

- 2. The contractor shall notify the Ohio Utilities Protection Service forty eight hours prior to starting any excavation at (800) 362-2764. The procedure outlined in the Ohio Revised Code section 163.64 shall be followed. The Utility Owner shall stake, mark or otherwise designate the location of its facility.
- 3. All references to the "Engineer" shall mean the Engineer of the City Massillon. No work shall begin untill the plans are approved.
- 4. The contractor shall coordinate operations with the various utilities and is responsible for obtaining all permits required for construction of this project.
- 5. All material and workmanship shall conform to the latest edition of the State of Ohio, "Construction and Material Specifications". Reference to specific ODOT item numbers are indicated throughout the plans. Construction and workmanship shall also conform to local standards and ordinances. If a conflict occurs between the local standards and the ODOT specifications the Engineer shall determine the governing authority. Defects in the construction or materials shall be repaired or replaced as directed by the Engineer.
- 6. The stationing and locations shown on these plans are approximate and are subject to adjustment in the field. The contractor shall verify all dimensions for relationship to the site and other work. Written dimensions shall prevail. Do not use scaled dimensions. All dimensions are parallel with or perpendicular to the lines from which they are measured. Distances are determined by horizontal measurements. Discrepancies shall be reported to the owner or the owner's representative. Underground facilities, structures and utilities have been plotted from available records and field checked where possible. There location must be considered approximate and care must be exercised when excavating on this site. The elevations on these plans are in feet and decimal parts thereof above mean sea level. Proposed elevations are to finished surfaces.
- 7. The contractor is to become familiar with the ground conditions, that now exist or may exist during construction, so as to not adversely effect any structure, utility or adjacent property. Proper drainage is to be maintained at all times to prevent damage to other properties.
- 8. Contractors, prior to submitting bids for this project, may request permission to dig test holes within the limits of the proposed work. The location of the test holes is subject to approval by the owner. The contractor is responsible for any damage resulting from digging these holes. The site is to be restored to a condition similar to that existing before the holes were dug.
- 9. Rock excavation shall be included in the unit price bid for general excavation and will not be a separate item for payment.
- 10. The contractor shall furnish and maintain all necessary traffic control devices, as specified in ODOT Item 614, so as to avoid injury to persons or damage to vehicles. The contractor shall conduct his operations so as to create a minimum hazard, delay and inconvenience to the public. The closing of streets must be coordinated with the safety forces.

- 11. Within one week after the notice to proceed, the contractor shall submit for approval, by the owner, a progress schedule showing the order in which the work is to be performed and the time that each operation will start and be completed. If the contractor falls behind the times shown on the schedule the owner may require a revised progress schedule be submitted within one week. The contractor shall use all means to make the work conform to the schedule. No payment will be made while the contractor is delinquent in submitting a progress schedule.
- 12. The cost of permits, inspection and tests shall be paid by the contractor and the fees associated with the permits inspectionand tests shall be included in the price of the other items of work.
- 13. The contractor shall maintain a current set of drawings (As Built Plans) on which any deviation from the original drawings and the exact location of all underground installations have been recorded.
- 14. Materials in excess of the requirements of the project are to be remove from the site. This disposal is the contractors responsibility.
- 15. The contractor shall keep all streets and roadways clear of dirt and mud. Roadways shall be cleaned at the end of each working day or more often if necessary. The contractor shall take all steps necessary to control dust and blowing debris. Cost for these control measures shall be included in the price of other items of work.
- 16. The contractor shall be responsible for all construction staking and restaking. The cost of this work is to be at the contractor's expense. The bench mark is to be compared to existing facilities prior to commencing any work.

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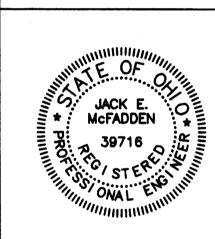
CFADDEN

ASSOCIATES, INC.

24100 EUCLID AVE. CLEVELAND, OHIO 44117

CONSTRUCTION NOTE:
FOR COMMUNITY CHURCH
ANKINS ROAD, N.E.

GENERAL CONST FOR GRACE COMMUI HANKINS R



REVISIONS

DESCRIPTION

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PROJECT No. **020101**

C-6

SHEET No.

JACK E. McFADDEN, P.E, P.S. DESIGN ENGINEER

EROSION CONTROL, EARTHWORK & PAVEMENT CONSTRUCTION NOTES

EROSION CONTROL NOTES

- 1. This work shall conform to the latest edition of "Rainwater and Land Development Manual" by the Ohio Department of Natural Resources. The work shall also conform to the OEPA permit program, the requirements of the Soil & Water Conservation District and the Municipalty.
- 2. The erosion control installation shall be in place prior to any grading operations. Disturbed aeras shall have soil stabilization iniated within seven days, if no work is planned for the area for more than 45 days. In areas within 50 feet of a stream, the soil stabilization shall begin within two days.
- 3. Storm water runoff, from disturbed areas shall pass through a sediment settling basin. The sediment basin shall have a minimum capacity of 67 cubic yards for each acre within the total runoff area. The basin shall be cleaned of sediment periodically, as needed.
- 4. Streams shall be stabalized immediately after any work, on the banks or in the bed is completed, interrupted or stopped. Precautions are to be taken to minimize erosion when in channel work is required.
- 5. The soil erosion and sediment control measures shall be inspected at least once every seven calendar days and within 24 hours after any storm event greater than 0.5 inch of rain within a 24 hour period. The owners designated representative shall inspect the erosion and sediment control practices and direct maintenance and repairs by the contractor.
- 6. The crossing of sensitive environmental areas shall be avoided. If it becomes necessary to cross such an area, the contractor shall preserve the area with as little damage to the soil and vegetation as possible. possible. The placement of of fill material shall be minimized. Temporary fills shall be removed in there entirety and the soils and vegetation shall be restored to a condition proir to construction activities.

EARTHWORK NOTES

- 1. All clearing, grubbing and earthwork shall conform to ODOT Items 201 & 203. earthwork shall be inspected and tested, if deemed necessary by the Engineer. This testing shall be done by a laboratory approved by the Engineer. The cost of such inspection and testing is to be paid by the contractor.
- 2. If soft soils are encountered and satisfactory stability cannot be obtained by moisture control and compaction, the unstable material shall be excavated to a depth approved by the Engineer and backfilled with suitable material.
- 3. The price bid for earthwork shall include but not be limited to the following: removal of all trees, including stumps; brush and any other vegation; structures and any obstructions that interferes with the project; excavation; embankment; removal of pavement; preparing the surface; dewatering; maintaining surface drainage and stability verification; providing soil erosion control and removal of sediment from ditches, swales and creeks which has resulted from this project.
- 4. Rough grading shall be completed prior to underground construction.

- 5. Grading around drainage structures shall have uniform slope from the last given elevation to the structure. The contractor shall maintain positive drainage at all times to eliminate ponding on the site.
- 6. The contractor shall blend new earthwork smoothly with existing surfaces.
- 7. Proof-rolling shall be performed on all areas to be paved prior to placement of aggregate base.
- 8. Unpaved areas being restored shall be prepared as per ODOT Item 652 or 653 placing topsoil and/or Item 654, renovating existing soil and seeded by the Hydro-seed method only, straw mulch is prohibited. If the density and uniformity of the grass is not acceptable to the Engineer, payment for the unaccepted areas will be withheld until such time as these requirements are met. Existing lawn areas, shrubs, flower beds, etc. disturbed by construction shall be replaced, by the contractor, to a condition equal to the original condition. All cuts, wounds or scars on trees, resulting from the contractors operations, shall be painted with a tree wound dressing.
- 9. All footings shall be placed on virgin soil.
- 10. The contractor is responsible for damage to any existing pavement or structure, inside or outside contract limits, due to his operations.
- 11. All waste or excess materials shall removed from the site at the contractors expense.

PAVEMENT NOTES

- 1. Pavement bases shall be constructed as shown in the details and in accordance with ODOT Item 300.
- 2. Pavement shall be constructed as shown in the details and in accordance with ODOT Item 400 for flexible pavement and ODOT Item 450 for rigid pavement.
- 3. Concrete walks shall be a minimum of four inches thick and constructed as shown in the details and in accordance with ODOT Item 451. Drive aprons shall be a minimum of nine inches thick and constructed as shown in the details and in accordance with ODOT Item 451. Expansion joint material shall be one-half inch thick with silicon sealant and placed as shown on the walk and drive details.
- 4. No walk, drive or pavement shall be laid on a frozen subbase, base or pavement.
- There shall be a uniform slope between given elevations and/or between 5. given elevations and structure rims.
- 6. The contractor shall make certain that all surfaces drain and all repairs or replacements blend smoothly with existing surfaces.
- All joints between existing and new pavement are to be saw cut and properly sealed.

JACK E. McFADDEN, P.E, P.S. DESIGN ENGINEER

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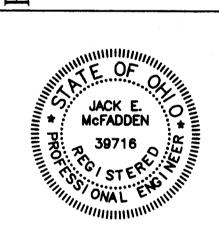
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EROSION, EARTHWORK & PAVING
FOR
GRACE COMMUNITY CHURC
HANKINS ROAD



REVISIONS

DESCRIPTION

PROJECT No. **020101**SHEET No.

- 1. Roof drains, foundation drains and other clean water connections to the sanitary sewer are prohibited.
- 2. The contractor shall take all precautions necessary to prevent any caving or settling of any excavation or trench wall which would endanger the safety of any person or damage utilities or property. The type of this protection such as sheeting, shoring, bracing or a trench box shall be consistent with the depth and width of the excavation, the composition of the soil and its water content, the proximity of utilities or structures, the spoil placement and the vibration of equipment. If any sheeting cannot be removed without adversely affecting the pipe it shall be cut off, as directed by the Engineer, and left in place at no additional cost to the owner.
- 3. All sewer pipe is to be placed on a firm bedding for the entire length. The bedding shall conform to ASTM C-12 (A,B,C) for rigid pipe or ASTM D 2321 (I,II,III) for flexible pipe. In any area where unstable soils are found and a firm bedding cannot be established the unstable soil must be undercut to a depth approved by the Engineer and backfilled with approved material. It may be necessary to dewater prior to excavation to provide a stable trench bottom. The contractor shall be responsible for any damage to structures, pavements, utilities or the loss of well water that results from dewatering.
- 4. All trenches under existing or future pavement, and to a point five feet beyond the edge of pavement, shall be backfilled to conform to ODOT Item 603.08, the cost of which is to be included in the cost of conduit. Crushed slag, granulated slag or slacker aggregates shall not be used. Backfill of excavations outside of pavement areas shall conform with ODOT Item 603.08 compacted earth.
- 5. The line and grade of the sewers shall be controlled during construction by the use of a laser. The laser shall be checked from line and grade stakes at a maximum of fifty foot intervals.
- 6. Prior to connecting to an existing manhole or conduit the contractor shall take whatever measures necessary to keep drainage from entering the existing system and contaminating it with silt.
- 7. Any pipe that is to be abandoned, in place, shall have both ends sealed with a tight fitting plug.
- 8. All service connections shall have a minimum grade of one per-cent.
- 9. Prior to the final inspection all sewers (sanitary and storm), manholes and other structures are to be cleaned and flushed.
- 10. Sanitary sewers are to be video taped by a firm approved by the Engineer. The tapes and a written report is to be supplied to the Engineer prior to acceptance.

SANITARY SEWER NOTES

- 1. Sanitary sewers and appurtenances shall be constructed in accordance with the Great Lakes-Upper Mississippi River Board of State and Provincial Public Health and Environmental Managers "Standards for Wastewater Facilities".
- 2. The sanitary conduit shall be: PVC sewer pipe, per ASTM D 3034 (SDR 35) having bell and spigot joints per ASTM D 3212 or extra strength VCP per ASTM C-700ES having compression type joints per ASTM C-425 except where ductile iron pipe is indicated on the plans.
- 3. All sanitary manholes are to be precast concrete and conform to ASTM C-478 and have joints between risers which conform to ASTM C-443. The manhole diameter shall be 48" or larger with an access hole 24" or larger. Manholes shall be set on minimum of 6" thick compacted base of granular material (no slag). Where inlet and outlet pipes connect to the manhole flexible watertight gaskets conforming to ASTM C-923 are required. The manholes inspected for damage and tested for water tightness by the ASTM C-1244-93 method prior to being placed into service. Manhole steps shall be polypropylene per ASTM 2146-68. Grade adjustment of manholes is to be made with grade rings and/or a maximum of two courses of brick per ASTM C-32. Maximum adjustment shall not exceed twelve inches and shall be sealed with non-shrinking mortar or other material approved by the Engineer. Only solid manhole covers are to be used. In easements the covers are to also be the locking type.
- 4. The sanitary sewers shall meet or exceed the leakage and deflection tests requirements of the OEPA before acceptance. Vitrified clay pipe shall meet requirements of ASTM low pressure test C 828-98 and plastic gravity sewer pipe shall meet the requirements of ASTM low pressure test F 1417-92. The plastic pipe deflection test shall not exceed five per-cent. If the installation fails to meet the requirements of these tests the contractor shall repair or replace all defects and retest the installation. A written report, by a firm approved by the Engineer, shall be submitted prior to acceptance.

STORM SEWER NOTES

- 1. Storm sewers and appurtenances shall be constructed in accordance with ODOT Item 603 as well as local standards.
- 2. The storm conduit shall be: reinforced concrete pipe as per ASTM C-76, with bituminous joints. Pipe 12"&15" shall be Class IV; pipe 18' through 24" shall be Class III; pipe 27" through 36" shall be Class II, or A D S, N-12 Polyethylene pipe meeting, ASTM F-667 specifications.
- 3. All manholes, catch basins and inlet basins are to be precast concrete which conforms to ASTM C-478 and have bituminous joints between risers. The manhole diameter shall be 48" or larger with an access hole 24" or larger. All structures are to be set on a minimum 6" base of granular material (no slag). Manhole steps shall be polypropylene per ASTM 2146-68.
- 4. All connections to catch basin shall have a minimum grade of one per-cent.

JACK E. McFADDEN, P.E, P.S. DESIGN ENGINEER

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ASSOCIATES, INC.

24100 EUCLID AVE. CLEVELAND, OHIO 44117-17

SEWER CONSTRUCTION NOTE
FOR GRACE COMMUNITY CHURCH
HANKINS ROAD

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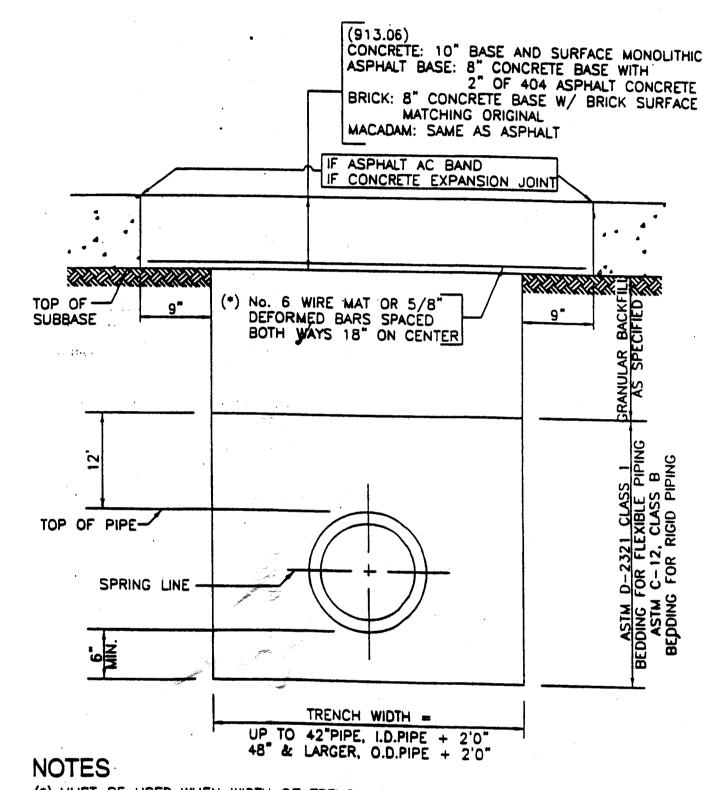
APPROVED BY:

DATE: November 18, 2002

PROJECT No. **020101**SHEET No.

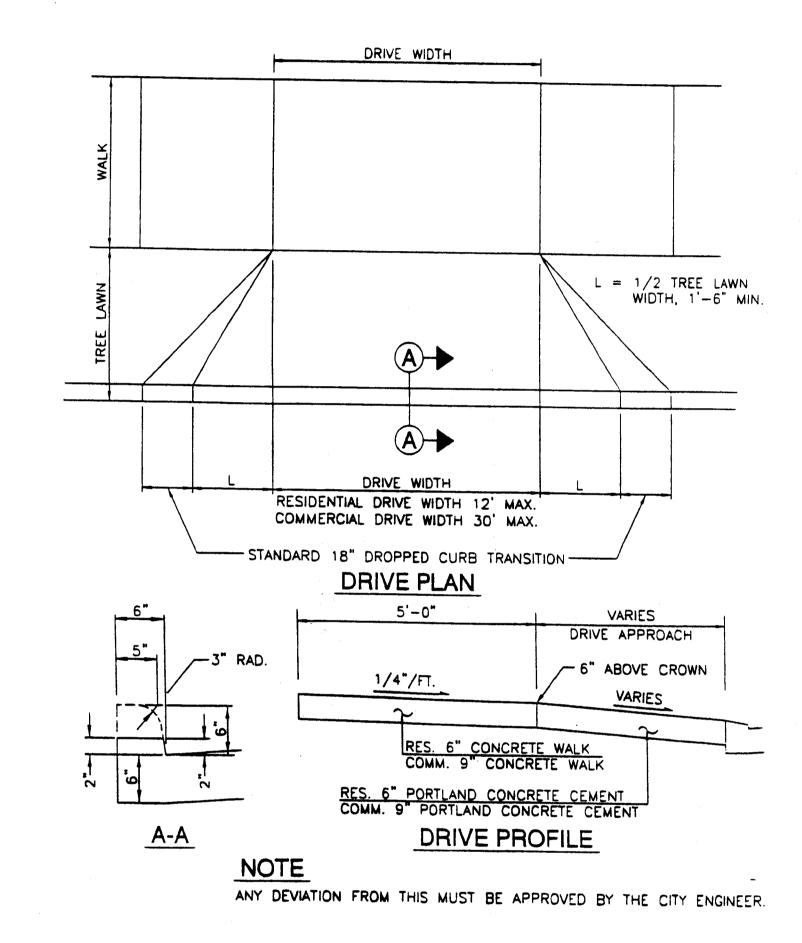
CITY OF MASSILLON NOTES AND DETAILS

- 1. Existing utilities to remain, which are crushed or danaged during construction, shall be replaced at the contractors expense.
- 2. Roof drains, foundation drains and other clean water connections to the sanitary sewer are prohibited.
- 3. Any utilities found during excavation, not shown on the plans, shall be brought to the immediate attention of the architect or engineer.
- 4. Each subcontractor shall obtain his own permits and contact the utility company for verification and location of hook-up prior to any work being done.
- 5. Utilities shown were taken from records of respective utility companies and from a topographic survey and do not necessarily represent all undergrund or overhead utilities adjacent to or upon the premises shown on the plan. Call OUPS prior to excavation.
- 6. Coordinate utility connections at the building with mechanical drawings.
- 7. The plumbing contractor shall be responsible for providing adequate slope of building sewers towards the lateral sewer in strict accordance with the governing authorities prior to starting construction.
- 8. All storm sewers shall conform to ODOT Itrm 707.33 or equal material approved by the City.
- 9. Sanitary lateral shall be a minimum 6" diameter of PVC pipe, ASTM D3034, SDR35, with rubber joints or approved equal. lateral shall be constructed with a minimum of 1% slope, and have a minimum of of 3 foot cover.
- 10. Water service lateral shall be ductile iron of the same size shown on the mechanical drawings and shall have between 4 & 5 foot of cover. All backflow devices shall be approved by the Consumers of Ohio Water Company.
- 11. A sanitary permit will be required. Contractor to connect Massillon Engineering Department for permit and inspection requirements.
- 12. A driveway permit will be required, contractor to contact Massillon Engineering Department for a permit and inspection requirements.
- 13. Contractor to be licensed in the City of Massillon for all work within the right-of-way.
- 14. Contractor to coordinate any underground electric with Ohio Edison, underground telephone with Ameritech and underground cable service with Massillon Cable TV.



(*) MUST BE USED WHEN WIDTH OF TRENCH IS GREATER
THAN 3' AT THE SUBBASE LEVEL

CONCRETE BASE SHALL BE OF 1:2:4, 6 BAG MIX, PORTLAND
CEMENT CONCRETE USING HIGH EARLY STRENGTH CEMENT AND
IT MUST BE CURED AT LEAST 48 HRS.



JACK E. McFADDEN, P.E, P.S. DESIGN ENGINEER

CFADDEN
ENGINEERING & SURVEYIN
ASSOCIATES, INC.
24100 EUCLID AVE. CLEVELAND, OHIO 44117-170

TY OF MASSILLON NOTES & DETAFOR CRACE COMMUNITY CHURCH HANKINS ROAD, N.E.

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DATE **JANUARY 6. 2003**

PROJECT No. **020101**

WATER CONSTRUCTION NOTES

- 1. ALL WATER WORK REQUIRED, WHETHER SHOWN ON THE PLANS OR AS DIRECTED BY THE WATER DEPARTMENT, SHALL BE AT THE EXPENSE OF THE PROJECT.
- 2. THE INFORMATION SHOWN FOR THE EXISTING WATER MAIN HAS BEEN TAKEN FROM RECORD INFORMATION AND IS NOT GUARANTEED.
- 3. CONTACT THE WATER DEPARTMENT TO SCHEDULE A MEETING PRIOR TO CONSTRUCTION.

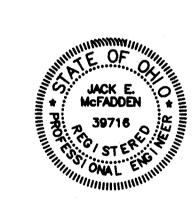
 THE OPERATION OF ANY VALVE OR ALTERATION OF ANY PART OF THE WATER SYSTEM BY THE CONTRACTOR OR THEIR EMPLOYEES IS PROHIBITED WITHOUT THE SUPERVISION OF A WATER INSPECTOR.
- 4. THE CONTRACTOR SHALL OBTAIN ACTUAL FIELD MEASUREMENTS OF THE MAIN DURING INSTALLATION AND SUPPLY (AS-BUILT) PLANS TO THE WATER DEPARTMENT.

 RECORD PRINTS IN A FORM ACCEPTABLE TO THE DIVISION OF
- 5. USE BACKFILL MATERIALAS SPECIFIED AND COMPACT SUFFICIENTLY IN THOSE AREAS WHERE EXISTING MAINS AND SERVICE CONNECTIONS ARE EXPOSED.
- 6. ALL WATER MAINS AND APPURTENANCES THEREOF SHALL CONFORM WITH THE LATEST MATERIAL SPECIFICATIONS AND SHALL BE INSTALLED IN ACCORDANCE WITH THE CONSTRUCTION AND STANDARD DETAILS OF THE WATER DEPARTMENT.
- 7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING WATER MAINS.

- 8. ALL PIPE, UNLESS OTHERWISE CALLED FOR, SHALL BE DUCTILE IRON, MINIMUM CLASS 52, CEMENT LINED HAVING PUSH-ON JOINTS WITH RADIALLY COMPRESSED RUBER RING GASKET.
- 9. ALL FITTINGS, UNLESS OTHERWISE CALLED FOR, SHALL BE DUCTILE IRON, CLASS 350, CEMENT LINED. ALL FITTINGS AND PIPE CONNECTED TO FITTINGS SHALL BE RESTRAINED USING A "RETAINED" MECHANICAL JOINT IN ACCORDANCE WITH ANSI/AWWA C-110/A21.10 AND ANSI/AWWA C-153/A21.53.
- 10. ALL BOLTS AND NUTS ON ALL "RETAINED" MECHANICAL JOINTS SHALL HAVE FIELD APPLIED ONE (1) COAT OF BITUMASTIC PAINTING FOLLOWED BY AN ENCASEMENT OF POLYETHYENE WRAPPING IN ACCORDANCE WITH ANSI/AWWA C-105/A21.5-88 CLASS "C" METHOD "B".
- 11. WHERE SHOWN ON THE PLANS, OR WHEN OTHERWISE CALLED FOR, PIPE AND FITTINGS SHALL HAVE AN APPROVED "TYPE I" OR "TYPE II" BOLTLESS RESTRAINED PUSH-ON JOINTS TO THE LIMITS SHOWN ON THE DRAWINGS.
- 12. IN ALL HYDRANT INSTALLATIONS THE CONTRACTOR SHALL FACE ALL HYDRANT 4" (STEAMER) NOZZLE TOWARD THE PAVEMENT PRIOR TO TESTING AND CHLORINATION OF WATER MAINS. CONTRACTOR SHALL CONSULT WITH THE LOCAL MUNICIPALITY'S ENGINERING OR SERVICE DEPARTMENT TO OBTAIN HYDRANT MODEL AND NOZZLE THREAD REQUIREMENTS IF NOT INDICATED ON THE APPROVED PLANS.
- 13. THE CONTRACTOR SHALL ARRANGE FOR A PERMIT WITH THE DIVISION OF WATER FOR ALL SIZE WATER CONNECTIONS.
- 14. ALL WATER MAIN CURB VALVE BOXES & METER VAULTS WILL BE INSTALLED IN GRASS AREAS WHEN POSSIBLE.

CFADDEN
ENGINEERING & SURV
ASSOCIATES, INC.
24100 EUCLID AVE. CLEVELAND. OHIO 44

WATER CONSTRUCTION NOTES
FOR
GRACE COMMUNITY CHURCH
HANKINS ROAD



REVISIONS

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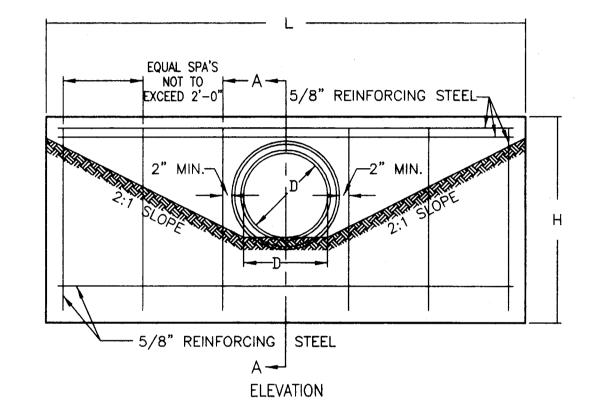
NOVEMBER 18, 2002 ACK E. McFADDEN, P.E, P.S. DESIGN ENGINEER

NOTES:

1. CONCRETE SHALL BE CLASS "C".

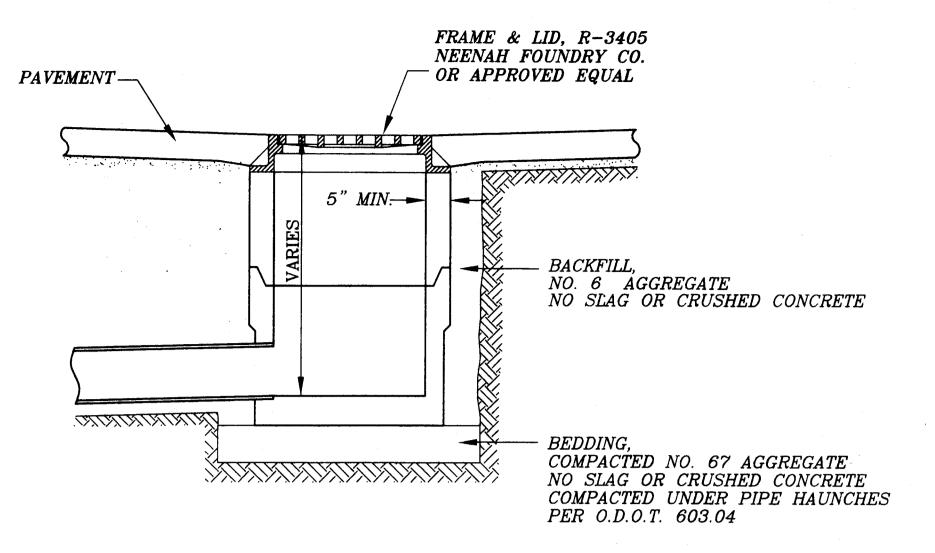
SECTION A-A

- 2. CHAMFER ALL EXPOSED CORNERS 3/4 OF AN INCH.
- 3. FOUNDATION— WHERE THE SOIL BORINGS INDICATE A BEARING CAPACITY OF LESS THAN 2600 POUNDS PER SQUARE FOOT, IT WILL BE NECESSARY TO INCREASE THE WIDTH OF THE



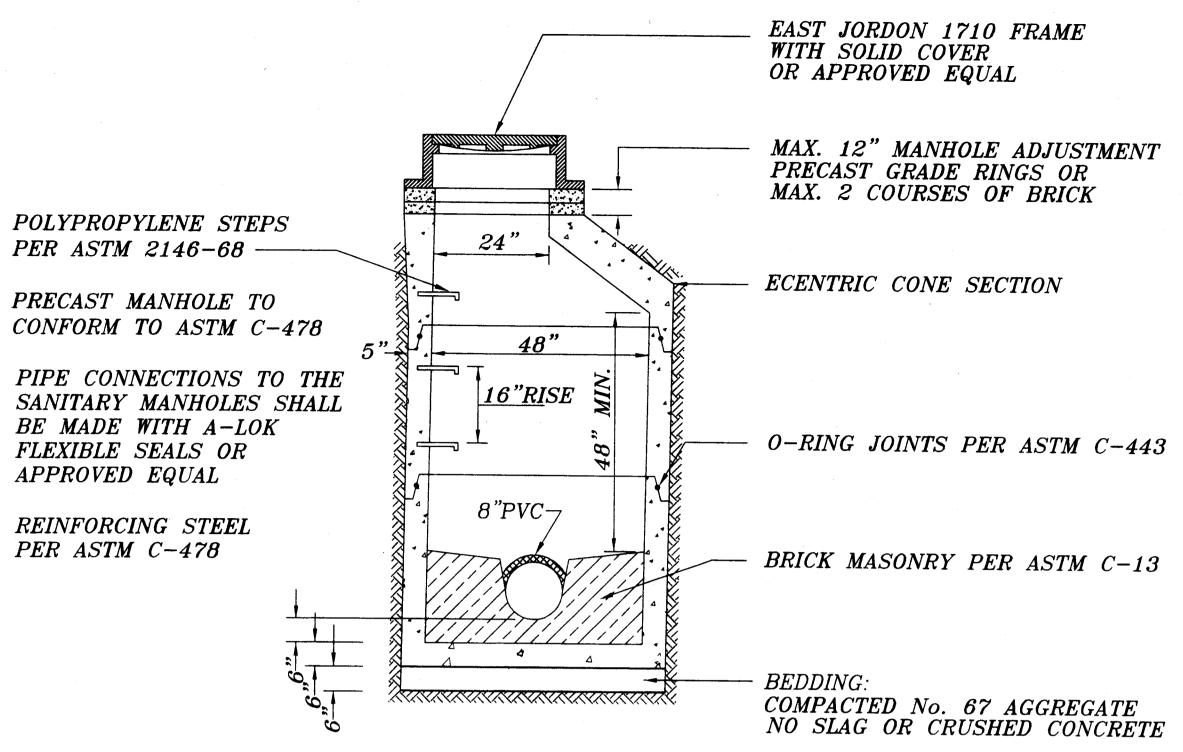
| | DIMENSIONS | | QUANTITIES ONE HEADWALL | |
|-----------|------------|--------|----------------------------|----------------------------|
| DIAMETER | н | L | CONCRETE CU. YDS. | REINFORCING STEEL, LBS. |
| 12" & 15" | 5'-2" | 7'-0" | 1.7 | 41 |
| 18" | 5'-5" | 8'-4" | 2.2 | 57 |
| 21" | 5'-8" | 9'-8" | 2.8 | 62 |
| 24" | 5'-11" | 11'-0" | 3.3 | 69 |
| 30" | 6'-5" | 13'-8" | 4.7 | 92 |
| 36" | 7'-0" | 16'-4" | 6.5 | 105 |

ODOT HW-1 HEADWALL,

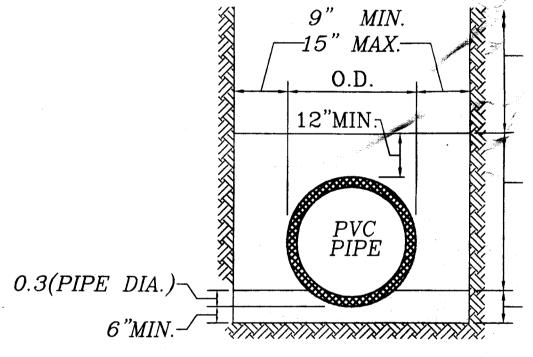


24" X 24" PRECAST REINFORCED CONCRETE **BASIN**

NOT TO SCALE



SANITARY SEWER MANHOLE **DETAIL** NOT TO SCALE



ASTM D-2321CLASS II BEDDING FORFLEXIBLE PIPE UNDER PAVED AREAS

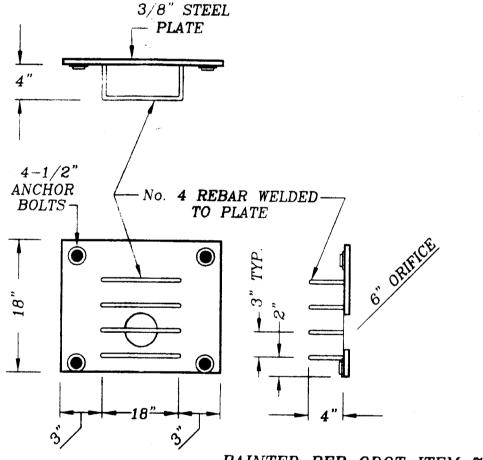
DETAIL

NOT TO SCALE

FINAL BACKFILL, COMPACTED INTERLOCKING AGGREGATE NO SLAG, PLACED IN 6" LIFTS AND COMPACTED

INITIAL BACKFILL, COURSE NO. 57 AGGREGATE PIPE COVER PER O.D.O.T. 603.08 NO SLAG OR CRUSHED CONCRETE

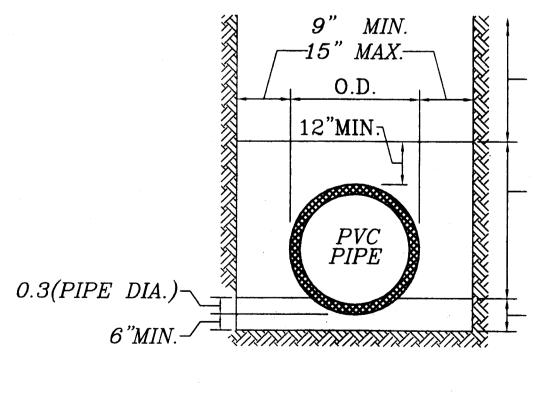
BEDDING, COMPACTED NO. 67 AGGREGATE NO SLAG OR CRUSHED CONCRETE COMPACTED UNDER PIPE HAUNCHES PER O.D.O.T. 603.04



THE ORIFICE, DEBRIS SCREEN, PLATE AND BOLTS ARE TO BE PROTECTED BY APPLYING ONE COAT OF VINYL PAINT OVER ONE COAT OF INORGANIC ZINC SILICATE PRIMER PAINT.

ORIFICE & DEBRIS SCREEN DETAIL

JACK E. McFADDEN, P.E, P.S. DESIGN ENGINEER



FINAL BACKFILL, DENSELY COMPACTED CLEAN SOIL

INITIAL BACKFILL, COURSE NO. 57 AGGREGATE PIPE COVER PER O.D.O.T. 603.08 NO SLAG OR CRUSHED CONCRETE

BEDDING, COMPACTED NO. 67 AGGREGATE NO SLAG OR CRUSHED CONCRETE COMPACTED UNDER PIPE HAUNCHES PER O.D.O.T. 603.04

ASTM D-2321 CLASS II BEDDING FORFLEXIBLE PIPE UNDER UNPAVED AREAS DETAILNOT TO SCALE

PAINTED PER ODOT ITEM 708.08

N.T.S.

CHECKED BY:_ APPROVED BY: ___ DATE: NOVEMBER 18. 2002 PROJECT No. **020101** SHEET No.

C-10

ITY CHURCH ROAD

COMMUNITY HANKINS ROA

GRACE

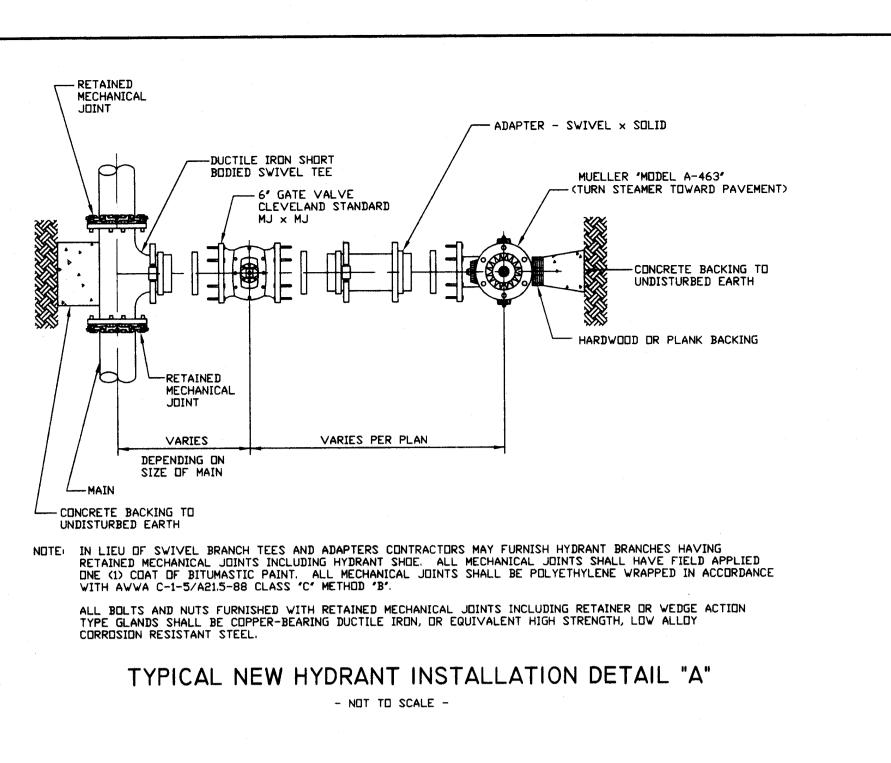
REVISIONS

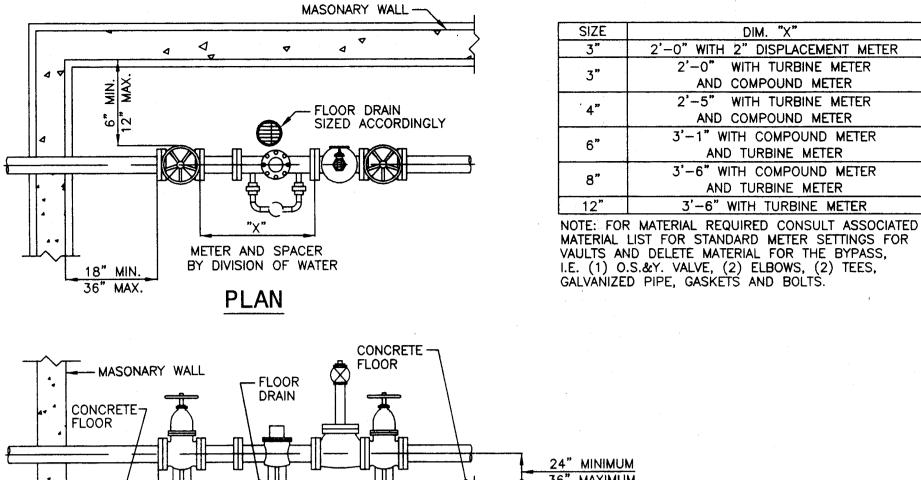
/6/03 REMOVE CATCH BASIN SUMP J.E.M.

DESCRIPTION BY

DETAIL

SEWER





(TYPICAL AS SHOWN) BY THE

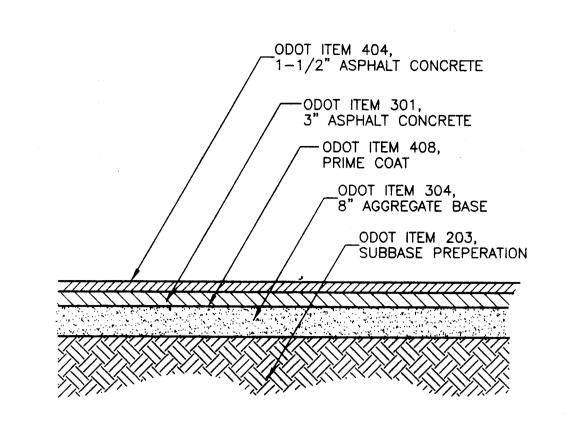
CONTRACTOR AT TIME OF

INSTALLATION.

THE ASPHALTIC CONCRETE SURFACE

MINIMUM OF 2" THICK AND SHAPED TO MATCH THE EXISTING SURFACE.

COURSE (ITEM 404) IS TO BE A



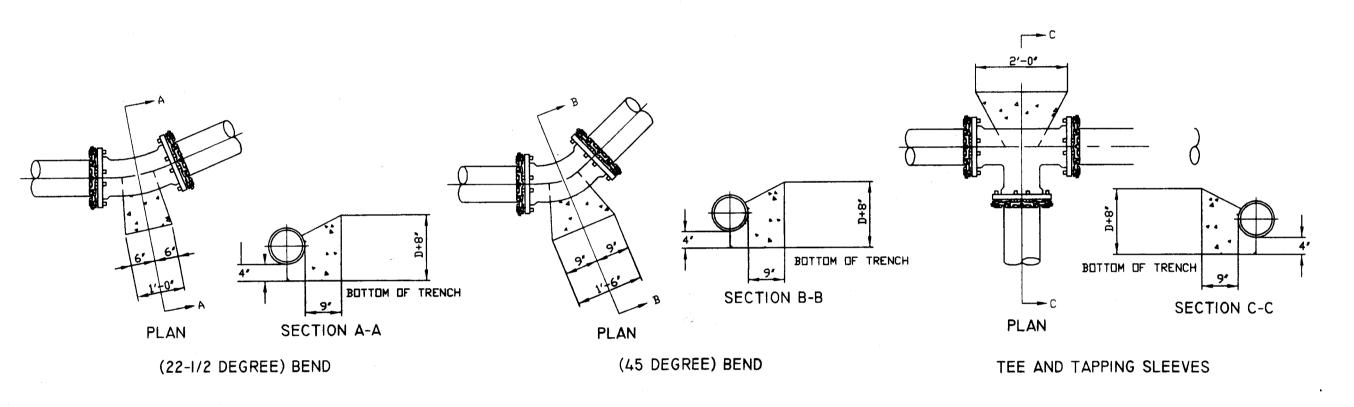
HEAVY DUTY ASPHALT PAVEMENT DETAIL

NOT TO SCALE

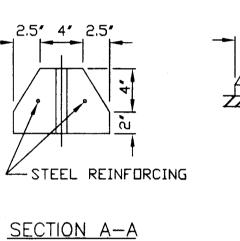


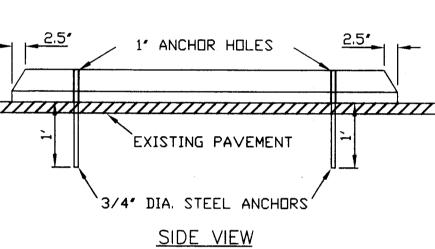
- NOT TO SCALE -

ELEVATION



TOP VIEW





_ODOT ITEM 451, 10" REINFORCED AIR ENTRAINED PORTLAND

CEMENT CONCRETE PAVEMENT

ODOT ITEM 304,
6" AGGREGATE BASE

ODOT ITEM 203,

SUBBASE PREPERATION

__ODOT ITEM 709, 6"X6" - 4/4 WWM

CONCRETE WHEEL STOP DETAIL

NOT TO SCALE

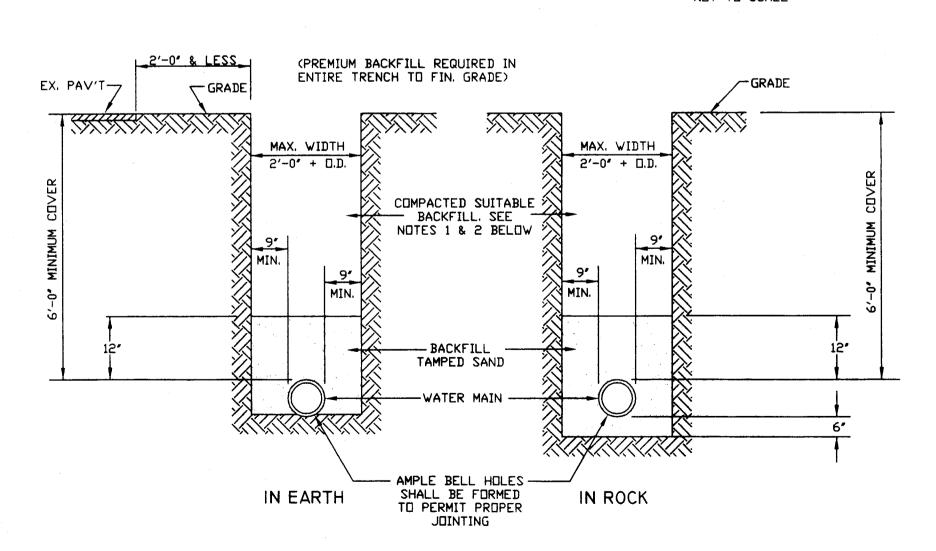
NOTE 1: ALL DIMENSIONS SHOWN HEREON ARE MINIMUM,
THRUST BLOCK SHALL BE POURED TO UNDISTURBED
EARTH.

NOTE 2: ALL CONCRETE FOR THRUST BLOCKS SHALL BE
CLASS "C" HAVING 4,000 PSI 28 DAY COMPRESSIVE
STRENGTH.

NOTE 3: DO NOT COVER BOLTS WITH CONCRETE ON MECHANICAL JOINTS.

NOTE 4: USE FORMS WHEN POURING CONCRETE TO MAINTAIN SHAPE AND DIMENSIONS OF THRUST BLOCKS.

THRUST BLOCK DETAILS



IN TWO EQUAL LIFTS.

EXISTING ASPHALTIC CONCRETE

ALL JOINTS SAWED FULL DEPTH

LIMESTONE

1'6"

PREMIUM BACKFILL SHALL CONSIST OF COMPACTED ODDT 304 LIMESTONE

OR APPROVED EQUAL.

THE ASPHALTIC CONCRETE BASE

COURSE (ITEM 301) IS TO BE A MINIMUM OF 10" THICK AND LAID

PAVEMENT OPENING REPAIR DETAIL

FLEXIBLE PAVEMENT

NOT TO SCALE

REINFORCED CONCRETE PAVEMENT DETAIL

NOT TO SCALE

NOTES:

1) PREMIUM BACKFILL REQUIRED UNDER EXISTING OR FUTURE PAVMENTS, SIDEWALKS AND DRIVES.
2) PREMIUM BACKFILL SHALL BE LIMESTONE SCREENINGS GRADED PER ODDT 304.02 OR ODDT 411. NO SLAG IS PERMITTED.
3) CONTRACTOR SHALL USE SPECIAL CARE IN PLACING THE SAND BEDDING BACKFILL, SO AS TO AVOID SCRAPING OF THE EXTERIOR COATING, INJURING THE PIPE, DISTORTING OR MOVING THE PIPE WHEN COMPACTING THE SAME, THE SAND BEDDING BACKFILL SHALL BE TAMPED IN SIX (6) INCH LAYERS, SIMULTANEOUSLY ON EACH SIDE OF THE PIPE, AND THOROUGHLY COMPACTED SO AS TO PROVIDE A SOLID BACKING AGAINST THE EXTERNAL SURFACE OF THE PIPE.
4) MINIMUM COMPACTING FOR ALL SAND BEDDING BACKFILL, BACKFILL AND PREMIUM BACKFILL SHALL BE 95% STANDARD PROCTOR.
5) PAVEMENT, SIDEWALK OR DRIVES TO BE INSTALLED IN ACCORDANCE WITH LOCAL MUNICIPALITY'S SPECIFICATIONS.

WATER MAIN TRENCH DETAILS

- NOT TO SCALE -

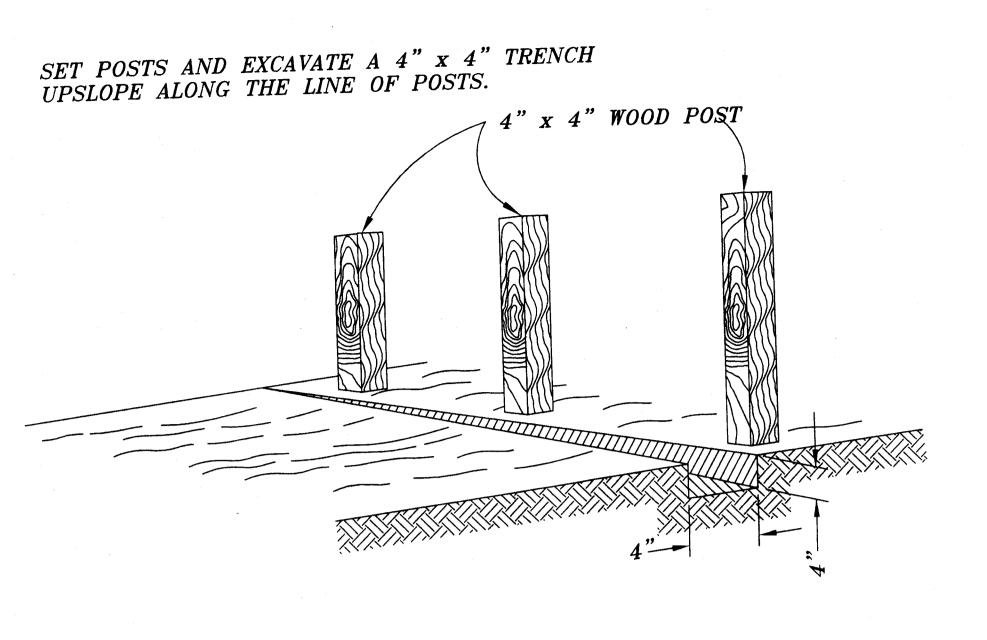
JE MOVEMBER 18, 2002 JACK E. McFADDEN, P.E, P.S. DESIGN ENGINEER WATER & PAVING DETAILS

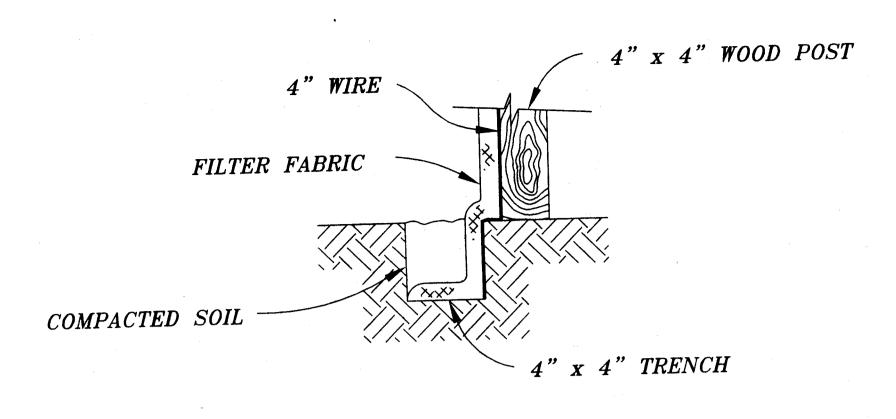
FOR

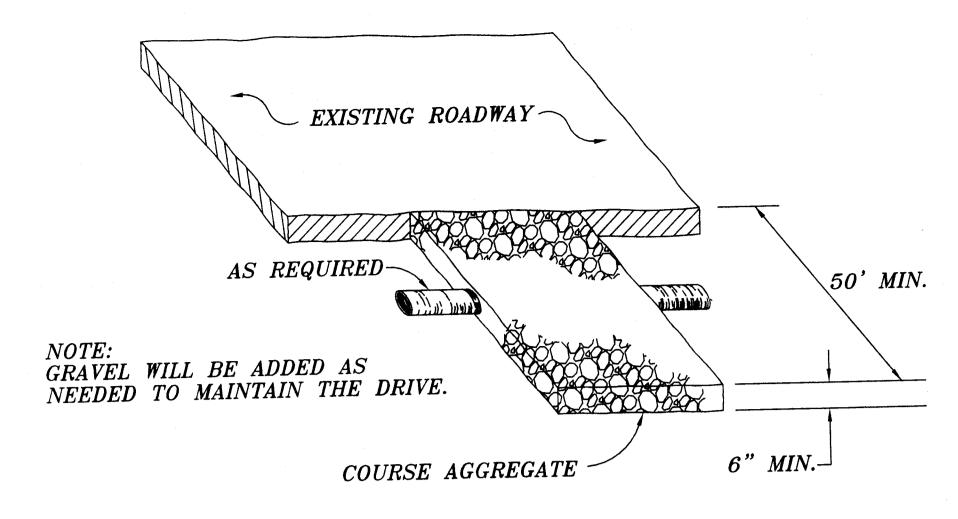
RACE COMMUNITY CHURCH
HANKINS ROAD

ACK E. McFADDEN **

| | REVISIONS | | |
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| PROJECT No. 020101 | | | |
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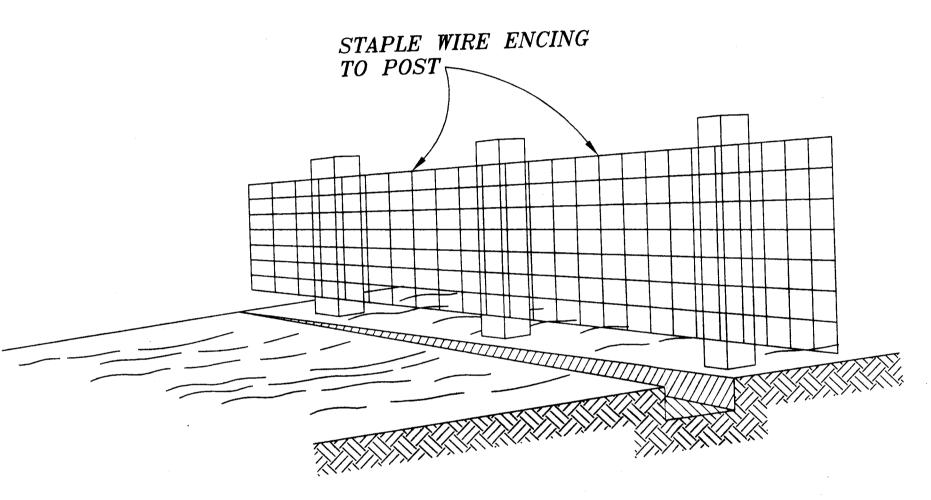


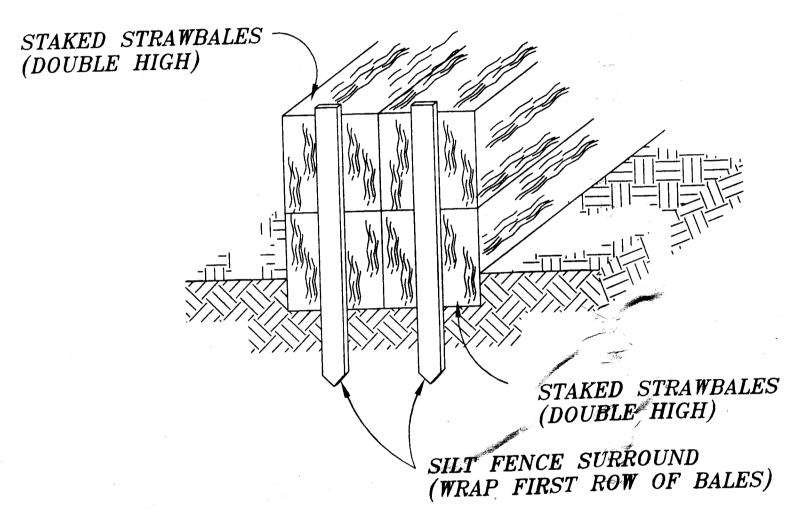


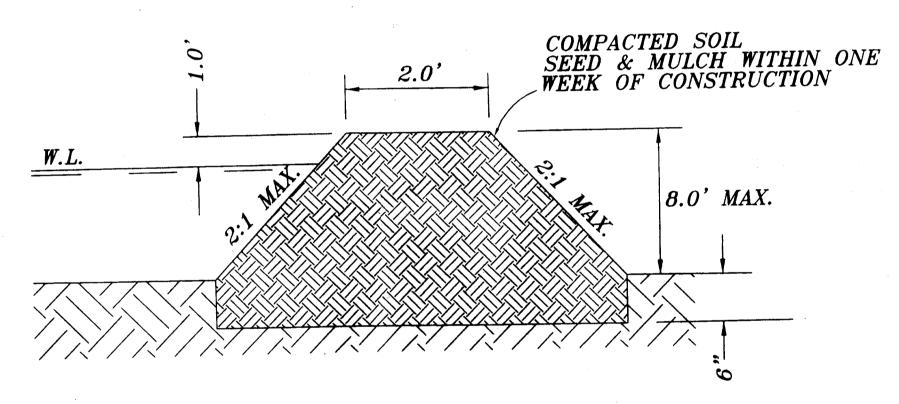


CONSTRUCTION DRIVE DETAIL

NOT TO SCALE







SECTION OF DYKE

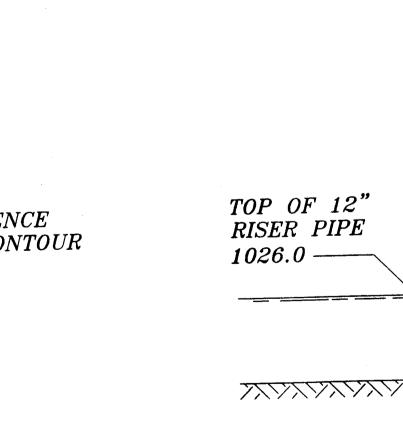
DETAIL

NOT TO SCALE

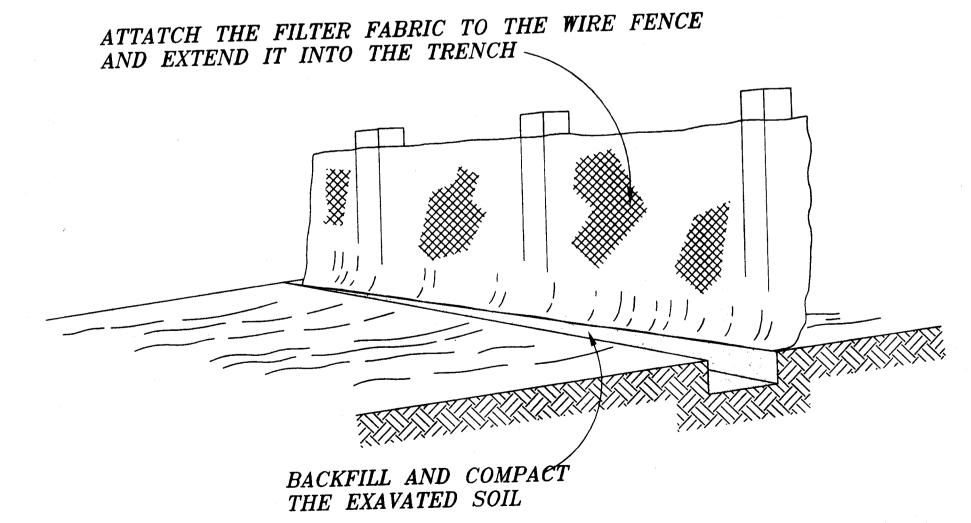
CREST OF EMERGENCY

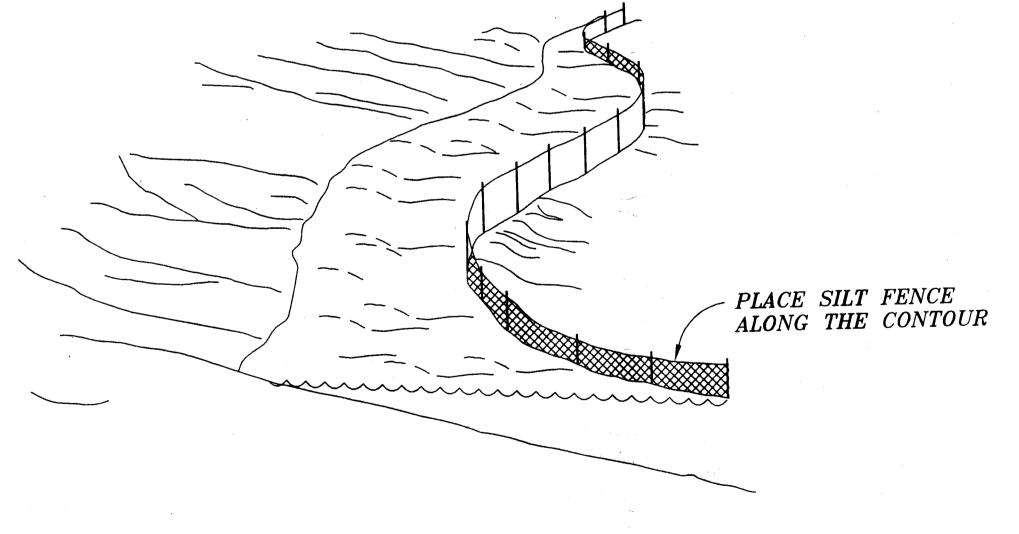
7/7/1/1/1/1/1/1/

SPILLWAY 1028.5



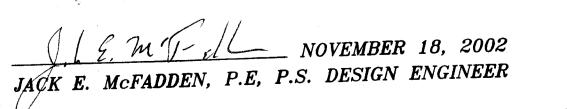
SEDIMENT BASIN
OUTLET DETAIL
NOT TO SCALE

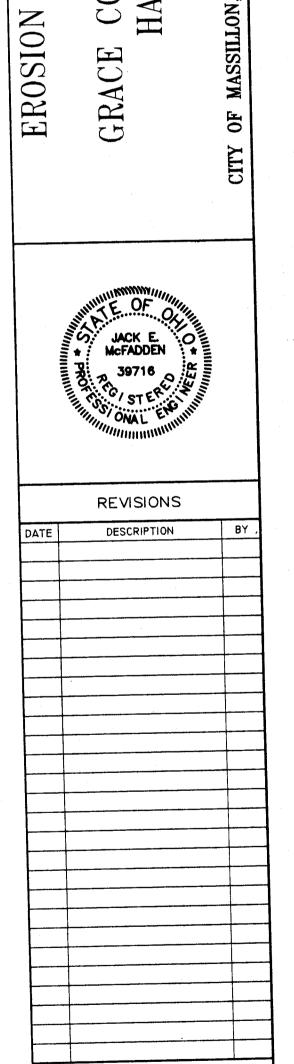




SILT FENCE DETAILS

NOT TO SCALE





DATE: NOVEMBER 18, 2002

PROJECT No. 020101
SHEET No.