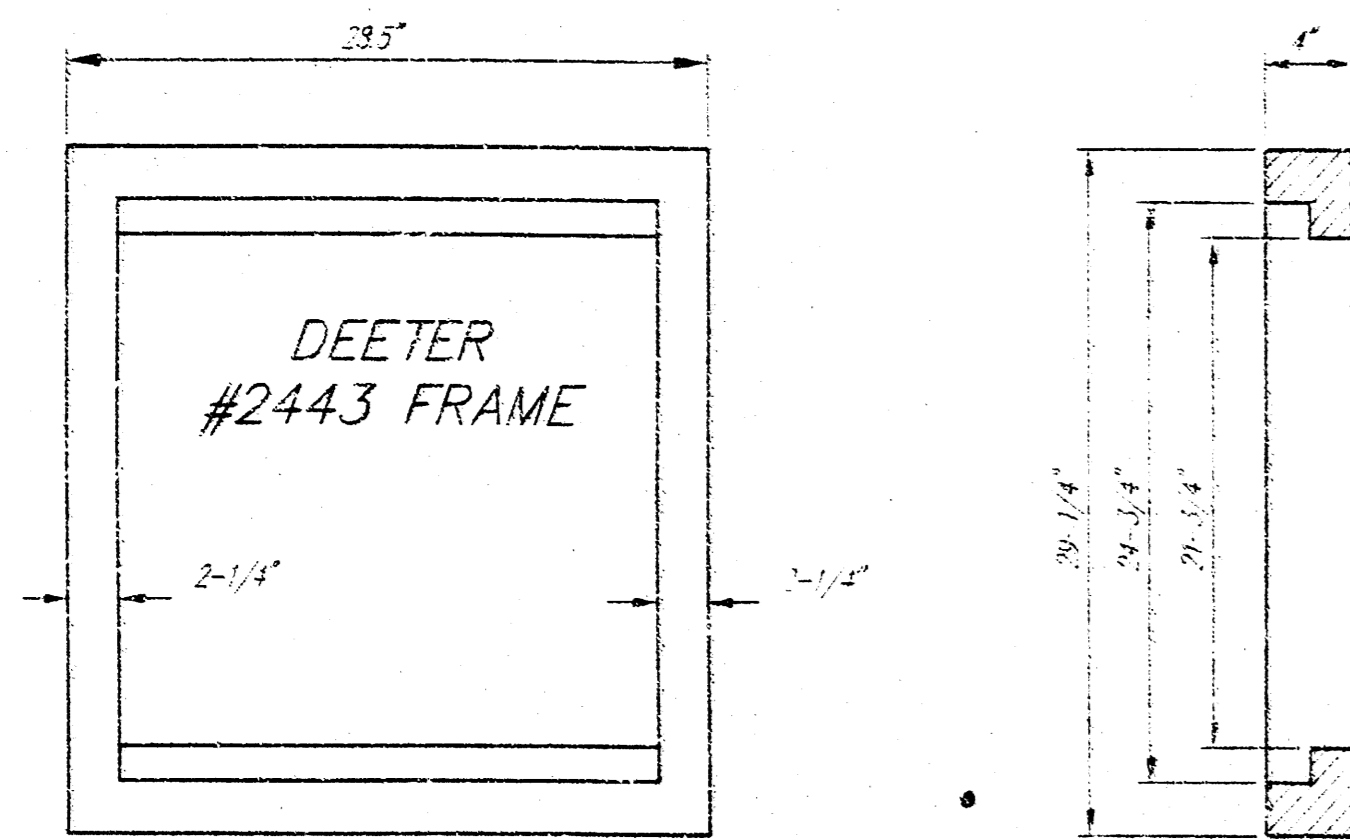


AS CONSTRUCTED 2-01-06

**DONOVAN TRUCK SERVICE CENTER**  
LOCATED AT 5920 AND 5980 W. HENDRYX AVE., WICHITA, KS  
C.O.W. PROJ. NO.: 1616 PPS (607851)

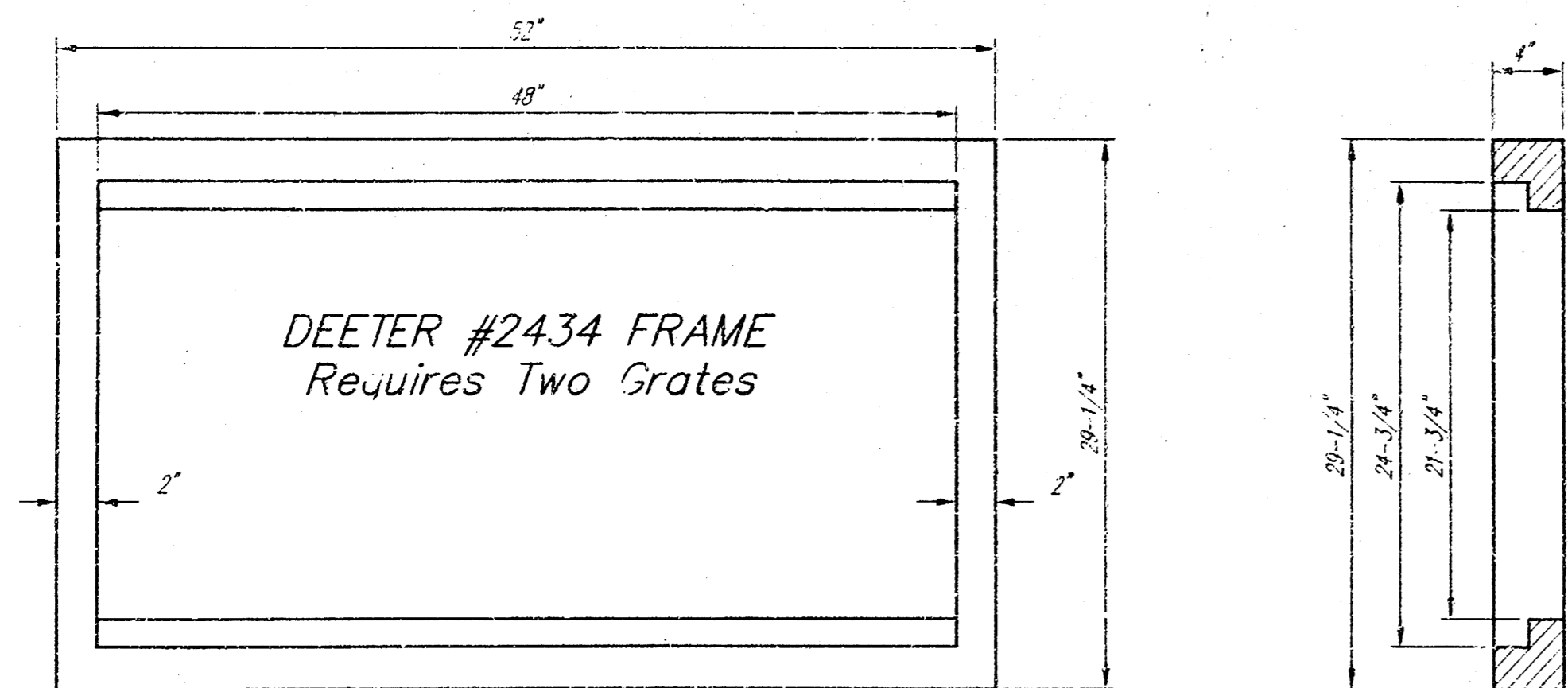
**CERTIFIED ENGINEERING DESIGN, P.A.**  
810 WEST DOUGLAS, SUITE C  
WICHITA, KANSAS 67203  
PH.(316)262-8808 FAX.(316)262-1669

DESIGNED: HDF SCALE: 1"=20' SHEET: 4  
DRAWN: CKW DATE: 11/05  
CHECKED: HDF CED FILE: Donovan-Base.dwg TOTAL: 5



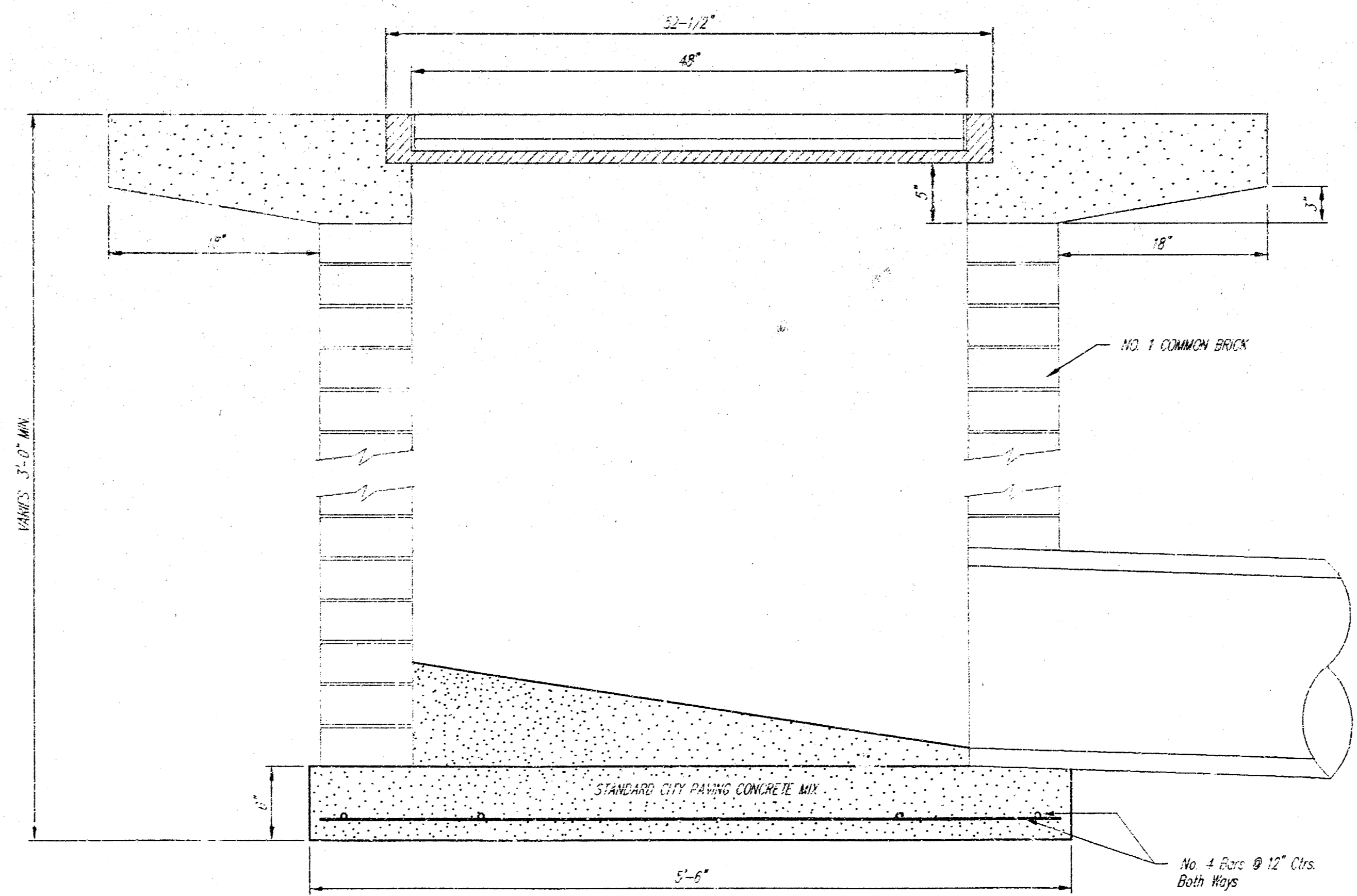
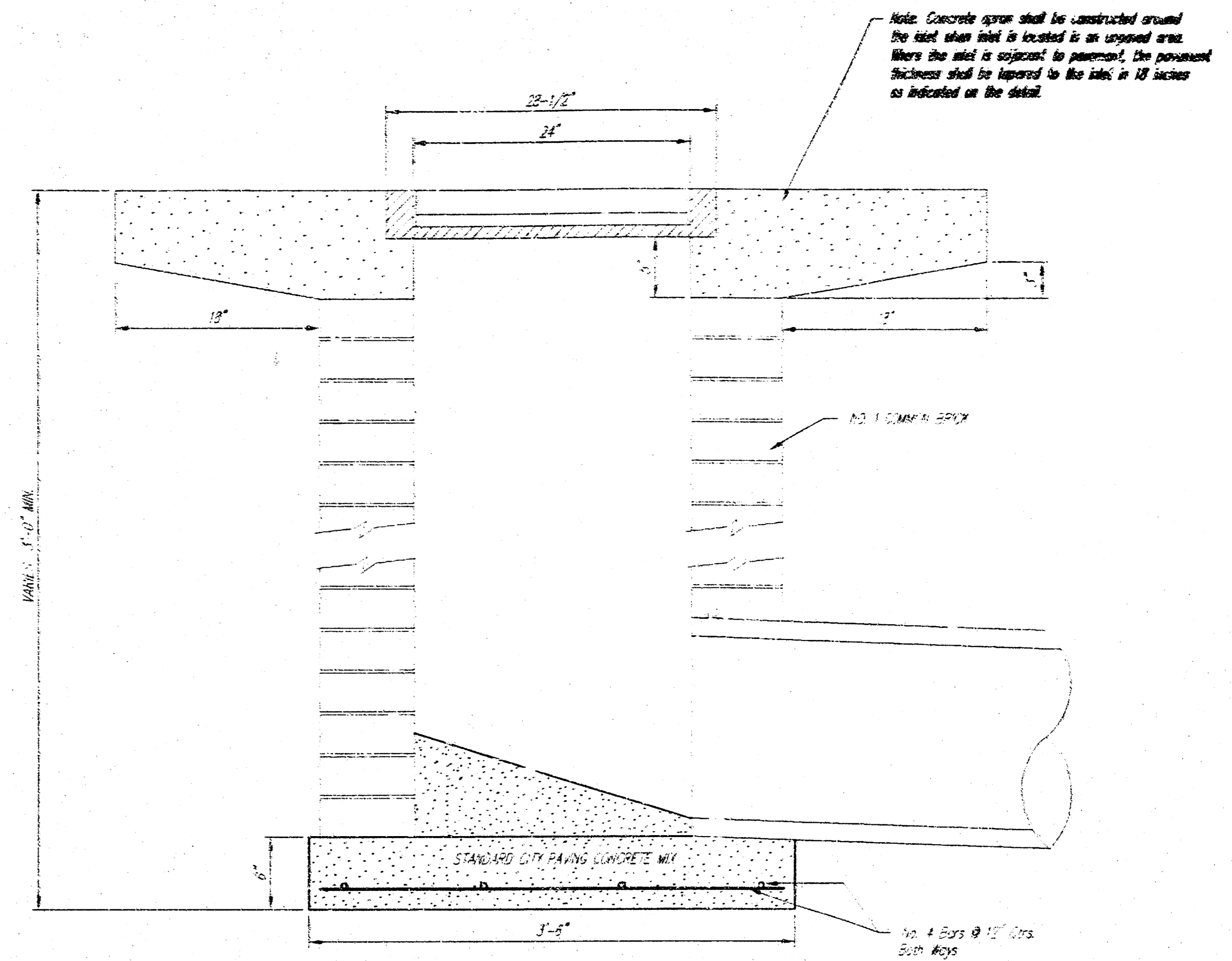
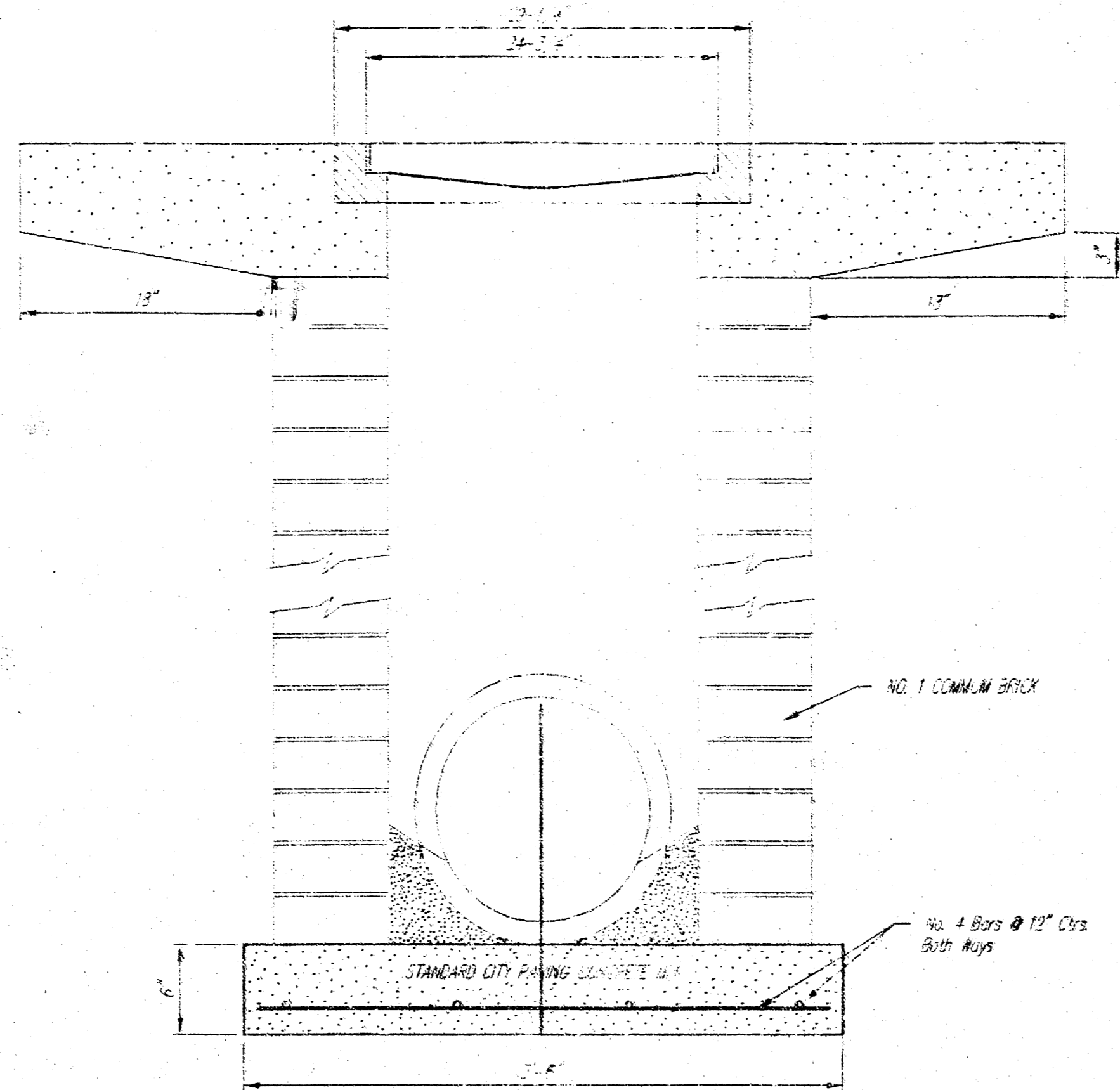
DEETER #2433 GRATE

24" x 24" Frame and Grate Detail

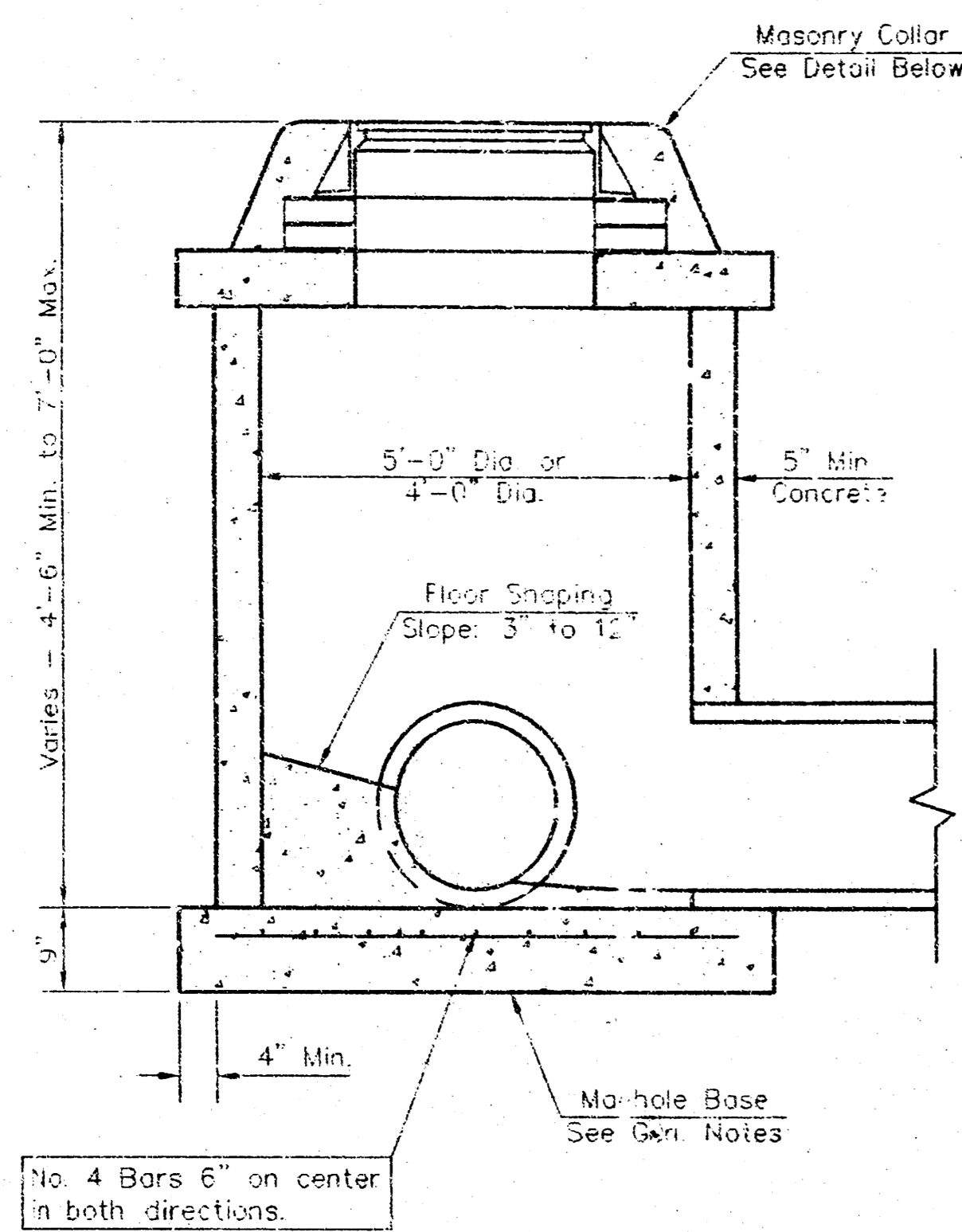


Double 24" x 24" Frame Detail

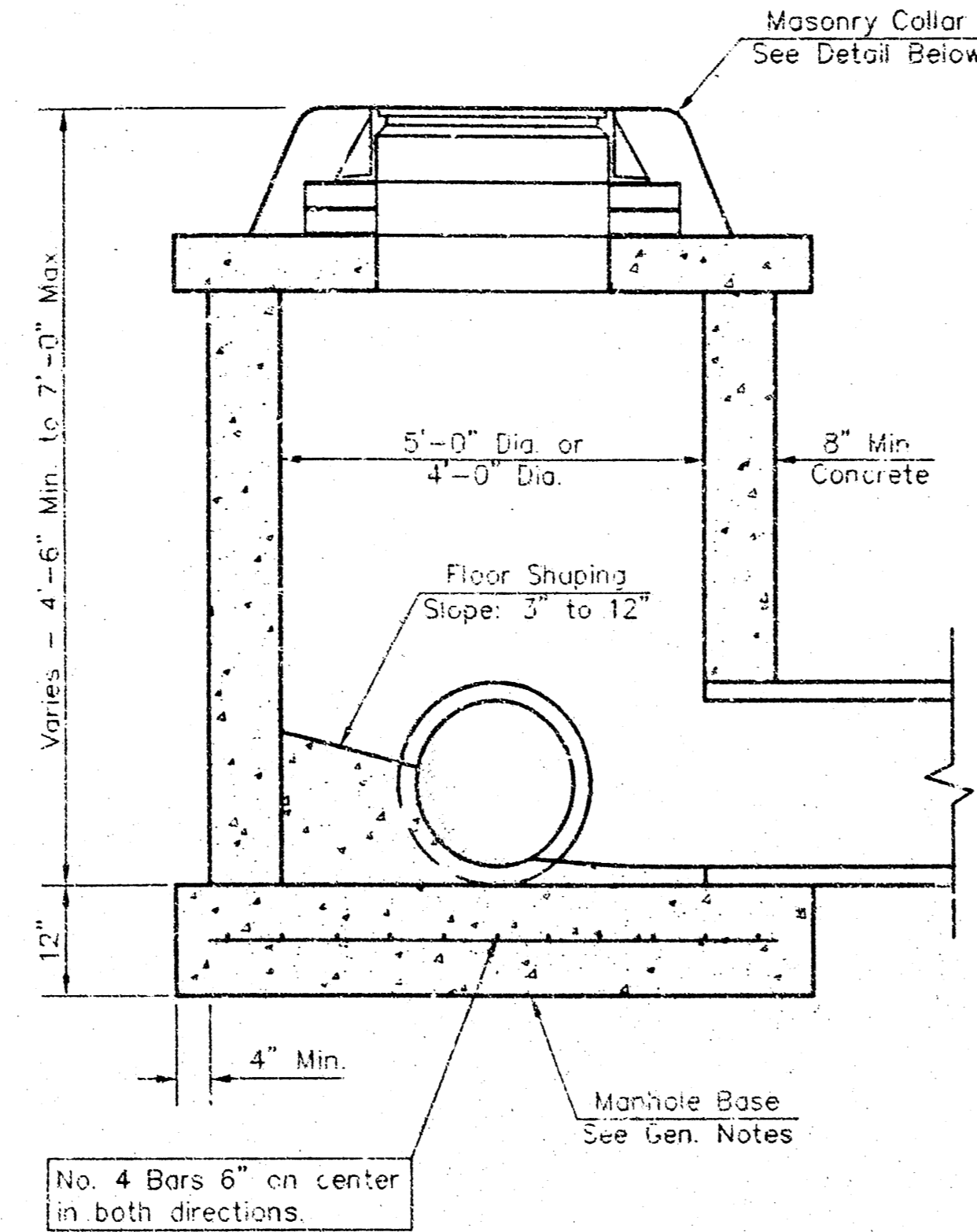
NOTE: Grates shall be imprinted on the top surface with "CITY OF WICHITA" using letters at least 1" in height. Other marking methods may be approved by the engineer.



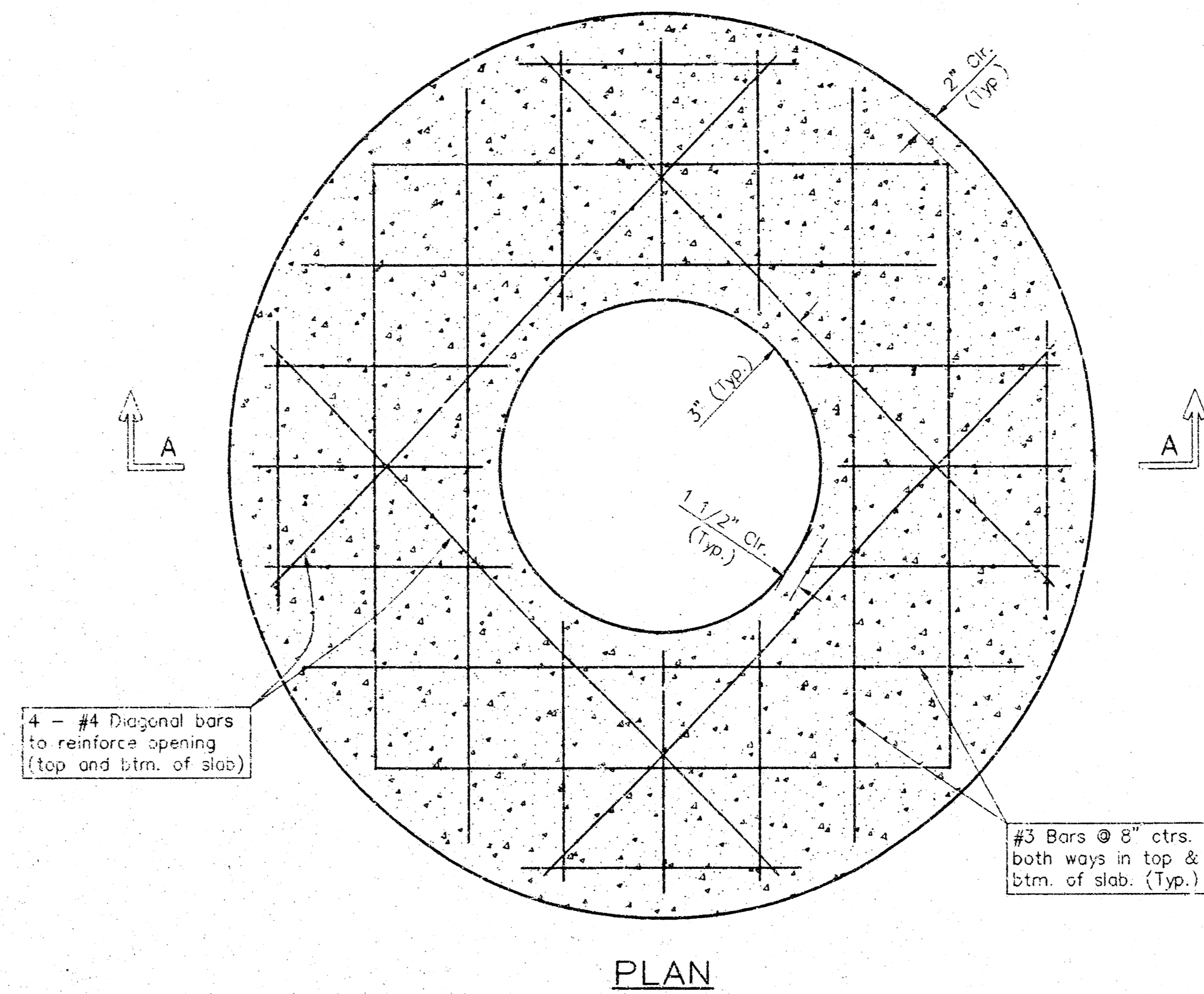
|   |   |                              |
|---|---|------------------------------|
| <p>THE CITY OF WICHITA</p> <p>CITY ENGINEER'S OFFICE<br/>CITY HALL, SECOND FLOOR<br/>400 NORTH MAIN STREET<br/>WICHITA, KANSAS 67202<br/>(316) 268-3114 FAX</p> | <p>DROP INLET<br/>2' X 2 1/2' X 4'</p>      |                              |
|   | <p>JAMES L. ARMOUR P.E. - CITY ENGINEER</p> |                              |
|   | <p>PROJECT NUMBER<br/>1616</p>              | <p>INDEX CODE<br/>607861</p> |
|   | <p>DATE<br/>NOV 05</p>                      | <p>SHEET 5 OF 6</p>          |



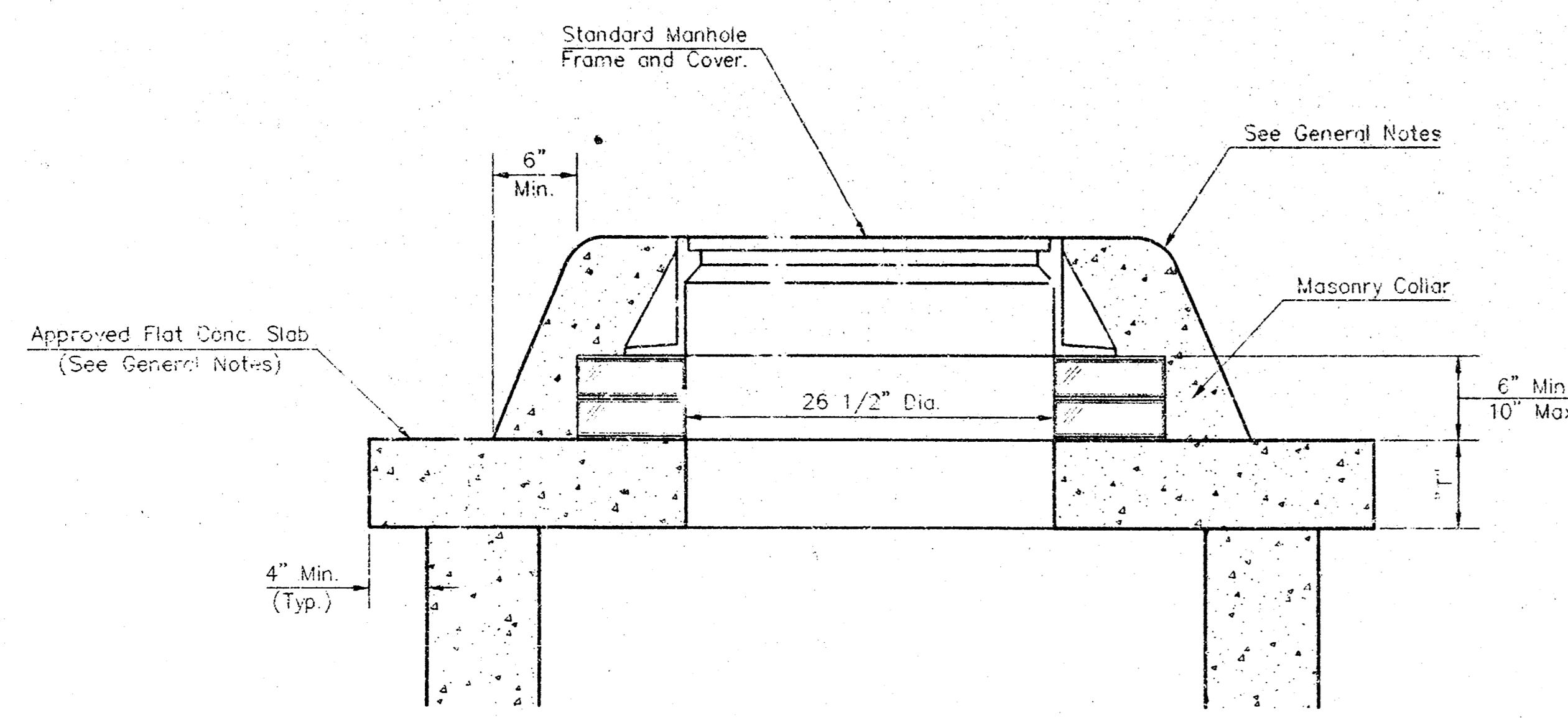
SHALLOW TYPE "P" MANHOLE



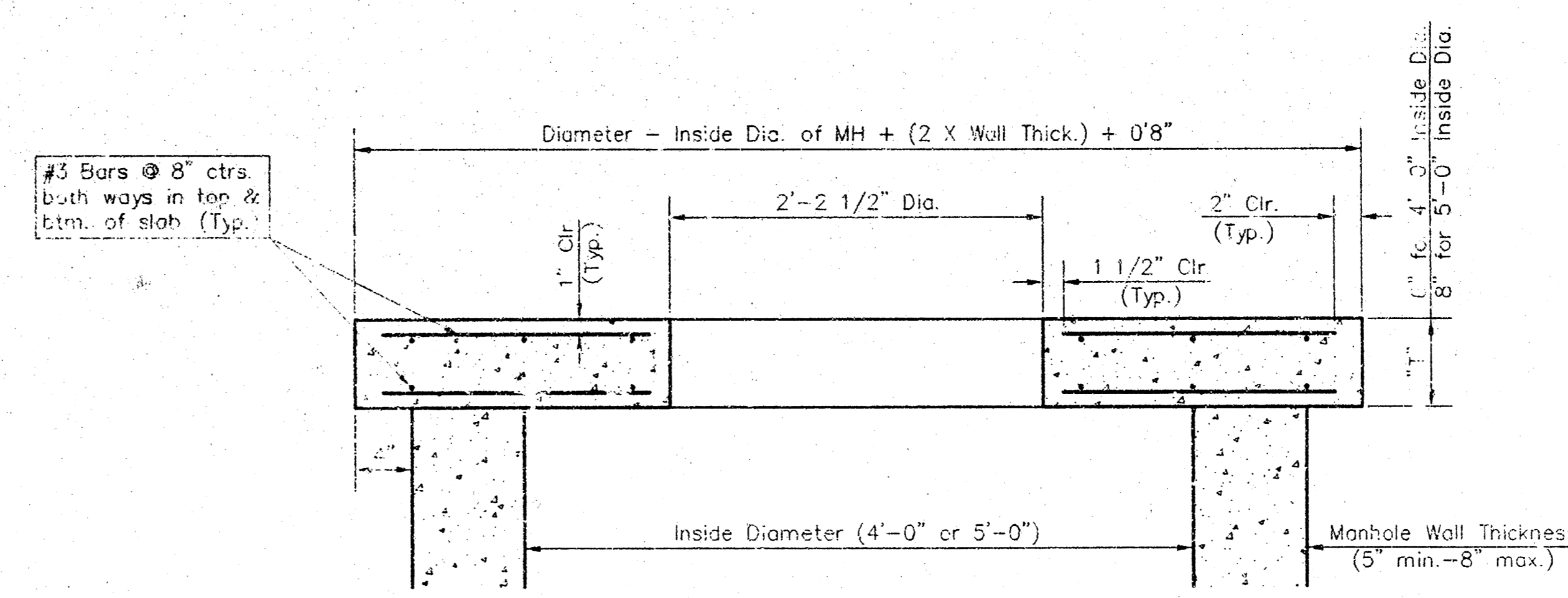
SHALLOW TYPE "C" MANHOLE



PLAN



MASONRY COLLAR DETAIL



SECTION A-A  
FLAT CONCRETE SLAB DETAILS

GENERAL NOTES

- Mortar used in masonry construction shall contain 3 sacks of cement per cubic yard. Concrete used in manhole bases shall conform to the requirements of concrete for concrete pavement construction as specified in the city standard paving specifications using city concrete cement mix without air entraining admixture. Mortar shall be placed around the manhole ring as shown on the drawings when manholes are constructed in unpaved areas. Manholes constructed where pipe sizes are smaller than 24" shall have an inside diameter of 4". Manholes constructed where pipe sizes are 24" or larger shall have an inside diameter of 5". Completed manhole shall be without leaks and water tight.
- Reinforcing steel shall be installed in the manhole bases and shall consist of no. 4 bars placed on 6" centers in both directions. The manhole base reinforcement shall be placed 6" above the bottom of the manhole base. All costs for furnishing and installing reinforcing steel shall be included in the unit price bid for the manhole.
- The floors of all manholes shall be sloped with flow channels such that the manholes will be self cleaning and free of areas where solids could be deposited as sewage flows through the manhole from all inlet pipes to the outlet pipe. Flow channels shall be formed to match the bottom halves of the inflowing pipes and the outflowing pipe as shown by the drawings. Manhole floors shall have slopes of 3 inches per foot in the areas outside of the flow channels sloped toward the flow channels. Pipes laid through manholes shall have the top half removed to neat lines for the full inside diameter of the manhole. Manhole floors shall then be shaped around the bottom half of the pipe which forms the flow channel.
- Pipes installed within the excavation made for the manhole shall be cradled with concrete to the limits of the manhole excavation. When clay pipe is used, the cradle shall extend to the first joint outside the manhole. The cradle shall be terminated at the clay pipe joint in a manner which will maintain the flexibility of the joint. Cost of cradle within manhole excavation or to clay pipe joints adjacent to manhole shall be included in the unit price bid for the manhole.
- Manhole cover castings and manhole frame castings shall conform to the requirements as indicated in the standard specifications and as shown in the standard detail drawings.
- The crowns of inflowing pipes shall never be set lower than the crown of the outflowing pipe.
- Standard shallow manholes type "P" and "C" shall be paid for at the unit price bid per each for the type and diameter indicated. All standard shallow manhole diameters will be 4' unless indicated otherwise.
- All brick used in manhole construction shall meet Grade SW of ASTM C652 or C62-87.

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|---|--------------------------------------|------------------------|
| <p>THE CITY OF WICHITA</p> <p>CITY ENGINEER'S OFFICE<br/>CITY HALL - SEVENTH FLOOR<br/>408 NORTH MAIN STREET<br/>WICHITA, KANSAS 67202<br/>(316) 253-2400<br/>CITY 253-1114 FAX</p> | SHALLOW MANHOLES                     |                        |
|   | TYPE 'P' & 'C'                       |                        |
|   | JAMES L. ARMOUR P.E. - CITY ENGINEER |                        |
|   | PROJECT NUMBER<br>1816               | INDEX CODE<br>(607861) |
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