

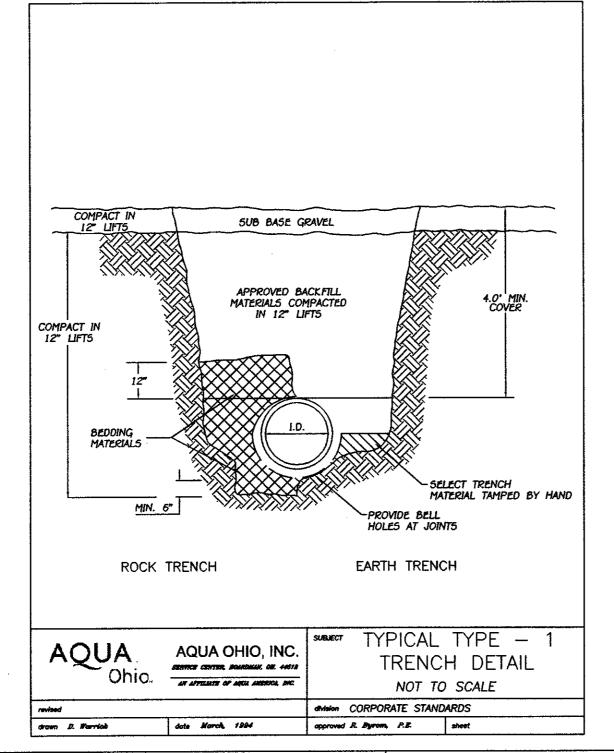
date August, 2004

date *AUGUST*, 2004

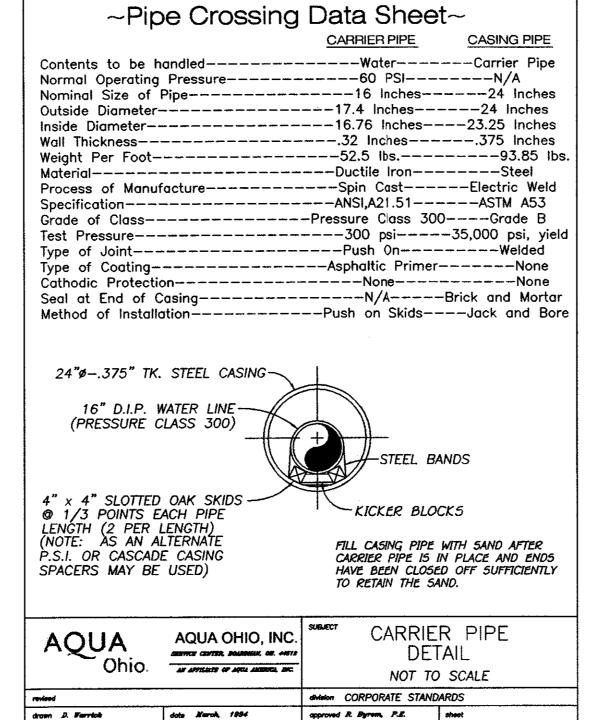
background 2003 Stark County GIS Aerials

designed D. WARRICK

drawn D. WARRICK



SCALE: 1" = 1"

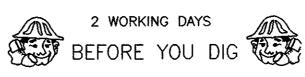


PREPARED BY:

SERVICE CENTER-ENGINEERING DEPT.

6650 SOUTH AVE BOARDMAN OHIO 44512

Aqua Ohio, Inc.



CALL TOLL FREE 800-362-2764
OHIO UTILITIES PROTECTION SERVICE

GENERAL CONSTRUCTION NOTES:

- 1. PRE-CONSTRUCTION MEETING WILL BE SCHEDULED PRIOR TO CONSTRUCTION WITH ALL APPROVING AGENCIES INVITED.
- 2. PRE-CONSTRUCTION VIDEOTAPE WILL BE MADE TO DOCUMENT
- EXISTING CONDITIONS PRIOR TO CONSTRUCTION.
- 3. THE CONTRACTOR SHALL COORDINATE THE CROSSING OF
- RESIDENTIAL DRIVEWAYS TO MAINTAIN ACCESS.
- TRAFFIC CONTROL WILL CONFORM TO STATE AND LOCAL REGULATIONS.

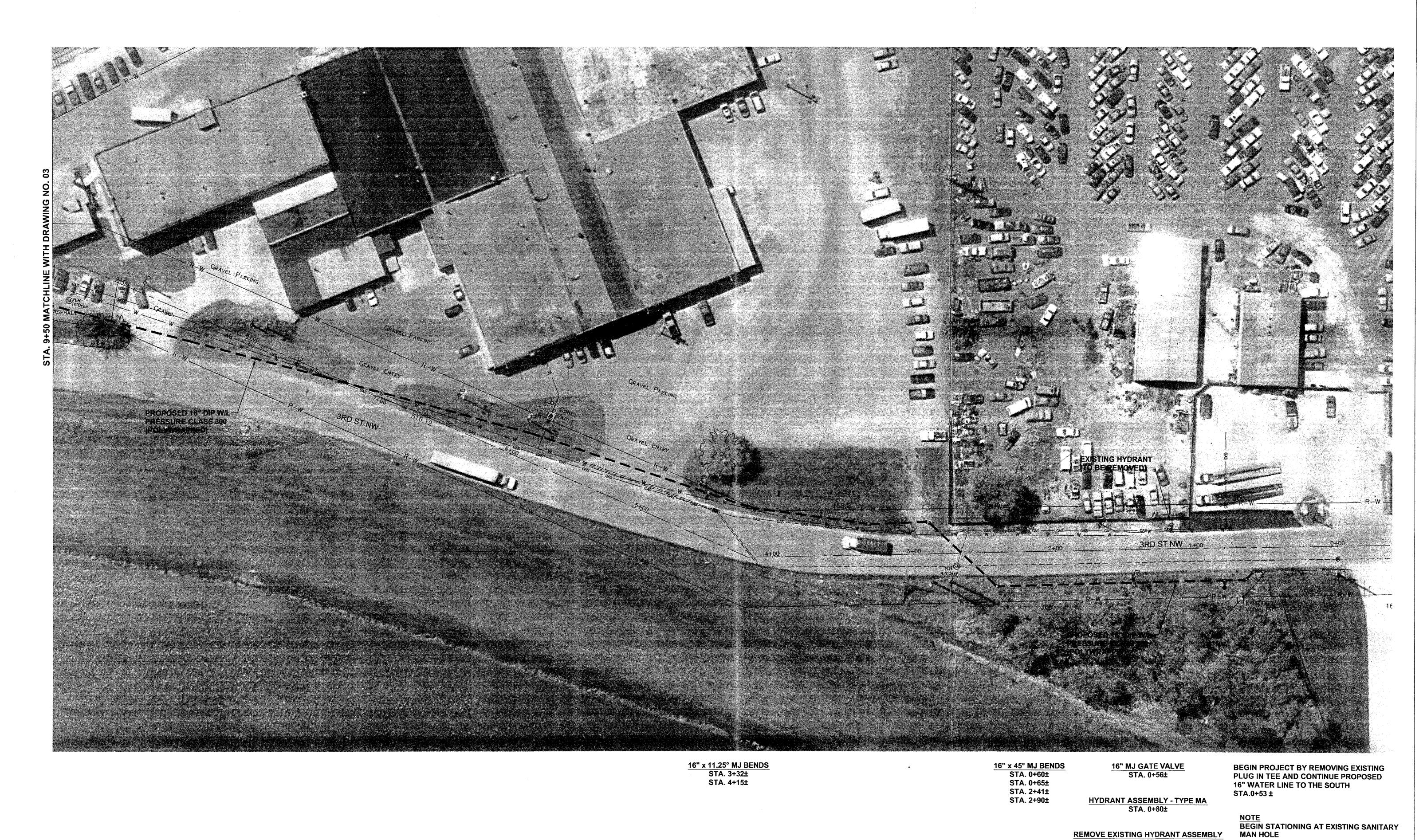
WATER LINE NOTES (Typical Unless Noted)

- 1. THE CONTRACTOR SHALL VISIT THE SITE TO PERSONALLY ASCERTAIN THE NATURE OF THE WORK INVOLVED AND THOROUGHLY BECOME FAMILIAR WITH THE SITE PRIOR TO THE SUBMISSION OF HIS OR HER BID.
- 2. THE CONTRACTOR SHALL CAREFULLY LAYOUT THE WATERLINE AND ALL RELATED FACILITIES TO ENSURE THAT THEY ARE LOCATED WITHIN THE PUBLIC RIGHT-OF-WAY AND/OR ACQUIRED EASEMENTS AS INDICATED.
- 3. THE CONTRACTOR SHALL TAKE PRECAUTIONARY MEASURES TO ENSURE SAFETY OF THE PUBLIC ON AND SURROUNDING THE SITE DURING CONSTRUCTION.
- 4. THE CONTRACTOR IS RESPONSIBLE FOR RESTORING THE SITE (YARDS, DITCHES, DRIVEWAYS, ETC.) TO IT'S ORIGINAL OR BETTER CONDITION UPON COMPLETION OF THE WATER LINE INSTALLATION.
- 5. THE LOCATION OF EXISTING UTILITIES AND STRUCTURES, BOTH ABOVE GROUND AND UNDERGROUND ARE SHOWN ON THE PLANS FROM DATA AVAILABLE AT THE TIME OF THE SURVEY AND ARE NOT NECESSARILY COMPLETE AND/OR CORRECT. THE EXACT LOCATION AND PROTECTION OF EXISTING UTILITIES AND STRUCTURES IS THE RESPONSIBILITY OF THE CONTRACTOR. DURING CONSTRUCTION, THE CONTRACTOR SHALL USE DUE DILIGENCE IN PROTECTING FROM DAMAGE ALL EXISTING UTILITIES AND STRUCTURES WHETHER SHOWN ON PLANS OR NOT. IF DAMAGE IS CAUSED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OR RESTORATION OF SAME IN ACCORDANCE WITH THE DIRECTIONS OF THE OWNER AND OR ANY CONSULTING DAMAGE. THE CONTRACTOR SHALL CONTACT OHIO UTILITIES PROTECTION SERVICE, AT 1—800—362—2764, TWO WORKING DAYS PRIOR TO START OF CONSTRUCTION AS REQUIRED BY OHIO LAW.
- 6. A TYPE 1 TRENCH SHALL BE USED AND BACKFILLED WITH EXCAVATED MATERIAL PROVIDED THAT SAID MATERIAL CONSISTS OF LOAM, SAND, GRAVEL, OR OTHER SUITABLE MATERIAL. BACKFILLING FOR ROAD AND DRIVEWAY CUTS SHALL BE AS SPECIFIED BY THE LOCAL JURISDICTION OR O.D.O.T. IF CONSTRUCTION IS WITHIN THE STATE RIGHT OF WAY.
- 7. THE WATERLINE SHALL BE INSTALLED SO THAT 4'-0" OF MINIMUM COVER FROM EXISTING/PROPOSED GRADE TO TOP OF THE WATERLINE IS MAINTAINED UNLESS OTHERWISE NOTED.
- 8. WATER LINE MATERIALS AND INSTALLATION PROCEDURES SHALL MEET OR EXCEED ALL APPLICABLE A.W.W.A. STANDARDS INCLUDING BUT NOT LIMITED C600 AND C651.
- 9. THE CONTRACTOR MAY DEFLECT THE WATERLINE AS NEEDED TO MAINTAIN MINIMUM HORIZONTAL AND VERTICAL SEPARATION DISTANCES.
- 10. MEG-A-LUG RETAINERS REQUIRED AT ALL FITTINGS.
- 11. A MINIMUM 4'-0" HORIZONTAL SEPARATION MUST BE MAINTAINED BETWEEN
- EXISTING STORM SEWERS AND THE WATERLINE.

 12. A MINIMUM 12" VERTICAL SEPARATION MUST BE MAINTAINED BETWEEN
- EXISTING STORM SEWERS AND WATERLINE, OUT TO OUT.
- 13. A MINIMUM 10'-0" HORIZONTAL SEPARATION MUST BE MAINTAINED BETWEEN EXISTING SANITARY SEWERS AND WATERLINE, OUT TO OUT.
- 14. A MINIMUM 18" VERTICAL SEPARATION MUST BE MAINTAINED BETWEEN
- EXISTING SANITARY SEWERS AND WATERLINE, OUT TO OUT.
- 15. EXISTING/MARKED PROPERTY PINS ARE NOT TO BE DISTURBED.
- 16. ALL ASPHALT AND CONCRETE DRIVES ARE TO BE SAW CUT FOR WATERLINE INSTALLATION.
- 17. ALL MAIL BOXES, TRAFFIC CONTROL SIGNS AND ADVERTISING SIGNS ENCOUNTERED DURING CONSTRUCTION SHALL BE REPLACED IMMEDIATELY AFTER THE WATER MAIN HAS BEEN INSTALLED AND BACKFILLED.
- 18. BOOSTER PUMPS ARE NOT PERMITTED ON SERVICE CONNECTIONS. THE WATER COMPANY
- MAY GRANT SPECIAL PERMISSION FOR BUILDINGS SIX STORIES AND HIGHER.
- 19. THE PROPOSED FACILITIES WILL MAINTAIN A MINIMUM PRESSURE OF 35 PSI DELIVERED TO THE CURB STOP DURING NORMAL OPERATING CONDITIONS.

3RD. STREET 16" & TRANSMISSION MAIN
CITY OF MASSILLON, STARK COUNTY, OHIO

 $\binom{1B}{5}$



date JUNE, 2004 designed D. WARRICK date *JUNE*, 2004 drawn D. WARRICK background Stark County GIS Aerials

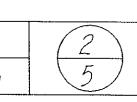
SCALE: 1" = 30'

AQUA Ohio.

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6650 SOUTH AVE.BOARDMAN OHIO 44512

3RD STREET 16" TRANSMISSION MAIN ~ PLAN CITY OF MASSILLON, STARK COUNTY, OHIO

REMOVE EXISTING HYDRANT ASSEMBLY STA. 1+15±



CONCRETE DE ENTRANCE END WATER LINE ON 6th ST. BY INSTALLING 16" x 16" MJ TEE WITH 16" MJ GATE VALVE AND ONE LENGTH OF PIPE TO THE SOUTH STA.0+53 ± - 16 x 22.5° MJB (FIELD LOCATE) INSTALL 16" x 12" (PE,MJ) REDUCER AND 12" x 22.5° MJ BEND TO THE NORTH (FOR TIE IN AT CHERRY ST.) INSTALL TYPE MA HYDRANT ASSEMBLY OFF OF PROPOSED 12" MAIN TIE TO EXISTING 6" WATER LINE ON CHERRY ST.
BY INSTALLING 6" x 6" TAPPING SLEEVE AND
VALVE WITH A 12" x 6" (MJ,PE) REDUCER 4TH ST NW 16" x 45° MJ BENDS STA. 10+43± STA. 11+00± 16" x 11.25° MJ BENDS STA. 9+68± 3RD ST NW AQUA Ohio. PREPARED BY: SERVICE CENTER-ENGINEERING DEPT. 6650 SOUTH AVE.BOARDMAN OHIO 44512 3RD STREET 16" TRANSMISSION MAIN ~ PLAN date JUNE, 2004 date JUNE, 2004 designed D. WARRICK STARK REGIONAL CITY OF MASSILLON, STARK COUNTY, OHIO drawn D. WARRICK SCALE: 1" = 30' background Stark County GIS Aerials



Erosion and Sedimentation Control Notes

- 1. A copy of the erosion and sedimentation control plan must be available at the site of the earth moving activity during construction and until the site is
- 2. The contractor is responsible for installation and maintenance of all erosion and sediment best management procedures.(BMP's)
- 3. Plan and execute construction and earthwork methods to control surface drainage from cuts and fills, and from borrow and waste disposal areas to prevent erosion and sedimentation.
- 4. Erosion and sediment BMP's are required for borrow and waste disposal areas. The contractor is required to have erosion and sedimentation control plans for these areas approved by the regulatory agency.
- 5. Soil stockpile heights must not exceed 35 feet. Soil stockpile slopes must be 2:1 or flatter.
- 6. Any disturbed area on which construction activity has ceased must be stabilized immediately. During non-germinating periods, mulch must be applied at the recommended rate of 3 tons/acre. Disturbed areas which are not at finished grade and which will be redisturbed within one year may be stabilized in accordance with temporary seeding specifications. Disturbed areas which are either at finished grade or will not be redisturbed within one year must be stabilized in accordance with permanent seeding specifications.

Staging of Construction Activities

Project construction is anticipated to begin and be completed the same year.

Erosion and sediment BMP's must be constructed, stabilized and functional before site disturbance begins within tributary areas of those BMP's.

- 1. Rough grading of site to subgrade elevations as required. Stockpiled excavated material is to be contained by filter fence.
- 2. Construction facility.
- 3. Utility line construction Strip and clear topsoil and vegetation from area of construction. Stripping and clearing operations may advance no more than 48 hours ahead of construction. Trenches to be excavated to the subgrade elevation as required and shown on the drawings. Excavated material to be placed on upslope side of trench until opening is backfilled. Daily trench excavation is to be limited to the length of pipe placement and backfilling that can be completed in the same day. At the end of the construction day, the last exposed bell shall have a temporary wooden plug placed in its end and then bell and plug shall be wrapped with visqueen, a 4" x 4" post placed at its end and the trench backfilled.
- 4. Installation of new water transmission mains and backfilling. Excess excavated material is to be hauled away immediately. Placement of straw bale or filter fabric fences in accordance with BMP's.
- 5. Installation of paving
- 6. Final placement of topsoil, seeding and mulching of all construction disturbed greas that are not paved.
- 7. After final site stabilization has been achieved, temporary erosion and sediment BMP's must be removed. Areas disturbed during the removal of controls must be stabilized immediately.

STRAW BALE BARRIER DETAIL

Straw Bale Barriers shall be placed at existing level grade. Both ends of the barrier shall be extended at least 8 feet up slope at 45 degrees to the main barrier alignment.

3. Sediment shall be removed when accumulations reach 1/3 the above ground height of the barrier.

4. Any section of Straw Bale Barrier which has been undermined or topped shall be immediately replaced with a Rock Filter Outlet.

Straw bale barriers should not be used in areas of concentrated flows (e.g. channels, swales, erosion guilies, across pipe outfalls, as inlet protection, etc.) and in areas where rock prevents full and uniform anchoring of the bales.

Bales should be installed in an anchoring trench. Two support stakes should be driven through each bale to a depth of 18" below the ground surface. The excavated soil should be backfilled and compacted on the upslope side of the bales.

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1. Straw Bale Barriers should not be used for more than 3 months.

Temporary Erosion and Sedimentation Control Measures

- 1. Filter fabric fence, rock construction entrance and straw bale barriers are to be located and constructed as shown on the drawings according to BMP's.
- 2. Soil stockpile greas are to be contained by filter fabric fence.
- 3. Where possible, natural features are to be preserved. Cut and fill operations shall be kept to a minimum and shall conform to existing topography so as to
- 4. All unpaved areas disturbed during construction are to be protected by mulching and temporary seeding. Areas disturbed for utility line installation are to be protected by mulching and temporary seeding within 7 days of utility
- 5. All slopes, channels, ditches or any other disturbed areas shall be stabilized within 72 hours after final earth moving has been completed or where activity ceases for more than 5 days. Interim stabilization measures shall be
- 6. Any sediment-laden water requiring pumping shall be discharged to a pumped water filter bag prior to discharge.

implemented properly.

Permanent Control Measures and Facilities All greas disturbed during construction and not paved are to be topsoiled, seeded, fertilized, and mulched according to the seeding and fertilizing section

Vegetated areas are to be considered permanently stabilized when a uniform 70% vegetative cover of erosion resistant perennial species has been achieved or the disturbed area is covered with an acceptable BMP which permanently minimizes accelerated erosion and sedimentation.

Laydown and Equipment Storage Areas

The contractor will be required to provide adequate erosion and sedimentation CONTROL FOR THESE AREAS.

Storage and Disposal Areas for Excess Excavated Material

Areas used for storage and disposal of excess excavated material are to be determined by the contractor. The contractor will be required to provide adequate control measures and facilities for these areas. If required, the contractor will notify regulatory agency.

Maintenance of the Erosion and Sedimentation Controls

- 1. Until the disturbed construction site is stabilized, all erosion and sediment BMP's must be maintained properly. Maintenance must include inspections following rainfall events and on a weekly basis. All preventative and remedial maintenance work, including clean out, repair, replacement, regrading, reseeding, remulching and renetting must be performed immediately. erosion and sediment BMP's fail to perform as expected, replacement or modification of those BMP's installed will be required.
- 2. Other control measures indicated in the Erosion and Sedimentation Control

-- 20' or total width of access

SECTION

ROCK CONSTRUCTION ENTRANCE DETAIL

NO SCALE

AASHTO #1 rock

Recycling Where feasible, waste materials are to be recycled

50' (min.)

PLAN_

NOTES:

1. Rock size - AASHTO No. 1

2. The structure's thickness will be constantly maintained

to the specified dimensions by adding rock. A stockpile of rock material will be maintained on the site for this purpose. At the end of each construction day, all sediment deposited on paved roadways, will be removed and returned to the construction site.

Geotextile will be placed over the entire area prior to

Washing of the roadway or sweeping the deposit into roadway ditches, sewers culverts or other drainage ways is not acceptable.

entrances shall be piped across the entrance. If piping is impractical, a mountable berm with 5:1 slopes will be

6. Wheels shall be cleaned to remove sediment prior to entrance

onto paved roadways. When washing is required, it shall be done on an area stabilized with stone and which drains into

5. All surface water flowing or diverted toward construction

an approved sediment trapping device.

Tall Fescue 70% by weight, 98% purity, 85% germination and 0.15% maximum weed seed.

Seeding and Fertilizing

Seeding dates March 15 to October 15.

1. Temporary Seeding

2. Permanent Seeding

Lawn Areas

Birdsfoot Trefoil Mixture 20% by weight, 98% purity, 80% germination and 0.10% maximum weed seed. Redtop 10% by weight, 92% purity, 80% germination and 0.15% maximum weed seed. Seeding rate is to be 1.05 lbs per 100 square yards or watch existing conditions. Seeding dates April 1 to June 15 and August 16 to September 15.

Perennial ryegrass mixture 20% by weight, 98% purity, 90% germination, 0.15% maximum weed seed. Creeping red fescue or chewings fescue 30% by weight, 98% purity, 85% germination, 0.15% maximum weed seed. Kentucky bluegrass mixture 50% by weight, 98% purity, 80%

germination, 0.20% maximum weed seed. Seeding rate to be 2.1 pounds per 100 square yards or watch existing conditions. Seeding dates March 15 to June 1 and August 1 to October 15.

After seeding, fertilizer and mulch have been applied, all slopes shall have erosion control mat

Temporary seed is to be annual grass rye with 98% purity, 90% germination and 0.15% maximum weed seed. Seeding rate is to be 1.0 lbs. per 100 square yards.

3. Fertilizing and Liming

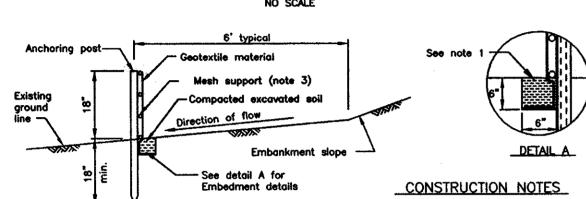
Fertilizer to be 10-20-20 analysis commercial fertilizer Permanent seeding fertilizer rate to be 780 lbs/acre; agricultural limestone rate to be 3 ton/acre. Temporary seeding fertilizer to be 10-20-20 analysis commercial fertilizer; fertilizer rate to be 150 lbs/acre; agricultural limestone rate to be 1 ton/acre.

Mulch rate for hay and straw to be 3 tons/acre; rate for hydraulically applied wood cellulose to be 320 pounds/1,000 square yards. Use only straw or wood cellulose mulch after permanent seeding. Binder rates to be 31 gallons/1,000 square yards for emulsified asphalt and 160 pounds/1,000 square yards for wood cellulose.

Mulching without seeding is to be used as an interim stabilization control during non-growing

A minimum of 4 inches of topsoil shall be placed on all disturbed areas prior to seeding.

STANDARD FILTER FABRIC FENCE (18" HIGH) DETAIL



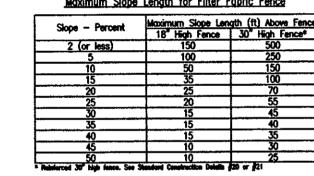
TOE OF SLOPE CONDITION 1. Extend fabric 8" to 12" into 2. Stakes placed at 8' maximum, 5'

- maximum C. to C. when mesh support 3. Installation of a mesh support wil depend on post spacing.
- adjoin each other, they shall be overlapped by 6" and folded. Prefabricated units to be installed per manufacturer's instructions.

4. When two sections of filter cloth

- 6. Filter fabric fence must be installed at level grade. Both ends of each fence section must be extended at least 8' upslope at 45' to the main fence alignment. 7. Sediment must be removed when
- accumulations reach 1/2 the above ground height of the fence. 8. Any fence section which has been undermined or topped must be immediately replaced with a rock

Prefabricated Unit: Woven polywith pre-stapled posts Moximum Slope Length for Filter Fabric Fence



DITCH RESTORATION

- 1. ALL DEFINABLE DITCHES SHALL BE RESTORED PER APPLICABLE COUNTY SPECIFICATIONS AND SHALL CONFORM TO THE CONFIGURATION AS SHOWN ON THE PAVEMENT RESTORATION DETAIL.
- 1.2 LB/YD OR EQUAL AND SHALL BE INSTALLED AND SEEDED ACCORDING TO THE MANUFACTURER'S
- 3. THE MATTING INSTALLATION SHALL RESEMBLE THE DETAIL BELOW.

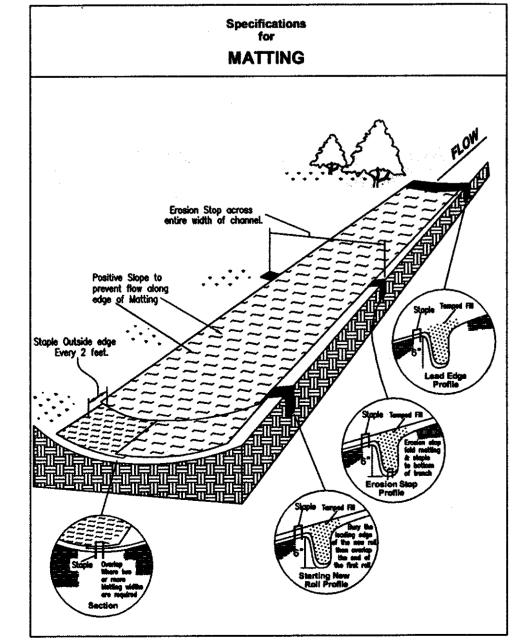
DETAIL B

MATERIAL NOTES

Posts: 2" hardwood or steel, T OR U TYPE

Fence: Woven wire, 14-1/4 gage

Filter Cloth: Woven Polypropylene



date OCTOBER, 2002

date OCTOBER, 2002

date

| Plot Scale: 1= 1

Dwg. Not to Scale

designed *L. LaCIVITA*

background Kucera

CURB INLETS

CUTTER INLET PROTECTION MUST BE INSTALLED AT THE FIRST BILET DOWNSTREAM OF SEDIMENT OBSERVED IN THE GUTTER SECTION. THE WIRE MESH SHALL BE OF SUFFICIENT STRENGTH TO SUPPORT FABRIN AND STONE. IT SHALL BE A CONTINUOUS PIECE WITH A MINIMUM WIDTH OF 30" AND 4" LONGER THAN THE THROAT LENGTH OF THE INLET. 2" ON EACH SIDE.

GEOTEXTILE CLOTH SHALL HAVE AN EQUINALENT OPENING SIZE (EOS) OF 20-40 SIEVE AND BE RESISTANT TO SUNLIGHT. IT SHALL BE AT LEAST THE SAME SIZE AS THE WARE MESH.

THE WIRE MESH AND GEOTEXTILE CLOTH SHALL BE FORMED TO THE CONCRETE GUTTER AND AGAINST THE FACE OF THE CURB ON BOTH SIDES OF THE INLET AND SECURELY FASTENED TO THE 2x4 FRAME.

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TWO-INCH STONE SHALL BE PLACED OVER THE WIRE MESH AND GEOTEXTILE IN SUCH A MANNER AT TO PREVENT WATER FROM ENTERING THE INLET LINDER OR AROUND THE GEOTEXTILE CLOTH.

AQUA

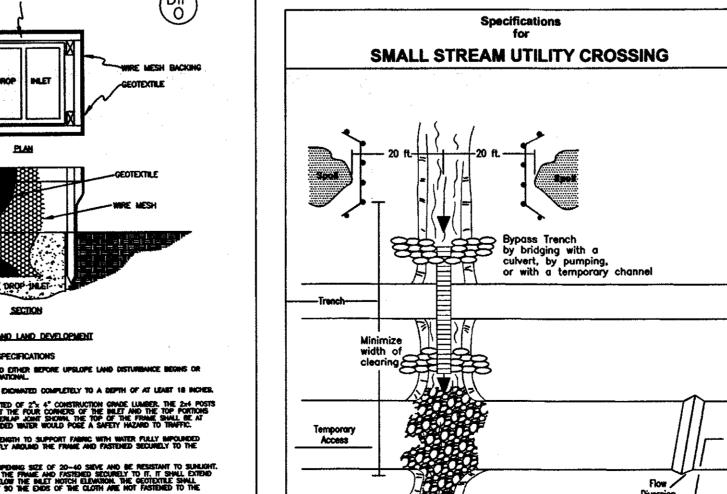
DROP INLET PROTECTION INLET PROTECTION SHALL BE CONSTRUCTED EITHER REFORE UPSLOPE LAND DISTURBANCE BEGINS OF BEFORE THE STORM DRAIN BECOMES OPERATIONAL.

WHE MESH SHALL BE OF SUFFICIENT STRENGTH TO SUPPORT FABRIC WITH WHTER FULLY IMPOUNDED AGAINST IT. IT SHALL BE STRETCHED TIGHTLY ABOUND THE FRAME AND PASTENED SECURELY TO THE

BACKFILL SHALL BE PLACED AROUND THE INLET IN COMPACTED 6" LAYERS UNTIL THE EARTH IS EVEN WITH THE NOTCH ELEVATION ON ENDS AND TOP ELEVATION ON SIDES.

STANDARD SOIL EROSION & SEDIMENT CONTROL NOTES AND DETAILS

CATCH BASINS



STREAM UTILITY CROSSINGS 1. WHEN CROSSING A STREAM THE CONTRACTOR SHALL, TEMPORARILY ROUTE THE STREAM FLOW AROUND THE WORK AREA BY BRIDGING THE TRENCH WITH A RIGID CULVERT, PUMPING, OR

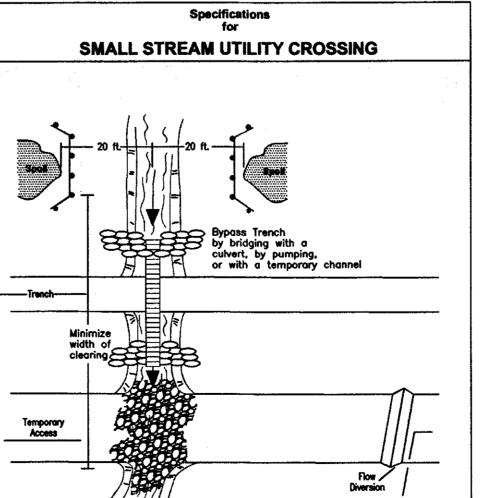
CONSTRUCTING A TEMPORARY CHANNEL. TEMPORARY CHANNELS SHALL BE STABILIZED BY ROCK OR

OR A GEOTEXTILE LINING THE CHANNEL BOTTOM AND SIDE SLOPES. 2. THE LIMITS OF DISTURBANCE SHALL BE AS NARROW AS POSSIBLE INCLUDING NOT ONLY THE CONSTRUCTION OPERATIONS ITSELF BUT ALSO THE CLEARING DONE THROUGH THE VEGETATION

3. THE TIME BETWEEN INITIAL DISTURBANCE OF THE STREAM AND FINAL STABILIZATION SHALL BE KEPT TO A MINIMUM. CONSTRUCTION SHALL NOT BEGIN UNTIL THE WATER LINE IS IN PLACE WITHIN 10 FT. OF THE STREAMBANK.

4. THE STREAM CROSSING SHALL GENERALLY RESEMBLE THE DETAIL BELOW.

5. STREAM NAME:_ AND CLASSIFICATION



PLAN VIEW

High strength strapping for holding hose in place-Sewn in spout hose (max.) Excavation 2. Pumping rate is not to be greater than 750 gpm or 1/2 the maximum specified by the manufacturer,

PUMPED WATER FILTER BAG SPECIFICATIONS

ASTM D-3776

ASTM D-4632

ASTM D-4833

ASTM D-4491

ASTM D-4491

ASTM D-4355

Dirtbag 53 as marketed by ACF Environmental

(1-800-448-3636) or other filter bag that

meets specifications.

<u>properties</u>

CONSTRUCTION NOTES 1. Place filter bag on stabilized, well vegetated area.

 $\Psi_{\mathsf{Well}}\Psi$

vegetated

3. Strap pump discharge hose firmly to filter bag in the manner specified by the manufacturer.

Monitor and evaluate pumping operation to assure filter bag continues to function properly.

Replace filter bag when bag becomes 1/2 full or when directed by engineer or conservation district.

6. Dispose of sediment in a manner satisfactory to the engineer and/or conservation district.

7. Discharge from filter bag shall be to stable, erosion resistant areas. Where this is not possible, a geotextile flow path shall be provided. Bags shall not be placed on slopes greater than 5%.

8. Extra filter bags must be maintained on site at all times.

9. Filter bags are to be made from non-woven geotextile material sewn with high strength, double stitched "J" type searns. They are to be capable of trapping particles larger than 150 microns.

10. Provide suitable means of accessing bag with machinery

required for disposal purposes.

11. Pump intake to be floating and screened.

12. Filter bags to be inspected daily. If any problem is detected, pumping shall cease immediately and not resume until the

PUMPED WATER FILTER BAG DETAIL

NO SCALE

8 oz/yd

203 lb.

130 lb.

1.5 sec

70 %