



**VILLAGE OF MORTON GROVE**

**CONSTRUCTION**

**STANDARDS**

**VILLAGE OF MORTON GROVE**  
**6101 CAPULINA AVENUE**  
**MORTON GROVE, ILLINOIS 60053**  
**(847) 965-4100**

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**SECTION 1**

**PERMITS**

**PERMIT PROCEDURES:**

1. Submit seven (7) copies of the drawings for approval.
2. Fill out permit.
3. Furnish the Village of Morton Grove with a copy of insurance policy naming the Village of Morton Grove as additional insured.
4. Pay all appropriate fees.
5. Call all appropriate Departments to obtain all inspections. All inspection requests shall be made 48 hours prior to the actual inspection.

Building Dept. : 847/470-5214

Public Works Dept. : 847/470-5235

Engineering Dept. : 847/470-5235

Community Development : 847/470-5231

6. Obtain all required approvals of completed work by calling the appropriate Departments and requesting Final Inspection of the project.
7. Construction hours are from 7:00 A.M. to 8:00 P.M. Monday thru Friday.

Strict adherence to the above mentioned procedures will ensure that your project will be completed with a minimum number of delays.

**PERMIT PROCEDURES**



**Village of Morton Grove**

**CONSTRUCTION STANDARDS**

**P - 1**

**SECTION 2**  
**STREET**  
**PAVEMENT**  
**REQUIREMENTS**

# **STREET PAVEMENT REQUIREMENTS**

**THESE REQUIREMENTS ARE FOR ALL TYPES OF STREETS THAT ARE TO BE CONSTRUCTED IN THE VILLAGE OF MORTON GROVE.**

**LOCAL RESIDENTIAL:  
& PARKING LOTS**

**1 1/2" BITUMINOUS SURFACE COURSE, CLASS I  
1 1/2" BITUMINOUS CONCRETE BINDER COURSE, CLASS I  
10 " AGGREGATE BASE COURSE, TYPE B ( 100% CRUSHED )**

**LOCAL COLLECTOR:**

**1 1/2" BITUMINOUS SURFACE COURSE, CLASS I  
3" BITUMINOUS CONCRETE BINDER COURSE, CLASS I  
12 " AGGREGATE BASE COURSE, TYPE B ( 100% CRUSHED )**

**INDUSTRIAL:**

**1 1/2" BITUMINOUS SURFACE COURSE, CLASS I  
2" BITUMINOUS CONCRETE BINDER COURSE, CLASS I  
8" BITUMINOUS AGGREGATE MIXTURE ( MINIMUM M.S. - 1200 )  
4 " AGGREGATE BASE COURSE, TYPE B ( 100% CRUSHED )**

## **PAVEMENT REQUIREMENTS**

**Village of Morton Grove**

**CONSTRUCTION STANDARDS**

**S - 1**



**SECTION 3**

**BACKFILL**



INSIDE DIAMETER OF CONDUIT OR PIPE (INCHES)	MAXIMUM TRENCH WIDTH AT TOP OF CONDUIT OR PIPE
6	3'-2"
8	3'-2"
10	3'-2"
12	3'-4"
15	3'-6"
18	3'-10"
21	4'-4"
24	4'-8"
27	4'-11"
30	5'-3"
33	6'-0"
36	6'-4"
42	6'-11"
48	7'-6"
54	8'-7"
60	9'-2"
66	9'-9"
72	10'-4"
78	10'-11"
84	11'-6"
90	12'-1"
96	12'-8"
102	13'-3"
108	13'-10"

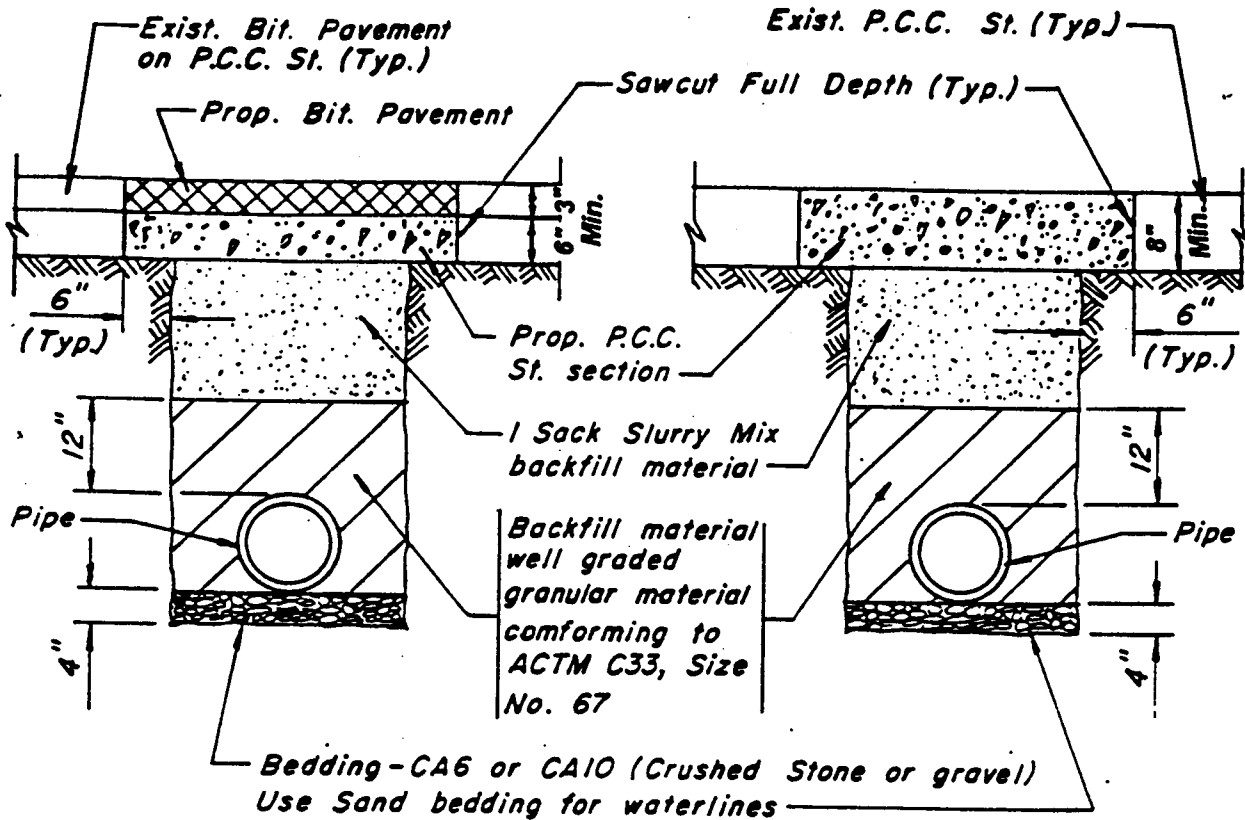
**Notes:**

1. Definition of one (1) Sack Slurry Mix - one (1) sack cement to one (1) cubic yard sand to be transit mixed and delivered.
2. Contractor is to remove and dispose of all excavated material off - site.
3. Contractor shall sawcut six (6") inches each side of the trench for removal. All sawcuts shall be full length.
4. Trenches shall not exceed five (5') feet in depth without proper shoring and permission. OSHA notification will be required.
5. Trench is to be excavated to firm, undisturbed soil. If over excavation is required to reach a firm trench bottom, the contractor shall fill the void with CA6 and compact to obtain proper density and grade.
6. Instead of slurry backfill, the contractor at the Village's option, utilize Trench Backfill as specified in the IDOT "Standard Specifications for Road and Bridge Construction, latest edition." Compaction tests shall be required in locations approved by the Village and these tests shall be paid for by the contractor. Backfill and compaction will be performed on every other lift. All tests shall have 95% compaction or better. The contractor shall also furnish the Village with a copy of the final compaction report.
7. All bituminous and portland cement concrete pavement shall meet the requirements of and be constructed in accordance with the Standard Specifications for Road and Bridge Construction, latest edition.
8. Minimum thickness of pavement based on type of street.

**TRENCH BACKFILL**

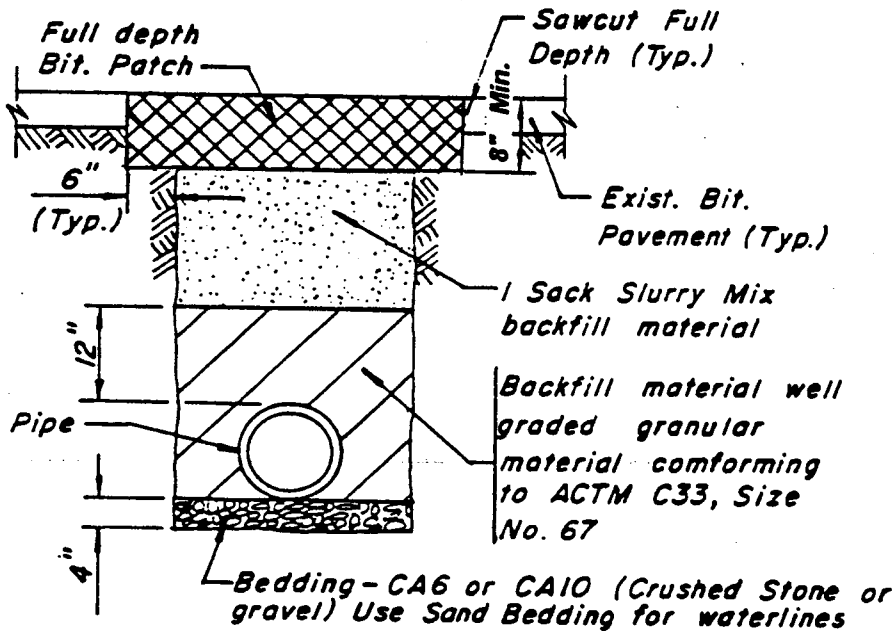
**Village of Morton Grove**





**EXIST. BIT. PAVEMENT  
ON P.C.C. ST.**

**EXIST. P.C.C. ST.**



**EXIST. BIT. PAVEMENT**

**NOTE**

1. For maximum trench width and General Notes see Std. T-1A
2. Instead of a Slurry backfill the contractor may at his option comply with Item \*6 of STD. \*T-1A
3. Any Excavation in Parkway areas shall be Restored to original condition and to the satisfaction of the Village Engineer

**TRENCH BACKFILL**

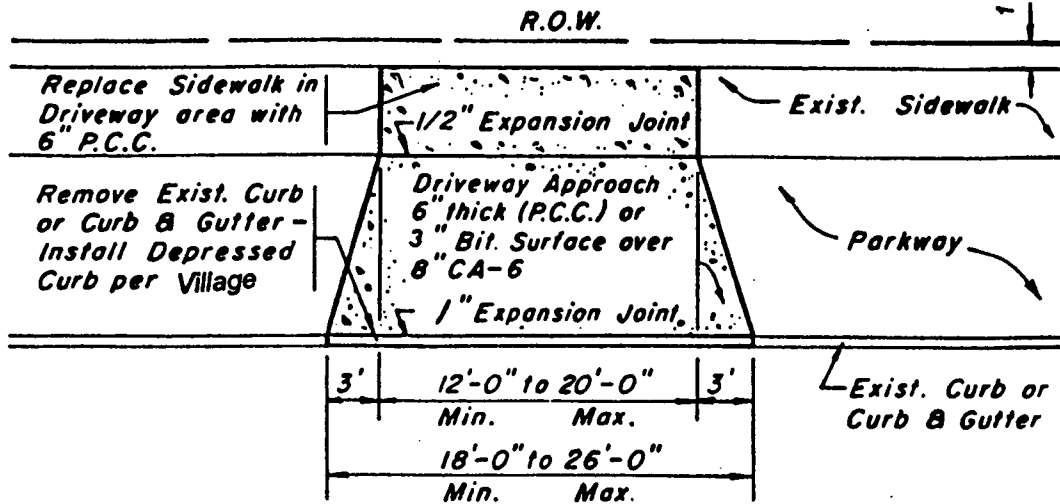
**Village of Morton Grove**

**CONSTRUCTION STANDARDS**



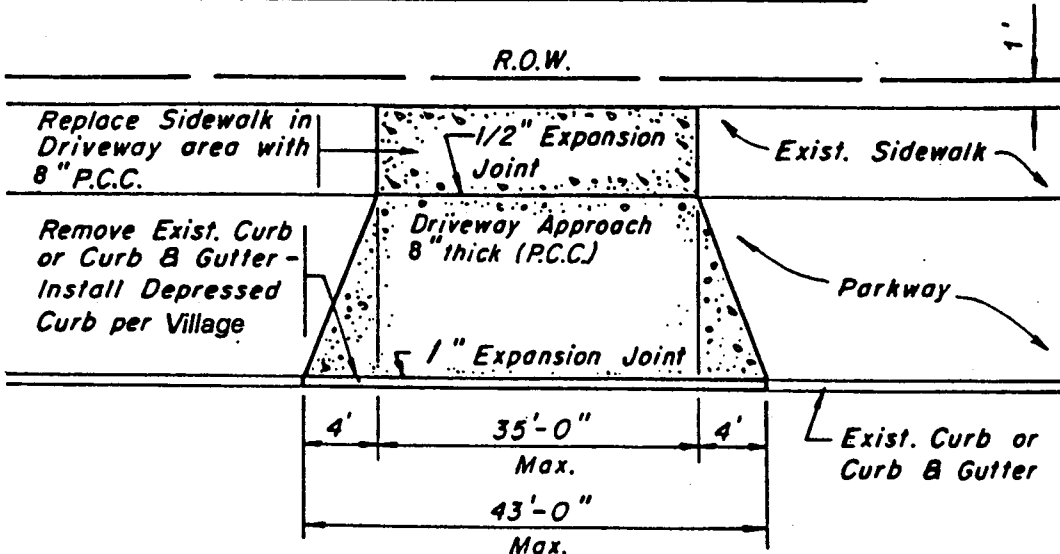
**SECTION 4**

**CONCRETE**



In no case shall any driveway approach be smaller than the existing existing driveway on property. Actual size to be approved by the Village.

### TYPICAL RESIDENTIAL DRIVEWAY



**Notes:**

### TYPICAL COMMERCIAL DRIVEWAY

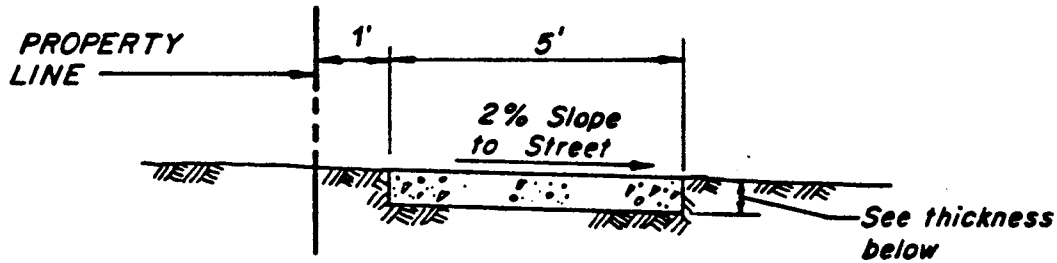
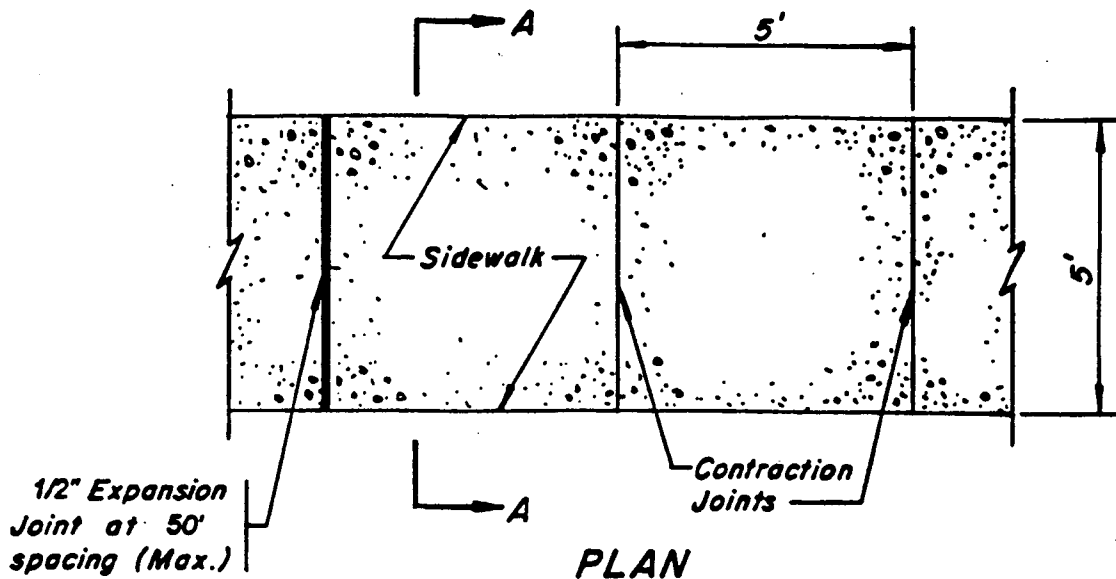
1. All material and workmanship shall conform to the Standard Specifications for Road and Bridge Construction, latest edition.
2. All pours must be separate. No monolithic pours with curb and gutter, driveway approaches, and sidewalks.
3. All sawcuts are to be full depth.
4. The contractor shall notify the Village 48 - hours prior to commencing work.
5. Protective coating shall be installed on all concrete work.
6. Residential driveway materials shall be determined by the Village.

## DRIVEWAY CONSTRUCTION

### Village of Morton Grove

#### CONSTRUCTION STANDARDS





**SECTION A-A**

**Notes:**

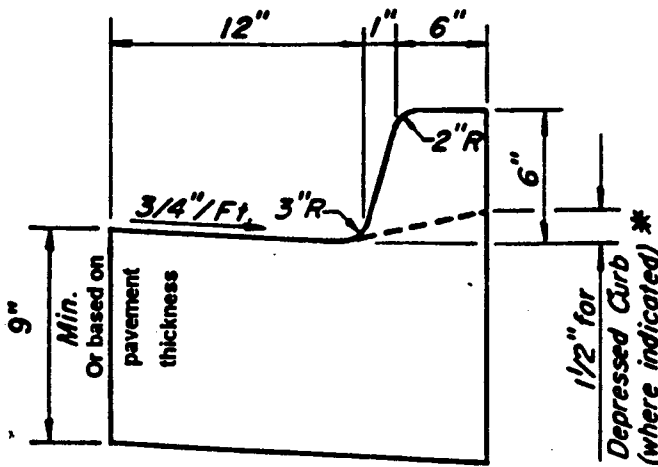
1. All material and workmanship shall conform to the Standard Specifications for Road and Bridge Construction, latest edition.
2. All pours must be separate. No monolithic pours with curb and gutter, driveway approaches, and sidewalks.
3. All sawcuts are to be full depth.
4. The contractor shall notify the Village 48 - hours prior to commencing work.
5. Protective coating shall be installed on all concrete work.
6. Install contraction joints 1/8" wide every five (5) lineal feet.
7. Install 1/2" expansion material every fifty (50) lineal feet.
8. Install 1/2" expansion material between the sidewalks and all structures such as light standards, traffic signal standards, poles, columns, or any structure which extends through the sidewalk.
9. Sidewalk Thickness: 5" Everywhere, except where driveways cross sidewalks.  
6" Where residential driveways cross sidewalks.  
8" Where commercial driveways cross sidewalks.

**SIDEWALK CONSTRUCTION**

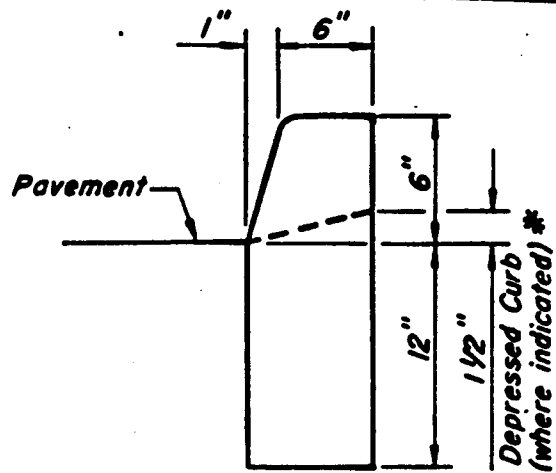
**Village of Morton Grove**

**CONSTRUCTION STANDARDS**



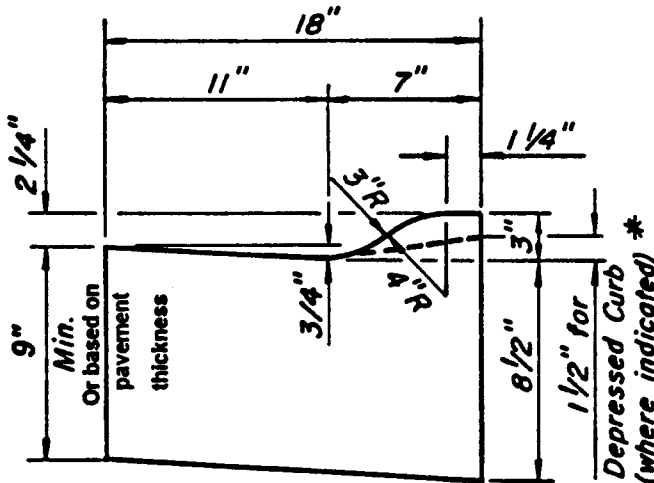


**CURB AND GUTTER TYPE B-6.12**



**CONCRETE CURB, TYPE B**

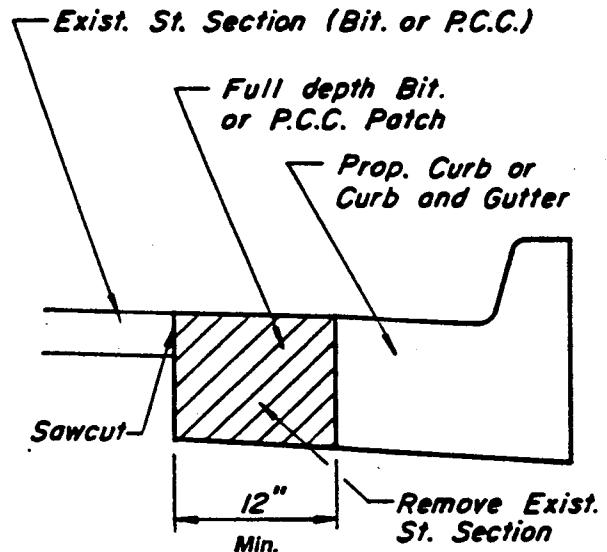
*\* Except handicapped ramps.  
See Std. C-4*



**CURB AND GUTTER TYPE M-3.12**

**Notes:**

1. All material and workmanship shall conform to the Standard Specifications for Road and Bridge Construction, latest edition.
2. All pours must be separate. No monolithic pours with curb and gutter, driveway approaches, and sidewalks.
3. All sawcuts are to be full depth.
4. The contractor shall notify the Village 48 - hours prior to commencing work.
5. Protective coating shall be installed on all concrete work.
6. Residential driveway materials shall be determined by the Village.

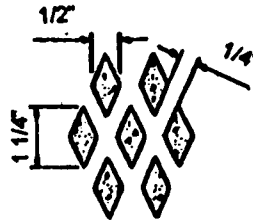
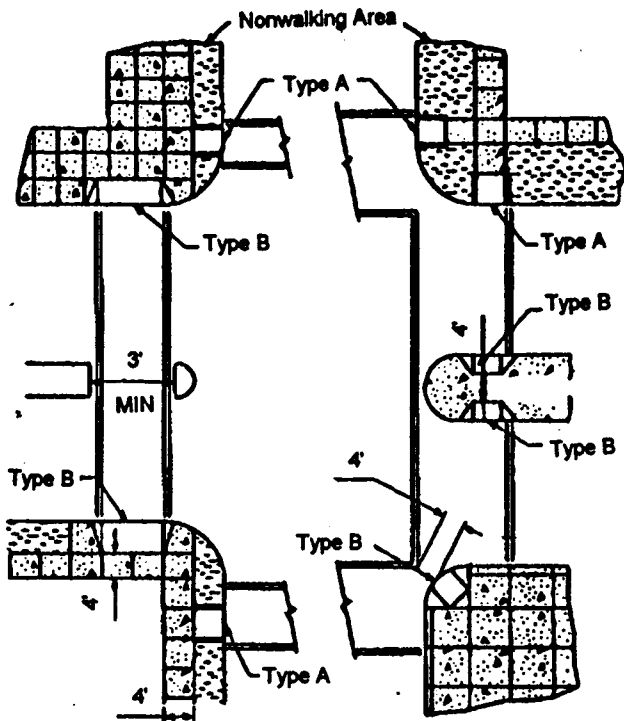


**CONSTRUCTION DETAIL**

**CURB AND COMBINATION CURB AND GUTTER**

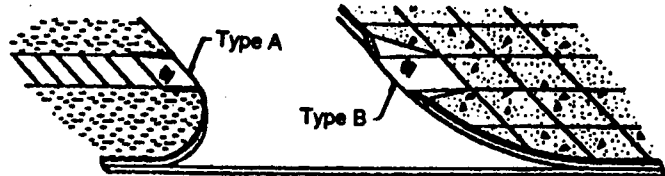
**Village of Morton Grove**





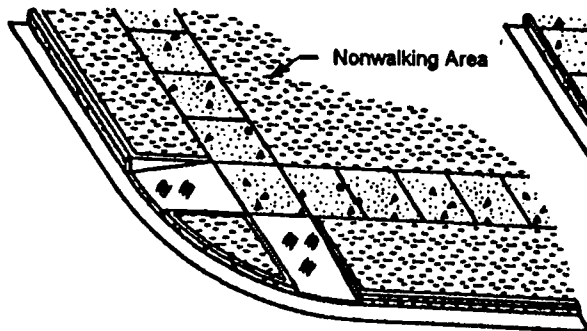
**RAMP TEXTURE DETAIL**

Nominal Dimensions

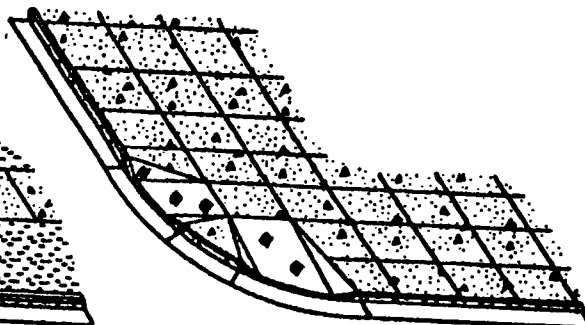


**RAMP TEXTURE DETAIL**

**RECOMMENDED LOCATIONS OF RAMP**



**TYPE A RAMPS**



**TYPE B RAMPS**

**General Notes:**

Ramp texturing is to be done with an expanded metal grate placed and removed from wet concrete to leave a diamond pattern as shown. The long axis of the diamond pattern shall be perpendicular to the curb. Grooves shall be 1/8" deep and 1/4" wide.

The maximum slope of the side flare for Type B ramps shall be 1:10: However, if the width of the landing area between the top of the ramp and an obstruction is less than 4' then the maximum slope shall be 1:12.

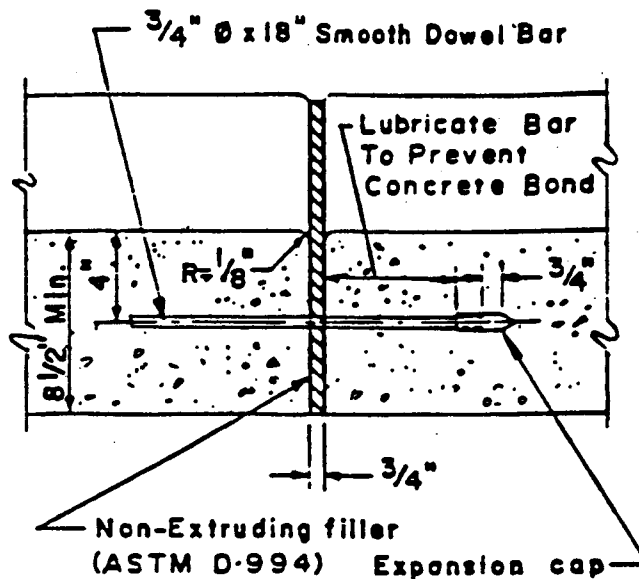
As slope ratios are expressed as units of vertical displacement to units of horizontal displacement ( $V_2H$ ).

**HANDICAPPED RAMPS**

**Village of Morton Grove**

**CONSTRUCTION STANDARDS**





**TYPICAL**  
**EXPANSION JOINT DETAIL**

**Notes:**

1. All material and workmanship shall conform to the Standard Specifications for Road and Bridge Construction, latest edition.
2. Contraction joints shall be constructed at twenty-five (25) feet O.C. and expansion joints at the beginning of all return radii and five feet either side of the structure.
3. Wherever curb and gutter is poured adjacent to the new P.C. Concrete pavement or base course, tie bars shall be provided in accordance with Illinois Department of Transportation Standards 2130 and 2323. Wherever curb and gutter is poured adjacent to existing P.C. Concrete pavement or base course, expansion tie anchors 5/8" shall be installed into the pavement or base course.

**CURB AND COMBINATION CURB AND GUTTER**

**Village of Morton Grove**

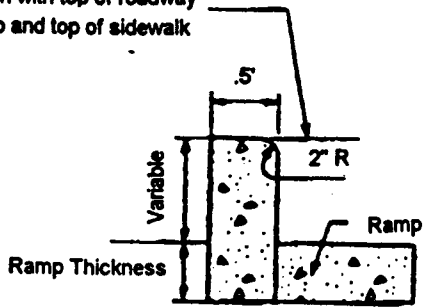
**CONSTRUCTION STANDARDS**

**C - 3A**



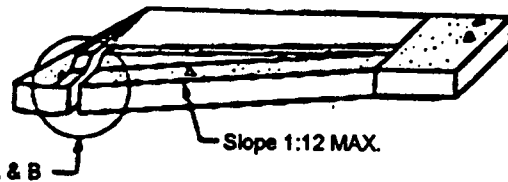


Flush with top of roadway curb and top of sidewalk

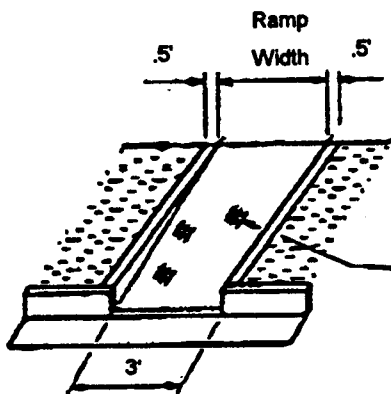


**DETAIL of SIDE CURB**

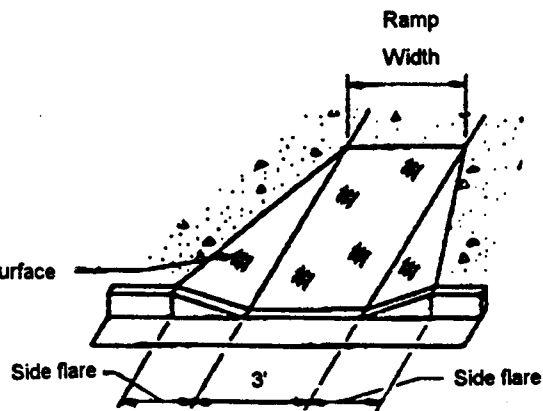
(Side curb may be constructed monolithically with ramp )



**RAMP PROFILE**

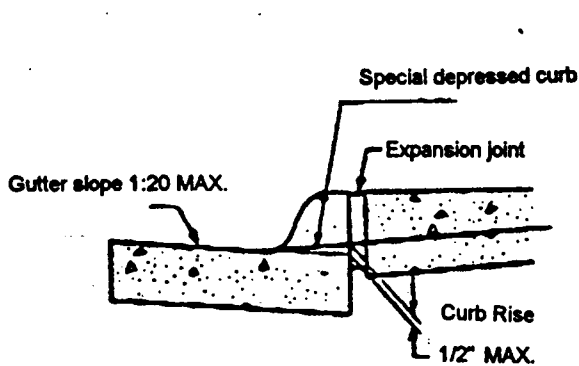


**TYPE A RAMPS**

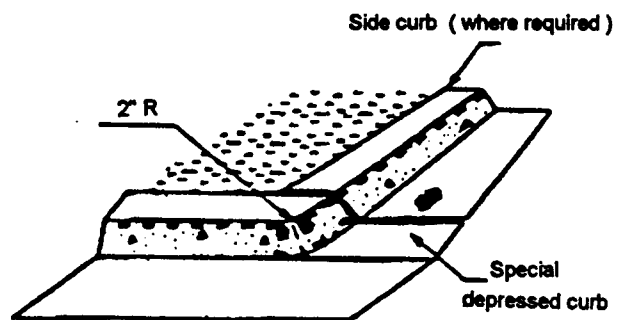


**TYPE B RAMPS**

**DETAILS of RAMPS**



**DETAIL A**



**DETAIL B**

**HANDICAPPED RAMPS**

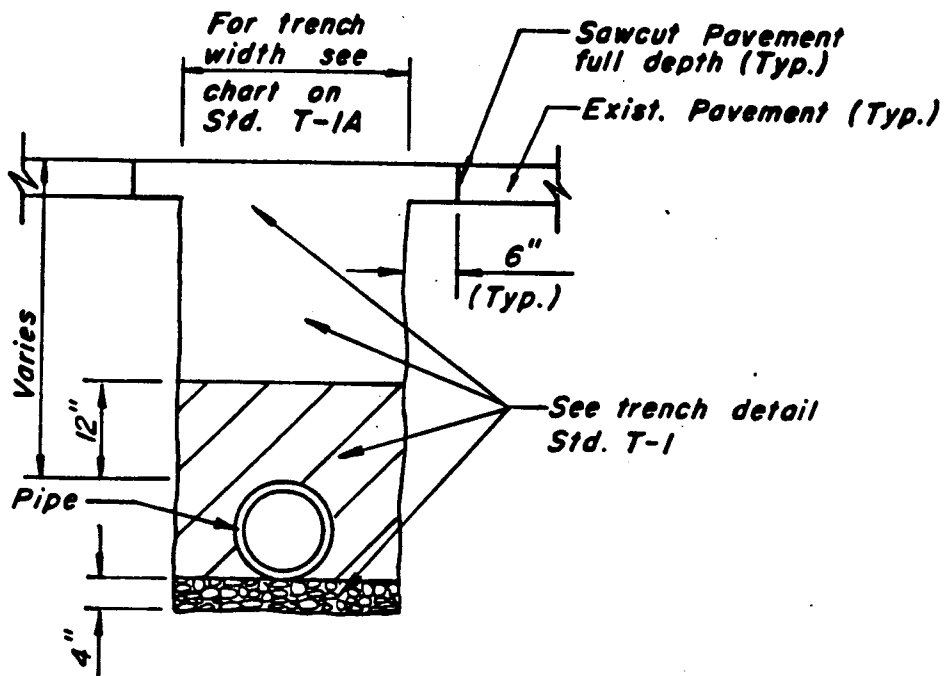
**Village of Morton Grove**

**CONSTRUCTION STANDARDS**



**SECTION 5**

**SANITARY SEWER**



**Sanitary Sewer Requirements:**

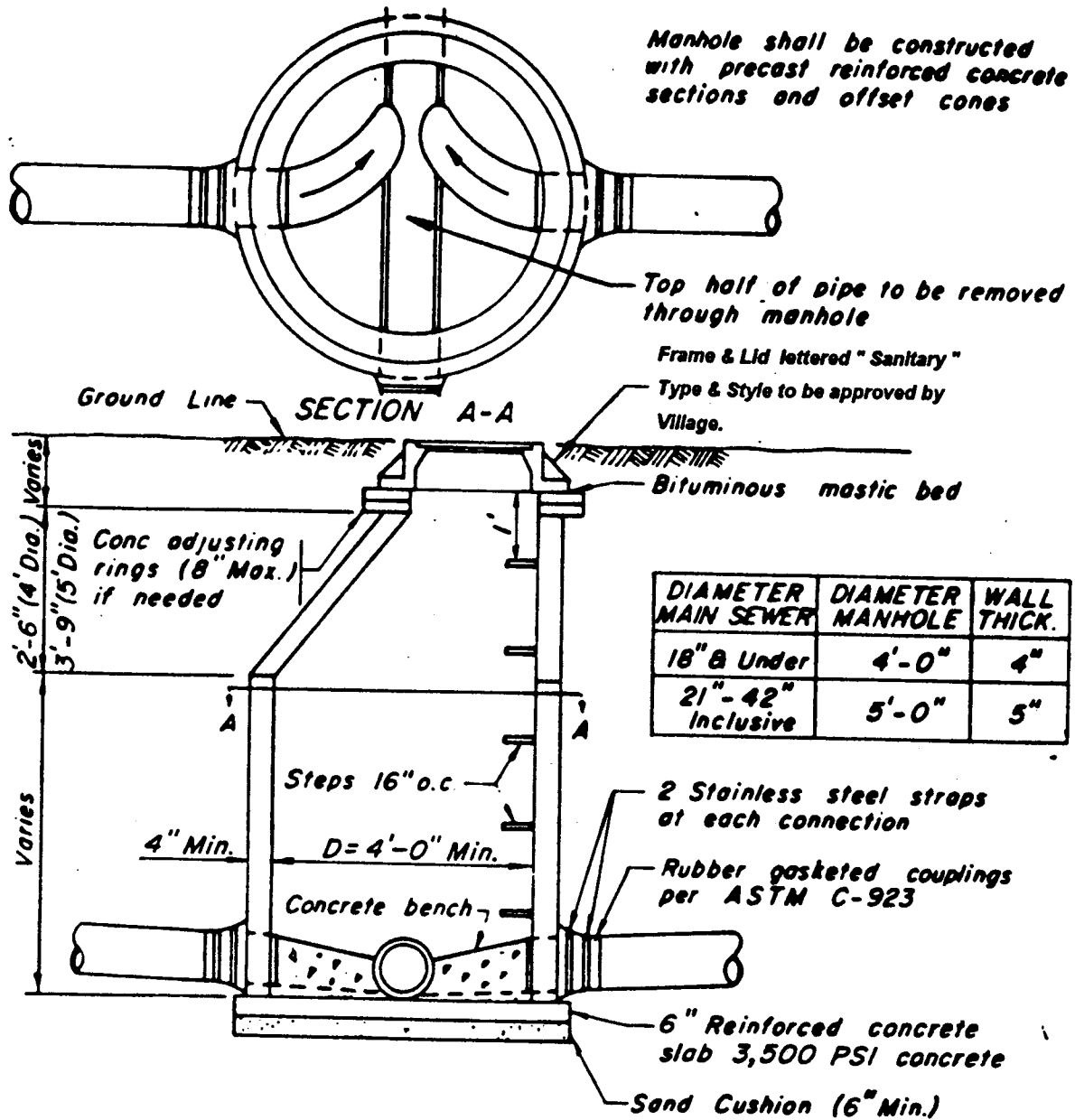
1. Depths of the main may vary as approved by the Village.
2. Sanitary sewer mains shall not be less than 8" in diameter. Sewer laterals from the sewer main to the property line shall not be less than 6" in diameter.
3. Pavement is to be sawcut full depth before removal begins.
4. All trench backfill shall comply with Village Standard Number T-1 and T-1A.
5. All testing shall be done in accordance with the Standard Specifications for Water and Sewer Main Construction in Illinois, latest edition.
6. Sanitary sewer lines must be kept separate from storm sewer lines. Combined sewer systems are not allowed in new construction projects.
7. All sanitary sewer lines of any length and service laterals of 100' or longer shall require a drawing and calculations signed and sealed by a Professional Engineer.
8. Notify the Sewer Superintendent 48 hours prior to commencing work.
9. All material and workmanship shall conform to the Standard Specifications for Water and Sewer Main Construction in Illinois, latest edition.
10. The sewer line shall be constructed of extra strength VCP and shall conform to ASTM C-700 71T with no bell joint, or PVC type SDR26 as approved by the Village and shall conform to ASTM 3033 and 3034.

**SANITARY SEWER CONSTRUCTION**

**Village of Morton Grove**

**CONSTRUCTION STANDARDS**





**Notes:**

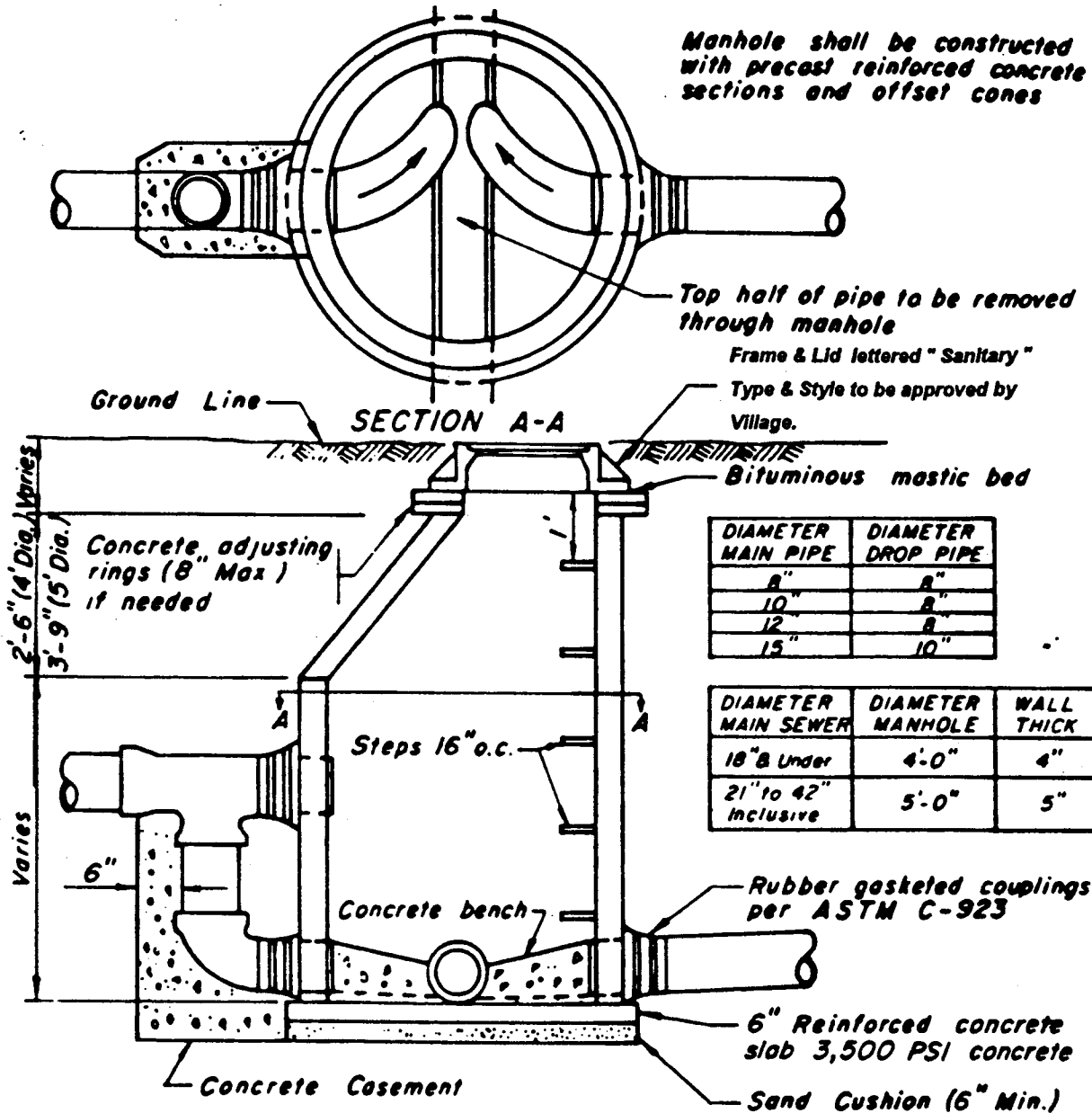
1. Notify the Sewer Superintendent 48 hours prior to commencing work.
2. All material and workmanship shall conform to the Standard Specifications for Water and Sewer Main Construction in Illinois, latest edition, as well as the requirements of the Metropolitan Water Reclamation District of Greater Chicago (M.W.R.D.G.C.).
3. All sanitary manholes shall be water tight.

**SANITARY MANHOLE**

**Village of Morton Grove**



Manhole shall be constructed with precast reinforced concrete sections and offset cones



**Notes:**

1. Notify the Sewer Superintendent 48 hours prior to commencing work.
2. All material and workmanship shall conform to the Standard Specifications for Water and Sewer Main Construction in Illinois, latest edition, as well as the requirements of the Metropolitan Water Reclamation District of Greater Chicago (M.W.R.D.G.C.).
3. All sanitary manholes shall be water tight.

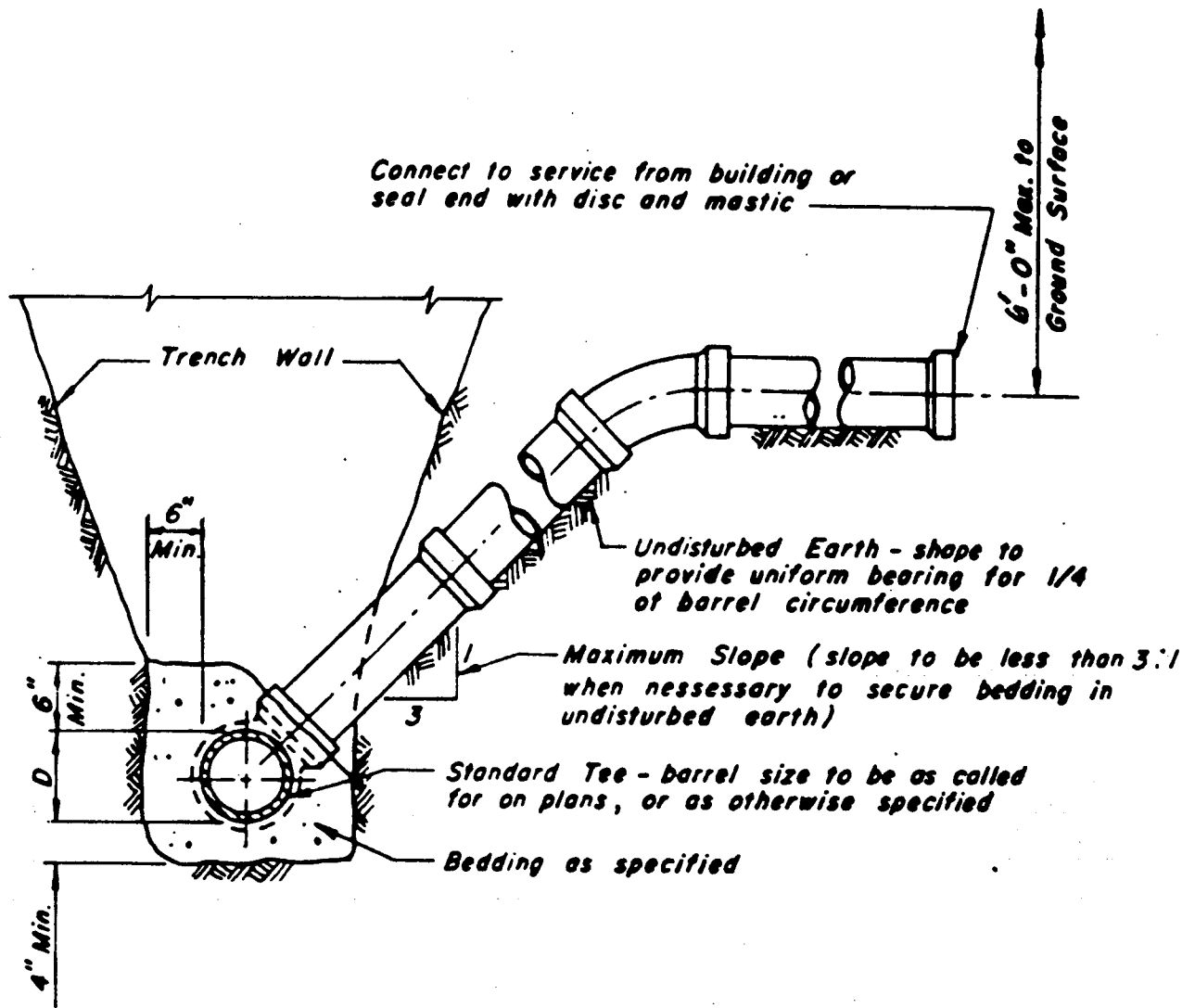
**SANITARY DROP MANHOLE**

**Village of Morton Grove**



**CONSTRUCTION STANDARDS**

**SS - 3**



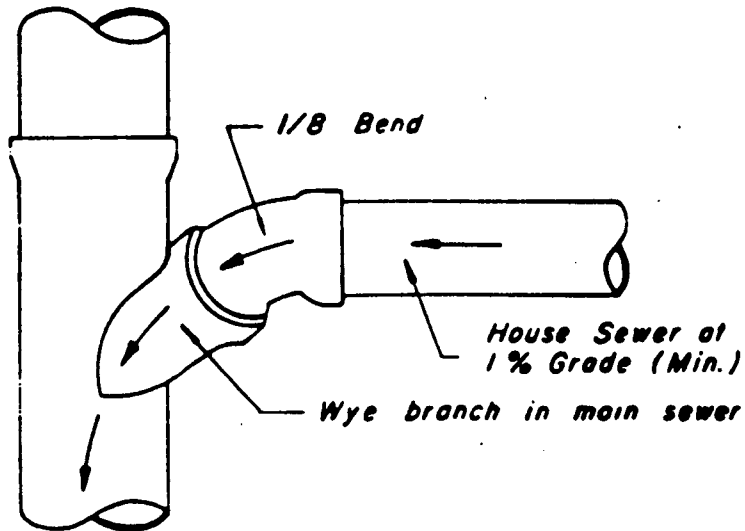
**Notes:**

1. Notify the Sewer Superintendent 48 hours prior to commencing work.
2. All material and workmanship shall conform to the Standard Specifications for Water and Sewer Main Construction in Illinois, latest edition, as well as the requirements of the Metropolitan Water Reclamation District of Greater Chicago (M.W.R.D.G.C.).

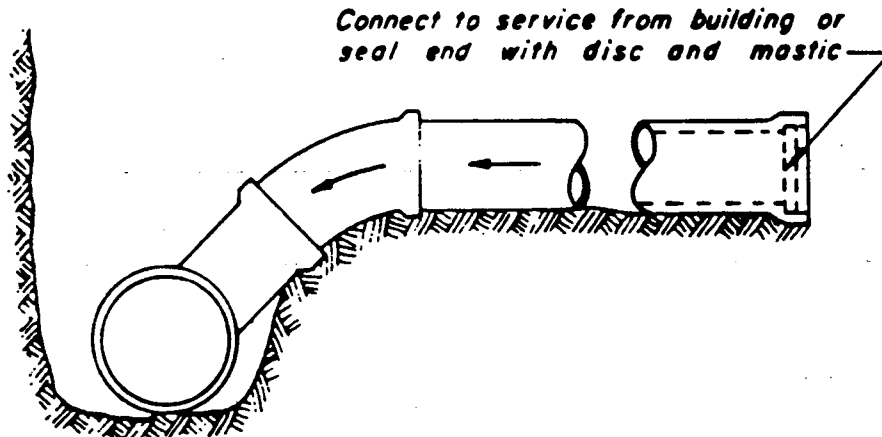
**SANITARY SEWER SERVICE RISER**

**Village of Morton Grove**





PLAN



ELEVATION

**Notes:**

1. Notify the Sewer Superintendent 48 hours prior to commencing work.
2. All material and workmanship shall conform to the Standard Specifications for Water and Sewer Main Construction in Illinois, latest edition, as well as the requirements of the Metropolitan Water Reclamation District of Greater Chicago (M.W.R.D.G.C.).

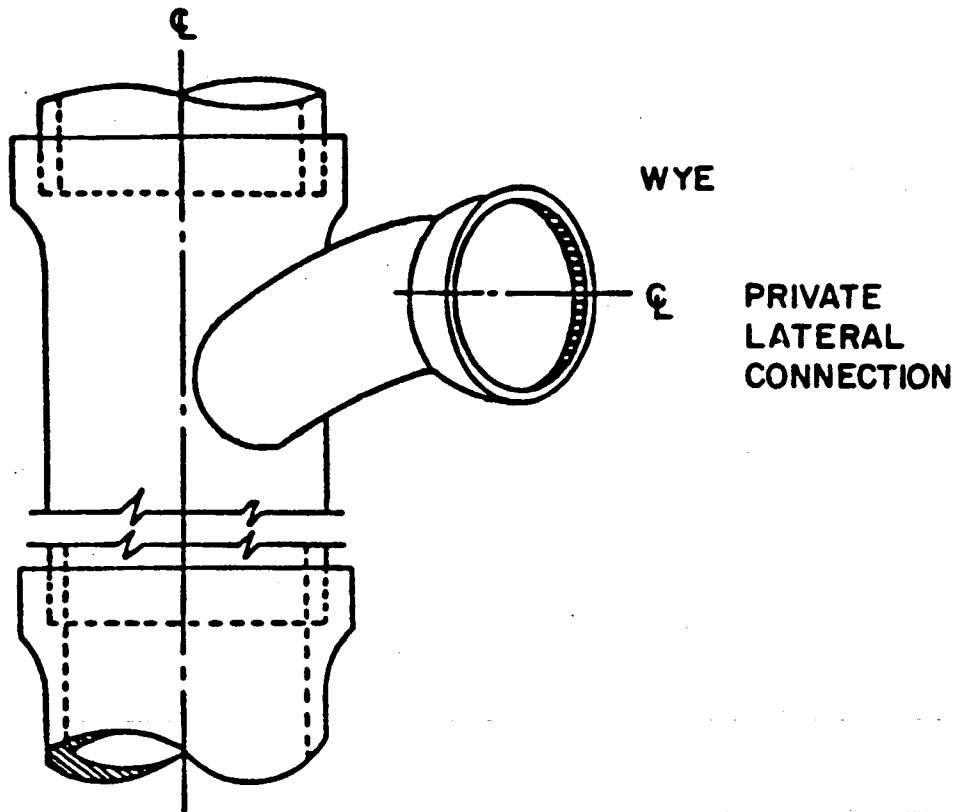
**SANITARY SEWER SERVICE**

**Village of Morton Grove**

**CONSTRUCTION STANDARDS**



PUBLIC SEWER



WHERE WYES ARE NOT PROVIDED, TAPPING SADDLES WILL BE REQUIRED. AXIS OF OUTLET PLACED AT 45° SLOPE WITH HORIZONTAL. OUTLET TO BE PROVIDED WITH STOPPER.

**Notes:**

1. Notify the Sewer Superintendent 48 hours prior to commencing work.
2. All material and workmanship shall conform to the Standard Specifications for Water and Sewer Main Construction in Illinois, latest edition, as well as the requirements of the Metropolitan Water Reclamation District of Greater Chicago (M.W.R.D.G.C.).

**SANITARY SEWER LATERAL CONNECTION**

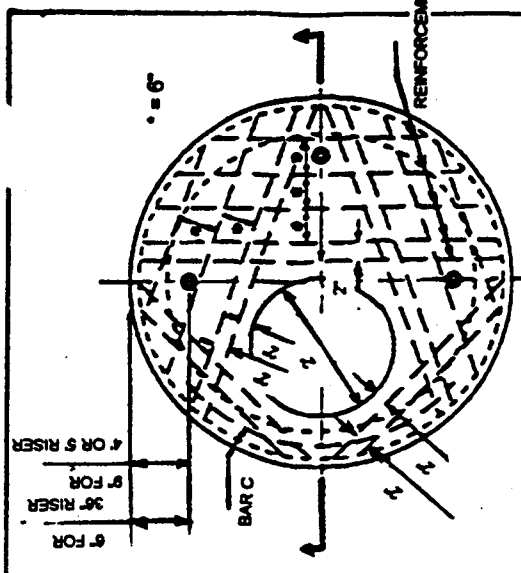
**Village of Morton Grove**

**CONSTRUCTION STANDARDS**

**SS - 6**

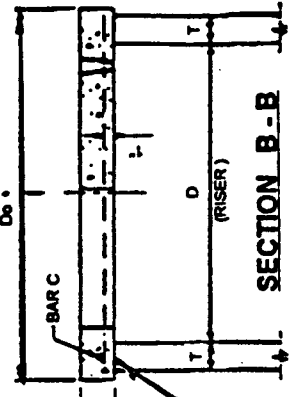






PLAN

(REINFORCEMENT BARS)

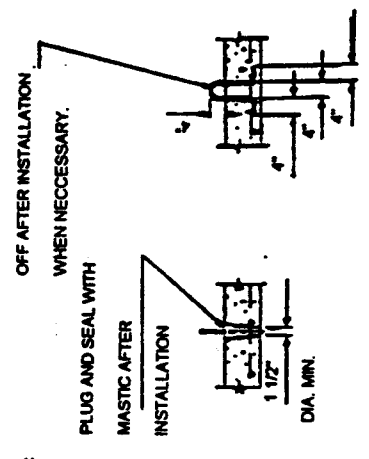


SECTION B-B

NOTES:

Precast Flat Slab Tops shall conform to the Standard Specifications for Road and Bridge Construction (latest edition). Reinforcement Bars or Welded Wire Fabric shall be in accordance with the Standard Specifications for Road and Bridge Construction (latest edition). Joint configuration and dimensions shall match and fit the riser joint detail lifting devices other than shown may be used subject to approval by the Village. The cost of furnishing and installing the Flat Slab Top shall be included in the unit price for Catch Basins, Manholes, or Valve Vaults.

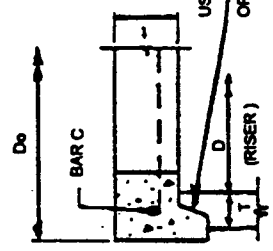
NO. 4 BAR LOOP - BURN OFF AFTER INSTALLATION WHEN NECESSARY.



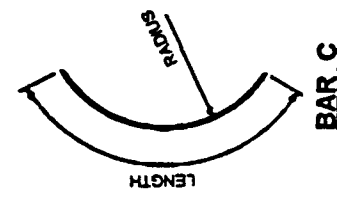
LIFTING HOLE OR LIFTING LOOP

TYPICAL

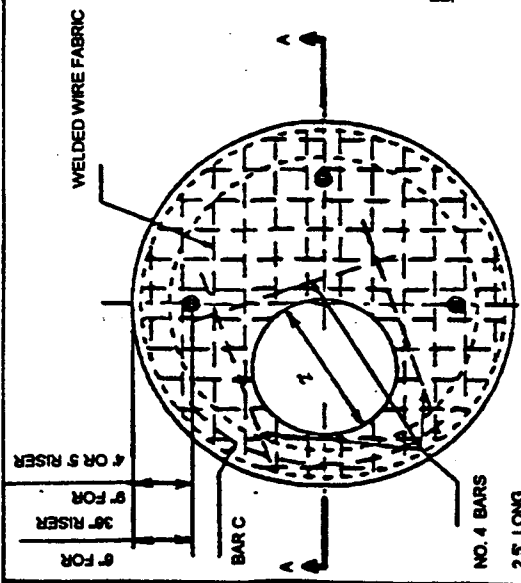
(3 REQUIRED PER SLAB)



ALTERNATE JOINT CONFIGURATION

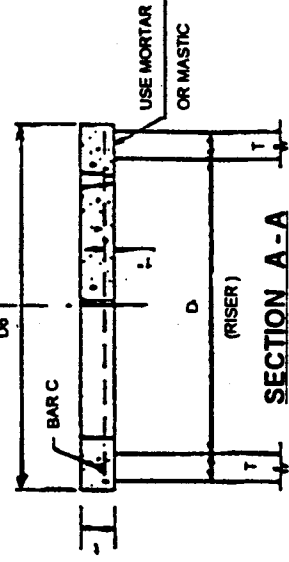


BAR C



PLAN

(WELDED WIRE FABRIC)



SECTION A-A

TABLE

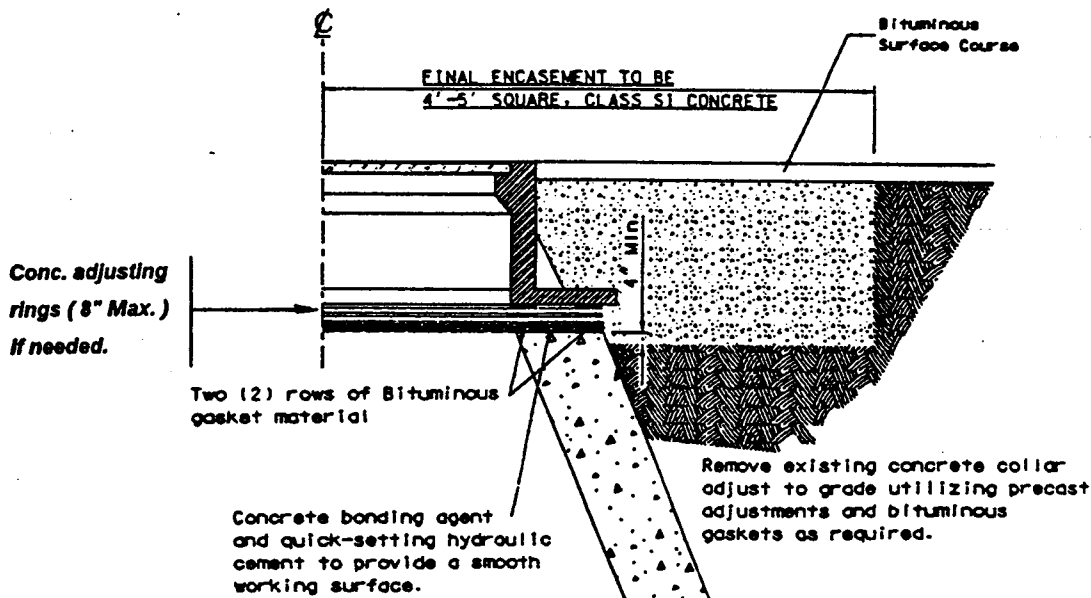
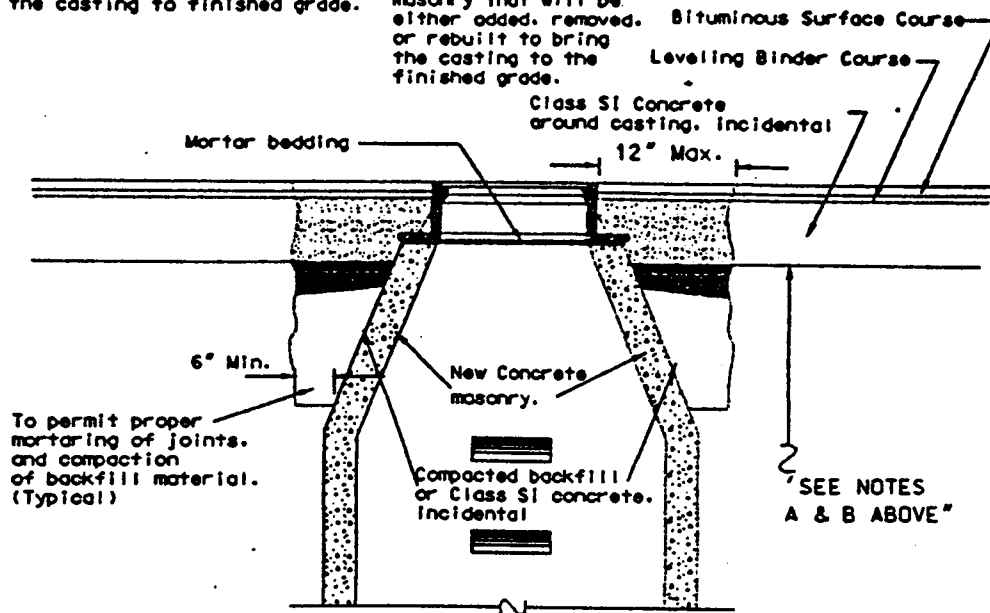
D	T	Do (min)	Reinforcement "A" W.W.F. each direction	Bar Size	No. 4	No. 4 Bar Length	No. 4 Bar Radius
36"	See IDOT Standards 1514, 1526	D + 2T	20 Sq. in. / FL	No. 4	4'-0"	19"	
4'-0"	1527, and 2349 Latest Editions	D + 2T	1.35 Sq. in. / FL	No. 4	4'-6"	26"	
5'-0"		D + 2T	1.35 Sq. in. / FL	No. 5	5'-0"	32"	

PRECAST REINFORCED CONCRETE FLAT SLAB TOP

Village of Morton Grove

**"NOTE A" - RECONSTRUCTION**  
 More than two (2) feet of conc. masonry will be either added, removed or rebuilt to bring the casting to finished grade.

**"NOTE B" - ADJUSTMENT**  
 Two (2) feet or less as approved by the Engineer, of concrete masonry that will be either added, removed, or rebuilt to bring the casting to the finished grade.



**Notes:**

1. Construction of storm sewers shall comply with the Standard Specifications for Road and Bridge Construction - Illinois Department of Transportation, the latest edition.
2. Notify the sewer superintendent 48 hours prior to any construction.

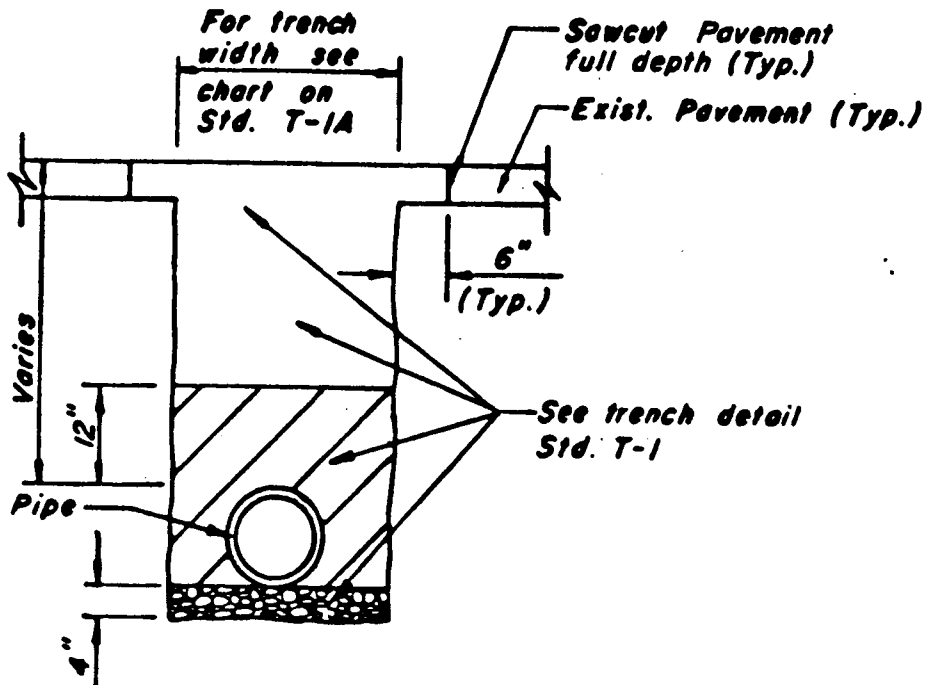
**SANITARY MANHOLE RECONST. OR ADJUSTMENT**

**Village of Morton Grove**



**SECTION 6**

**STORM SEWER**



**Storm Sewer Requirements:**

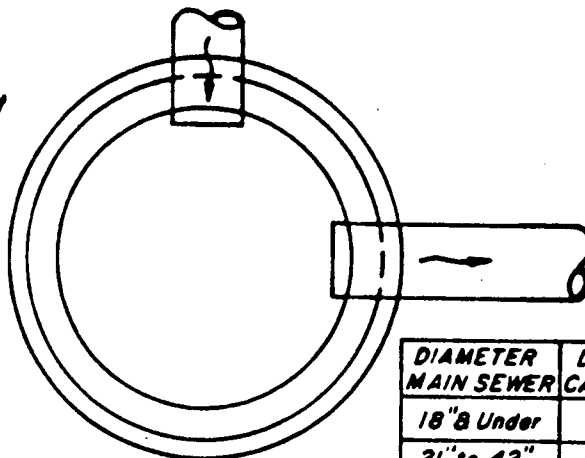
1. Depths may vary as approved by the Village Engineer.
2. Storm sewer lines must be kept separate from sanitary sewer lines.
3. Pavement is to be sawcut full-depth before removal begins.
4. All trench backfill shall comply with City Standard Drawing Numbers T-1 and T-1A.
5. Construction of storm sewers shall comply with the Standard Specifications for Road and Bridge Construction - Illinois Department of Transportation, the latest edition.
6. All storm sewers shall require a drawing and calculations signed and sealed by a Professional Engineer.
7. Notify the sewer superintendent 48 hours prior to any construction.
8. Pipe shall be non-reinforced concrete pipe, reinforced concrete pipe (RCCP), or PVC pipe SDR 26 of the type and class specified by the Standard Specifications for Road and Bridge Construction.
9. The Village does not allow combined storm and sanitary sewers for new construction.

**STORM SEWER CONSTRUCTION**

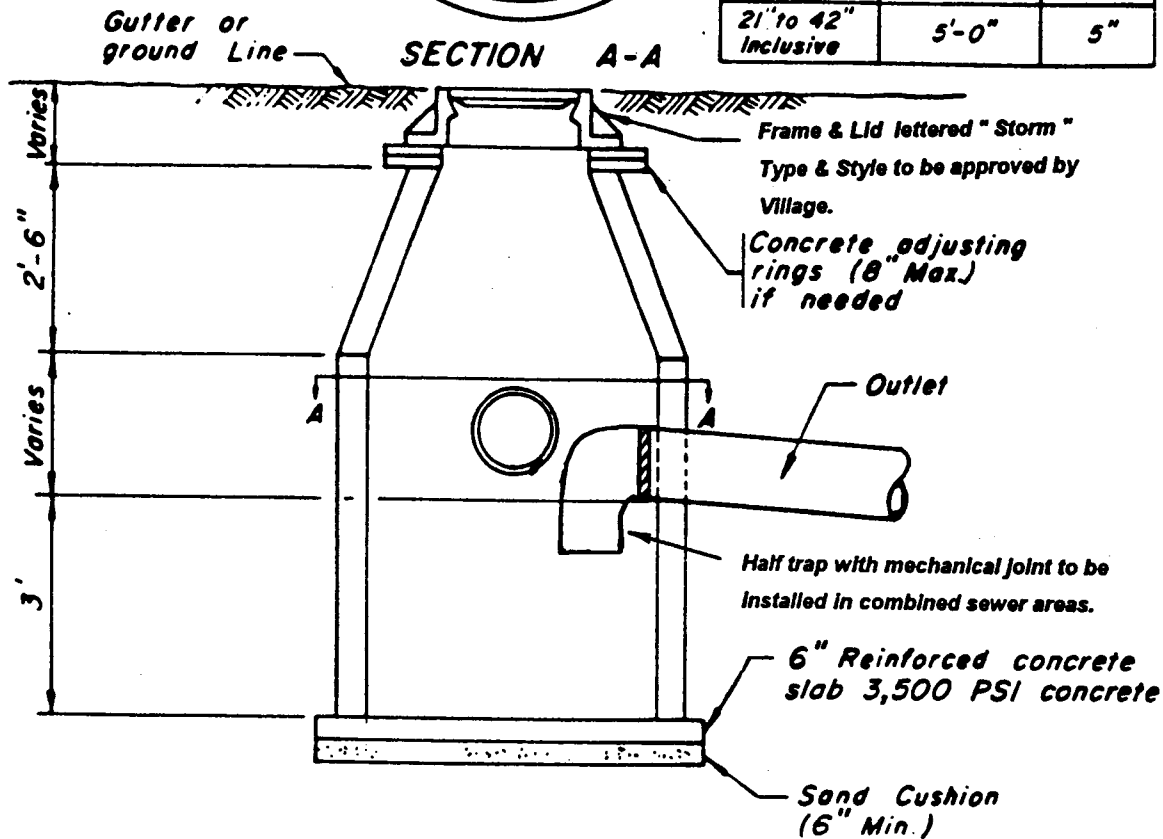
**Village of Morton Grove**



Catch basin shall be constructed with precast reinforced concrete sections



DIAMETER MAIN SEWER	DIAMETER CATCH BASIN	WALL THICK.
18" & Under	4'-0"	4"
21" to 42" Inclusive	5'-0"	5"



**Notes:**

1. Construction of storm sewers shall comply with the Standard Specifications for Road and Bridge Construction - Illinois Department of Transportation, the latest edition.
2. Notify the sewer superintendent 48 hours prior to any construction.

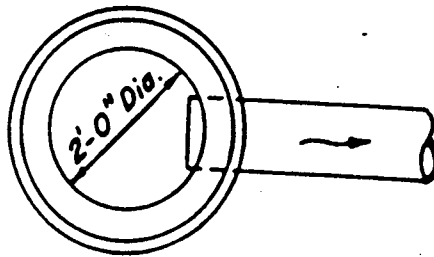
**TYPE "A" CATCH BASIN**

**Village of Morton Grove**



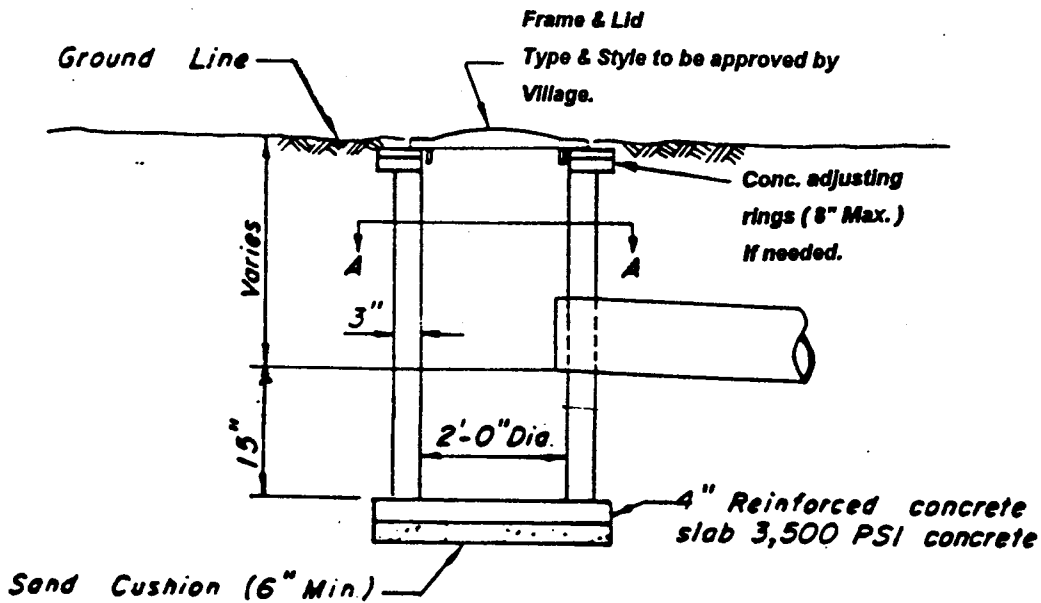
**CONSTRUCTION STANDARDS**

**STS - 2**



SECTION A-A

Catch basin shall be constructed with precast reinforced concrete sections.



Use "Type A" Catch Basin with trap instead of "Type C" Catch Basin in all combined sewer areas.

**Notes:**

1. Construction of storm sewers shall comply with the Standard Specifications for Road and Bridge Construction - Illinois Department of Transportation, the latest edition.
2. Notify the sewer superintendent 48 hours prior to any construction.

**TYPE "C" CATCH BASIN**

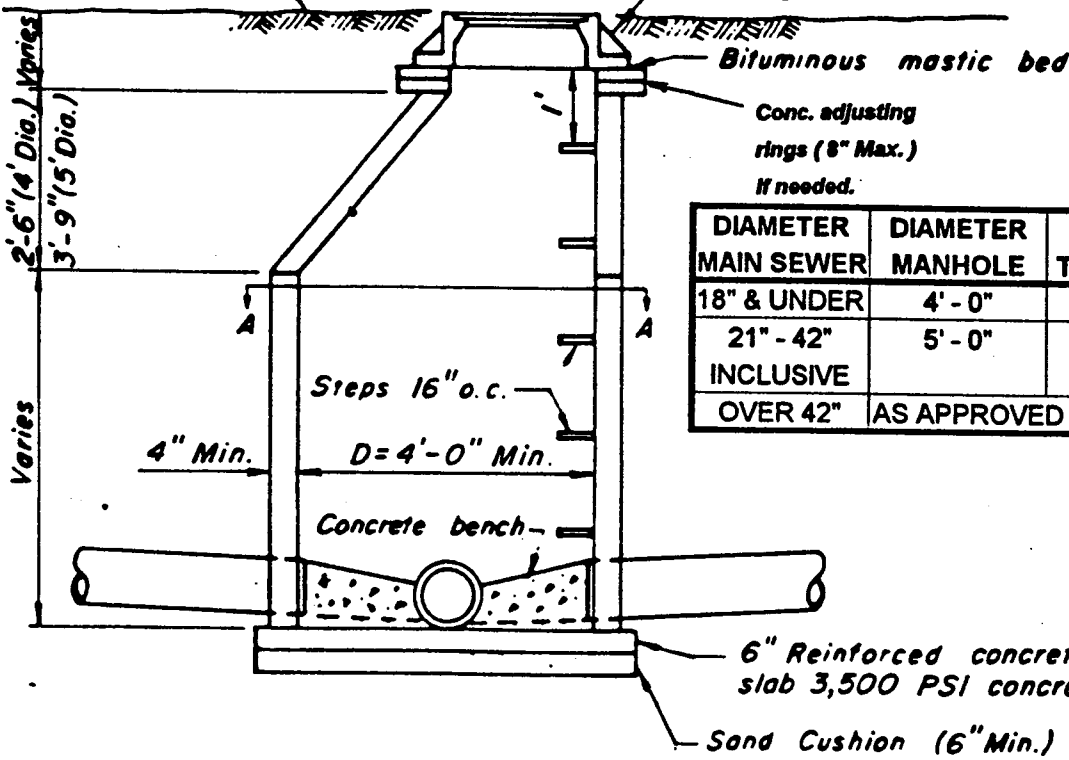
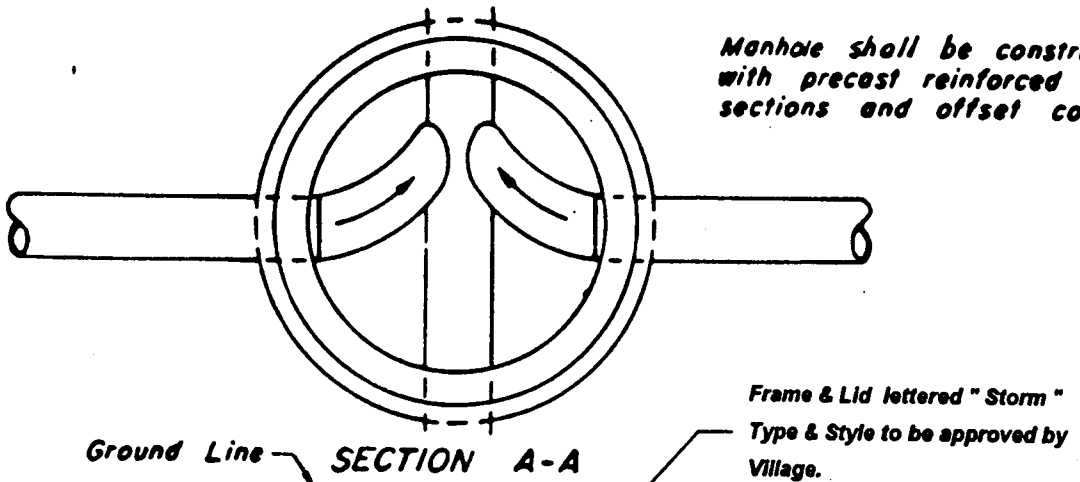
**Village of Morton Grove**

**CONSTRUCTION STANDARDS**

**STS - 3**



Manhole shall be constructed with precast reinforced concrete sections and offset cones



DIAMETER MAIN SEWER	DIAMETER MANHOLE	WALL THICKNESS
18" & UNDER	4' - 0"	4"
21" - 42" INCLUSIVE	5' - 0"	5"
OVER 42"	AS APPROVED BY VILLAGE	

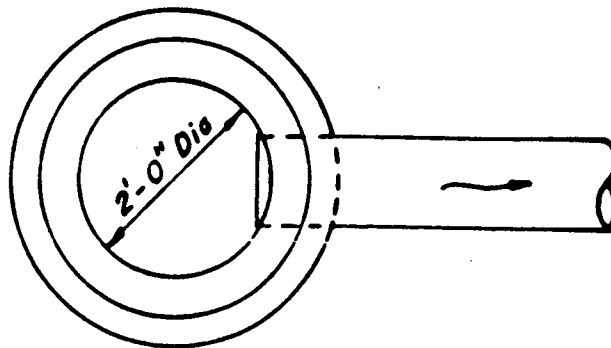
**Notes:**

1. Construction of storm sewers shall comply with the Standard Specifications for Road and Bridge Construction - Illinois Department of Transportation, the latest edition.
2. Notify the sewer superintendent 48 hours prior to any construction.

**STORM MANHOLE**

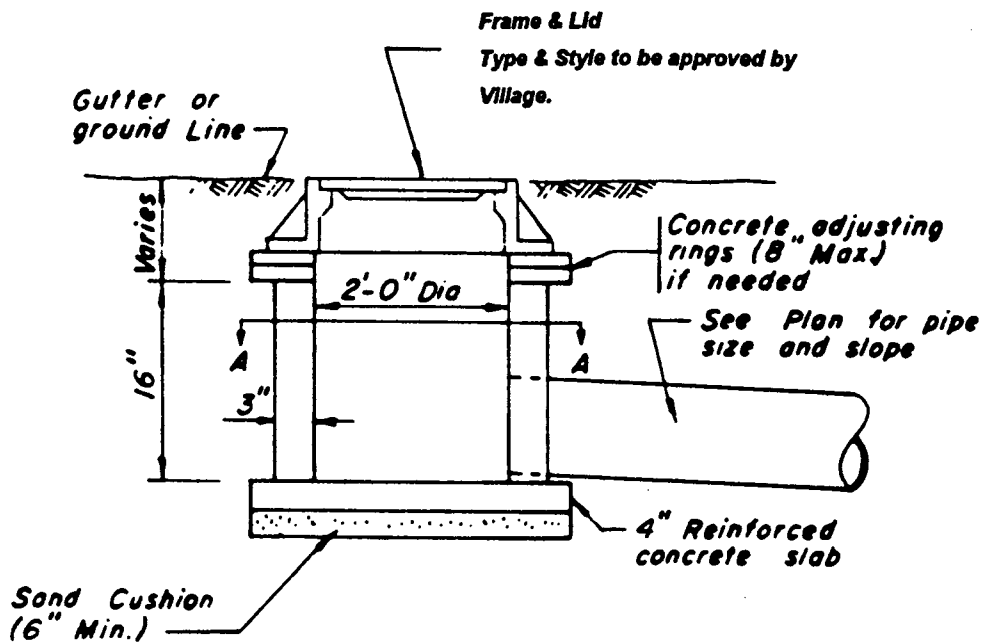
**Village of Morton Grove**





SECTION A - A

*Inlet shall be constructed with precast reinforced concrete sections.*



*Use " Type A " Catch Basin with trap instead of " Type A " Inlet in all combined sewer areas.*

**Notes:**

1. Construction of storm sewers shall comply with the Standard Specifications for Road and Bridge Construction - Illinois Department of Transportation, the latest edition.
2. Notify the sewer superintendent 48 hours prior to any construction.

**TYPE "A" INLET**

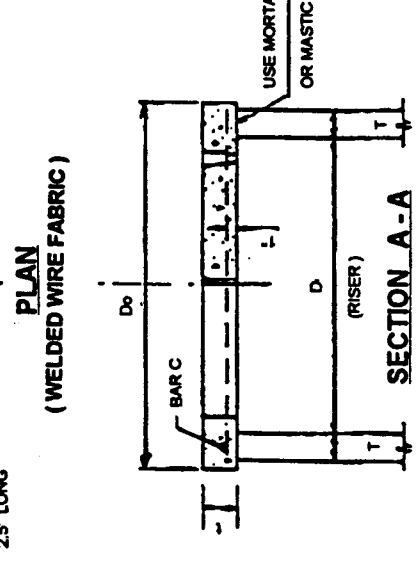
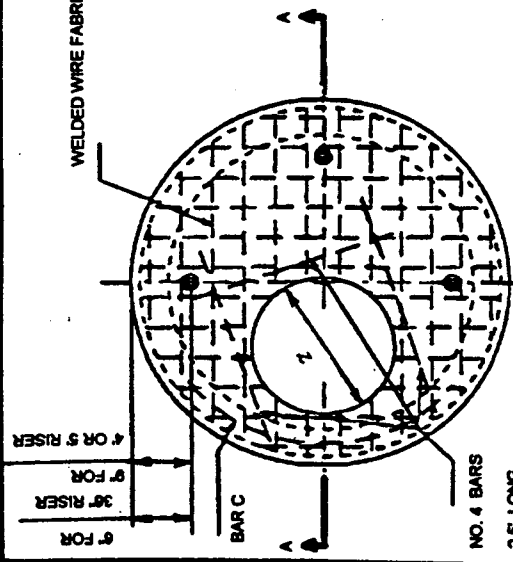
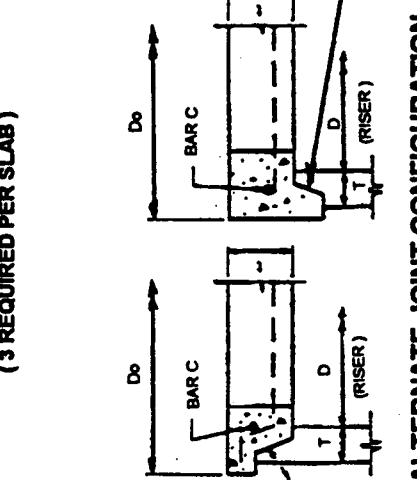
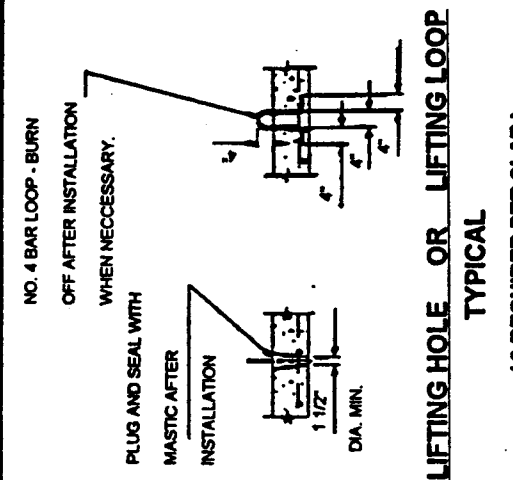
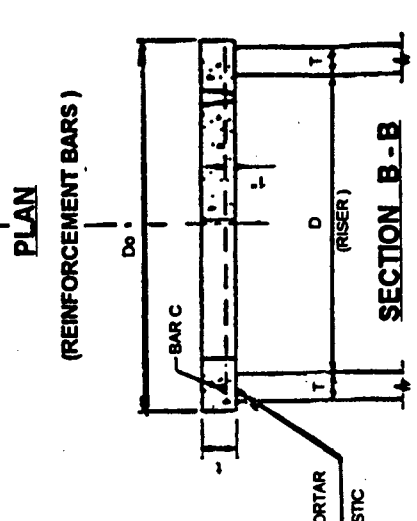
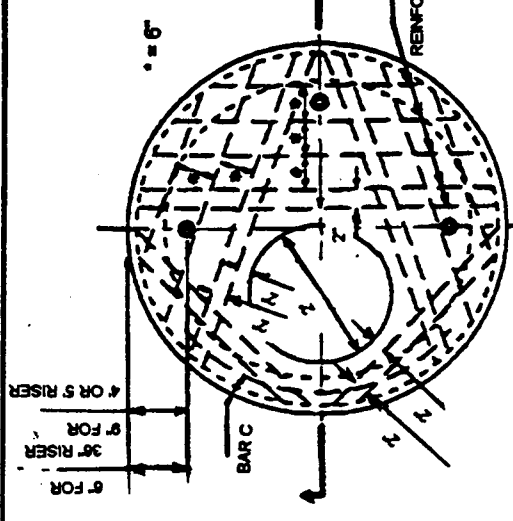
**Village of Morton Grove**

**CONSTRUCTION STANDARDS**

**STS - 5**

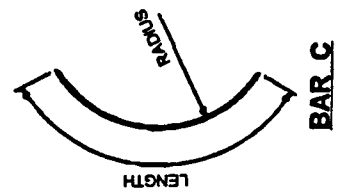






**Notes:**

Precast Flat Slab Tops shall conform to the Standard Specifications for Road and Bridge Construction (latest edition). Reinforcement Bars or Welded Wire Fabric shall be in accordance with the Standard Specifications for Road and Bridge Construction (latest edition). Joint configuration and dimensions shall match and fit the riser joint detail lifting devices other than shown may be used subject to approval by the Village. The cost of furnishing and installing the Flat Slab Top shall be included in the unit price for Catch Basins, Manholes, or Valve Vaults.

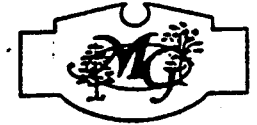


**TABLE**

D	T	Do (min)	Reinforcement		No. 4 Bar C Length	No. 4 Bar C Radius
			"A's" W.W.F. each direction	Bar Size		
36"	See IDOT Standards	D + 2T	20 Sq. in. / FL	No. 4	4'-0"	19"
4'-0"	1514, 1528 and 1527, and 2349 Latest Editions	D + 2T	1.35 Sq. in. / FL	No. 4	4'-6"	26"
5'-0"		D + 2T	1.35 Sq. in. / FL	No. 5	5'-0"	32"

**PRECAST REINFORCED CONCRETE FLAT SLAB TOP**

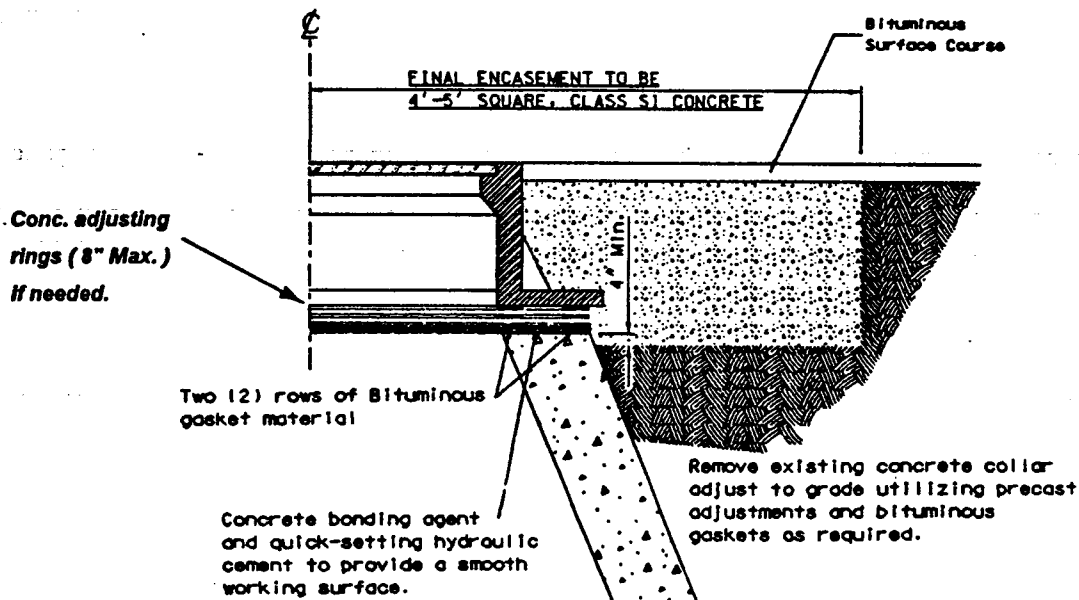
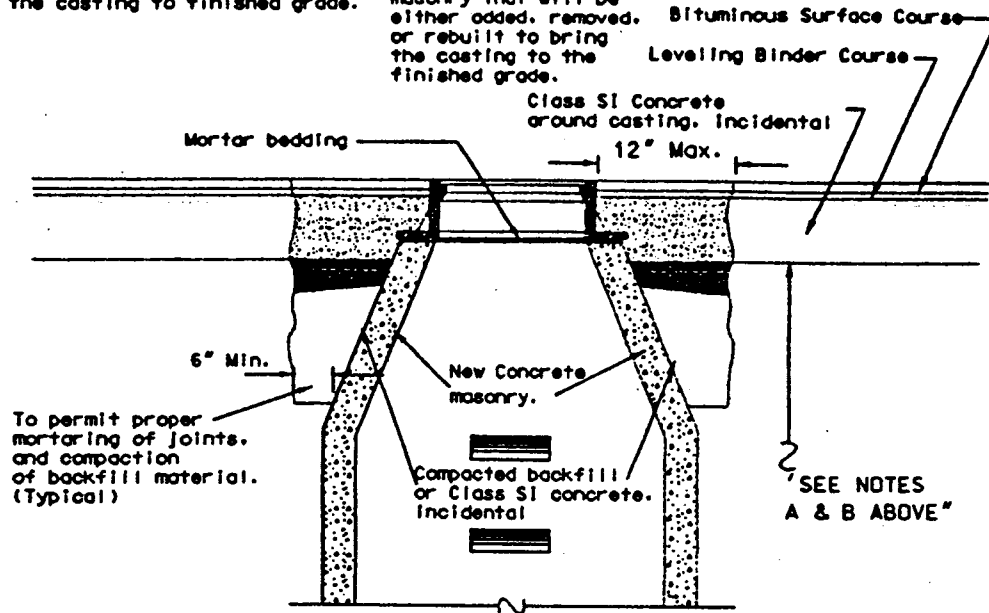
**Village of Morton Grove**



**CONSTRUCTION STANDARDS**

**"NOTE A" - RECONSTRUCTION**  
 More than two (2) feet of conc. masonry will be either added, removed or rebuilt to bring the casting to finished grade.

**"NOTE B" - ADJUSTMENT**  
 Two (2) feet or less as approved by the Engineer, of concrete masonry that will be either added, removed, or rebuilt to bring the casting to the finished grade.



**Notes:**

1. Construction of storm sewers shall comply with the Standard Specifications for Road and Bridge Construction - Illinois Department of Transportation, the latest edition.
2. Notify the sewer superintendent 48 hours prior to any construction.

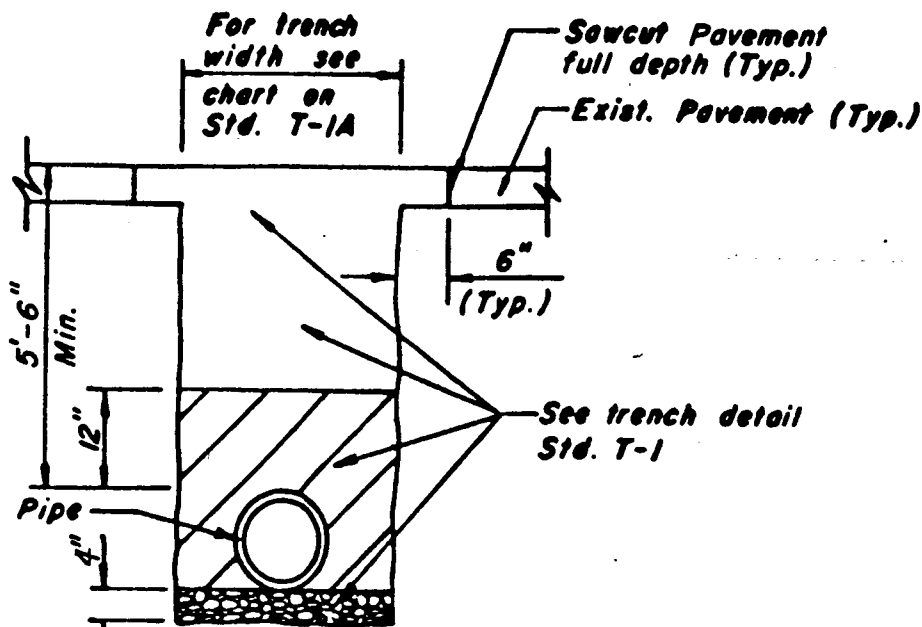
**STORM MANHOLE RECONST. OR ADJUSTMENT**

**Village of Morton Grove**



## **SECTION 7**

## **WATER**



**Water Main Requirements For New Construction:**

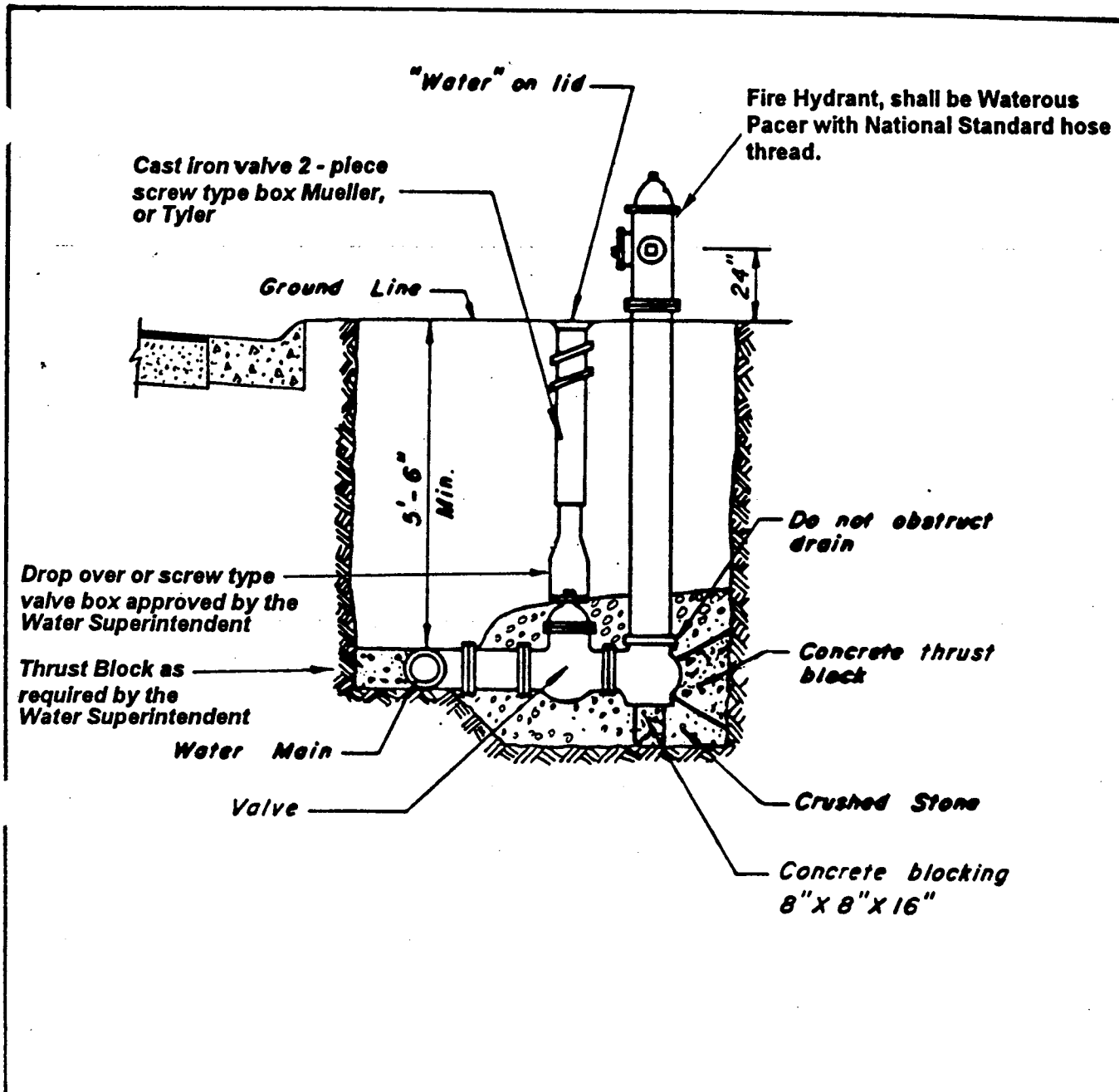
1. Minimum Depth - 5'6" to the top of pipe.
2. Ductile Iron Water Main - Shall conform with ANSI A21.51 (AWWA - C151) Minimum Size - 8" Diameter.
3. Fire Hydrant spacing shall not exceed 300 lineal feet.
4. Trench Backfill shall comply to Village Standard Drawing No. T-1.
5. All pipe joints shall be push joints with mechanical joint fittings and shall conform to ANSI A21.10 (AWWA-C110).
6. Gate valves must be installed at each branch main connection and elsewhere, as required, to allow adequate isolation of individual sections for maintenance.
7. All testing shall be done against bulkheads to prevent possible contamination of the Village water system. Tie into the Village system will be done after all testing has passed.
8. All testing shall be done in accordance with Section 41-2.12 of the Standard Specifications for Water and Sewer Main Construction in Illinois, latest edition, and shall be paid for by the contractor.
9. Pavement is to be sawcut full depth before removal begins.
10. All water main construction shall require a drawing and calculations signed and sealed by a Professional Engineer.
11. Notify the Water Superintendent 48 hours prior to commencing work.
12. All material and workmanship shall conform to the Standard Specifications for Water and Sewer Main Construction in Illinois, latest edition.
13. For Water Main tie-ins see Standard W4 and W5.

**WATER MAIN CONSTRUCTION**

**Village of Morton Grove**

**CONSTRUCTION STANDARDS**





**Notes:**

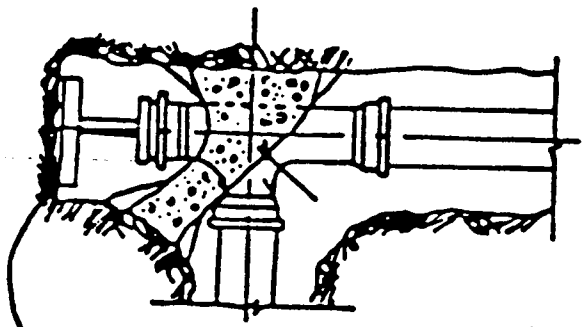
1. Fire service to private properties are to be combined with domestic service. Both fire services and domestic services must be metered separately.
2. Fire hydrant spacing shall not exceed 300 lineal feet.
3. Notify the Water Superintendent 48 hours prior to commencing work.
4. All material and workmanship shall conform to the Standard Specifications for Water and Sewer Main Construction in Illinois, latest edition.

**FIRE HYDRANT ASSEMBLY**

**Village of Morton Grove**

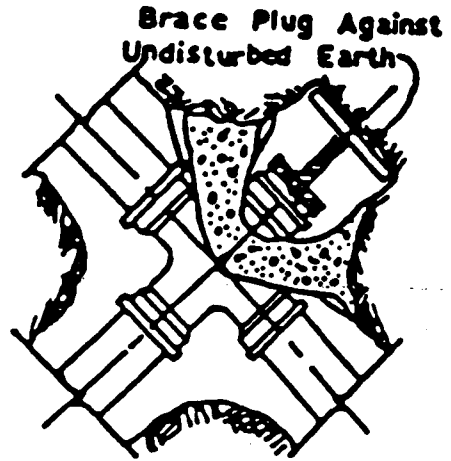
**CONSTRUCTION STANDARDS**



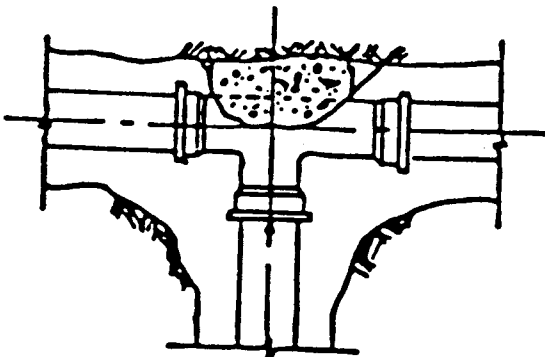


Brace Plug Against Undisturbed Earth

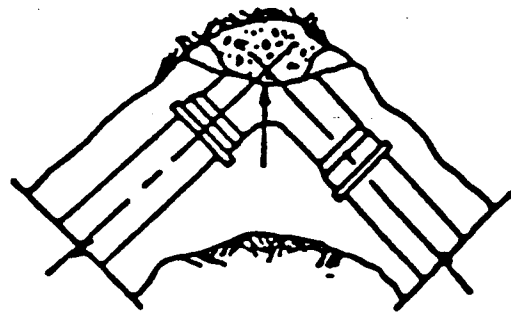
PLUGGED TEE



PLUGGED CROSS



TEE



ELBOW

11/4° BENDS OR GREATER

Notes:

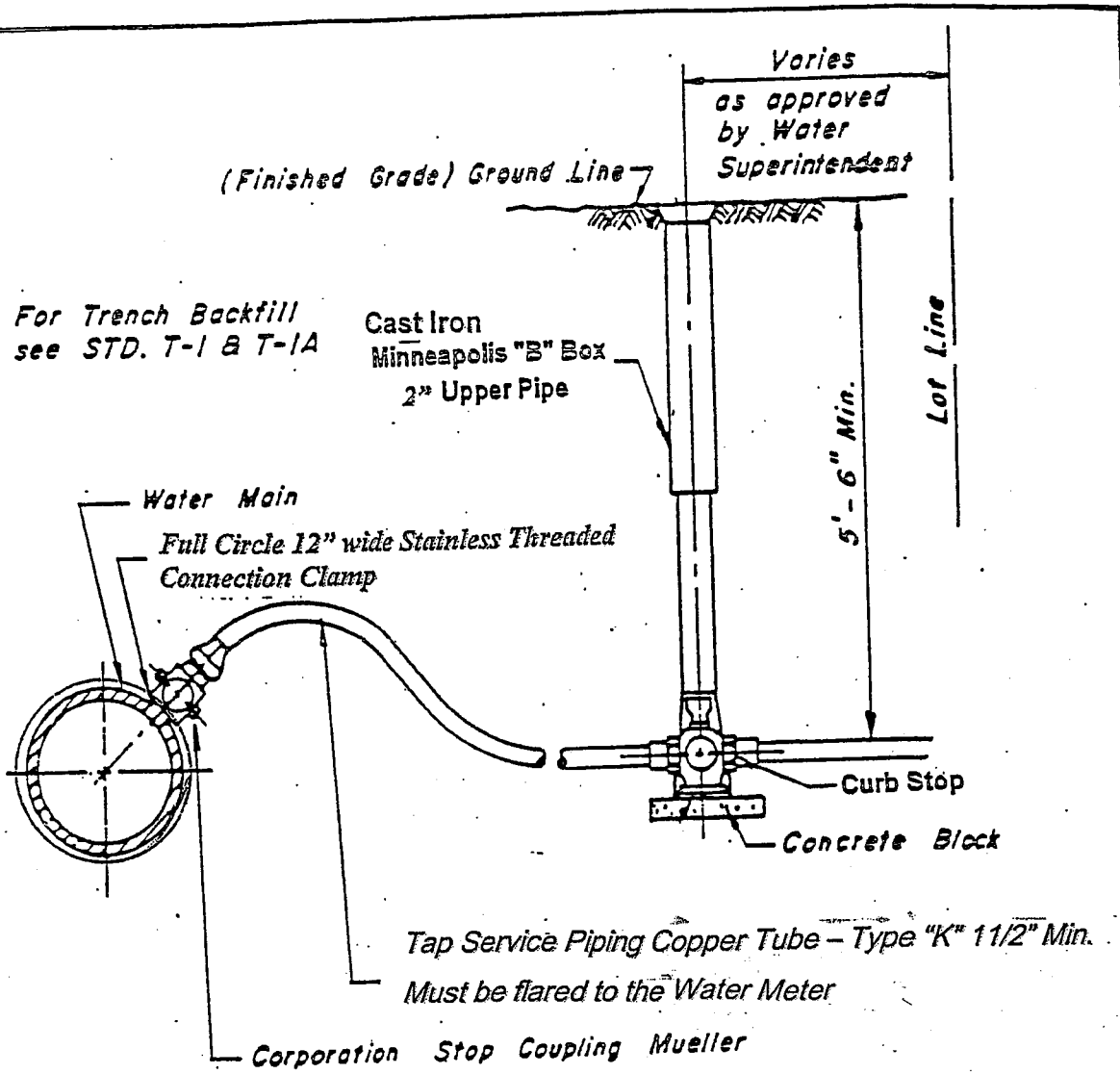
1. All blocks must bear against undisturbed earth.
2. Arrows indicate direction of thrust.
3. All thrust blocks are to be 3,000 PSI concrete.
4. Keep joints clear of concrete blocking.
5. Notify the Water Superintendent 48 hours prior to commencing work.
6. All material and workmanship shall conform to the Standard Specifications for Water and Sewer Main Construction in Illinois, latest edition.

**THRUST BLOCK INSTALLATIONS**

**Village of Morton Grove**

**CONSTRUCTION STANDARDS**





**Notes:**

1. Notify the Water Superintendent 72 hours prior to commencing work.
2. All material and workmanship shall conform to the Standard Specifications for Water and Sewer Main Construction in Illinois, latest edition.
3. All taps will be done by a qualified contractor approved by the Village and are to be inspected by the Village of Morton Grove Water Department, both during and after tapping.
4. Domestic and fire services may be common. The domestic and fire services must be metered separately.

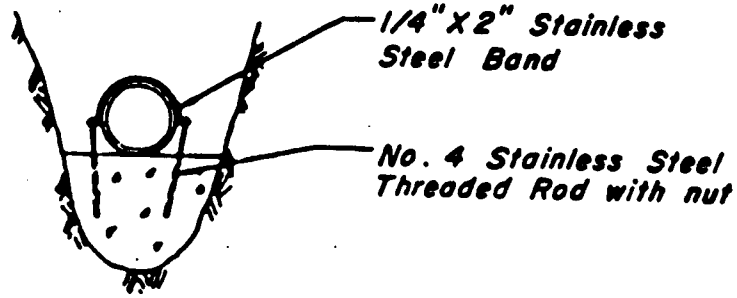
WATER SERVICE REVISED 4/12/04

Village of Morton Grove

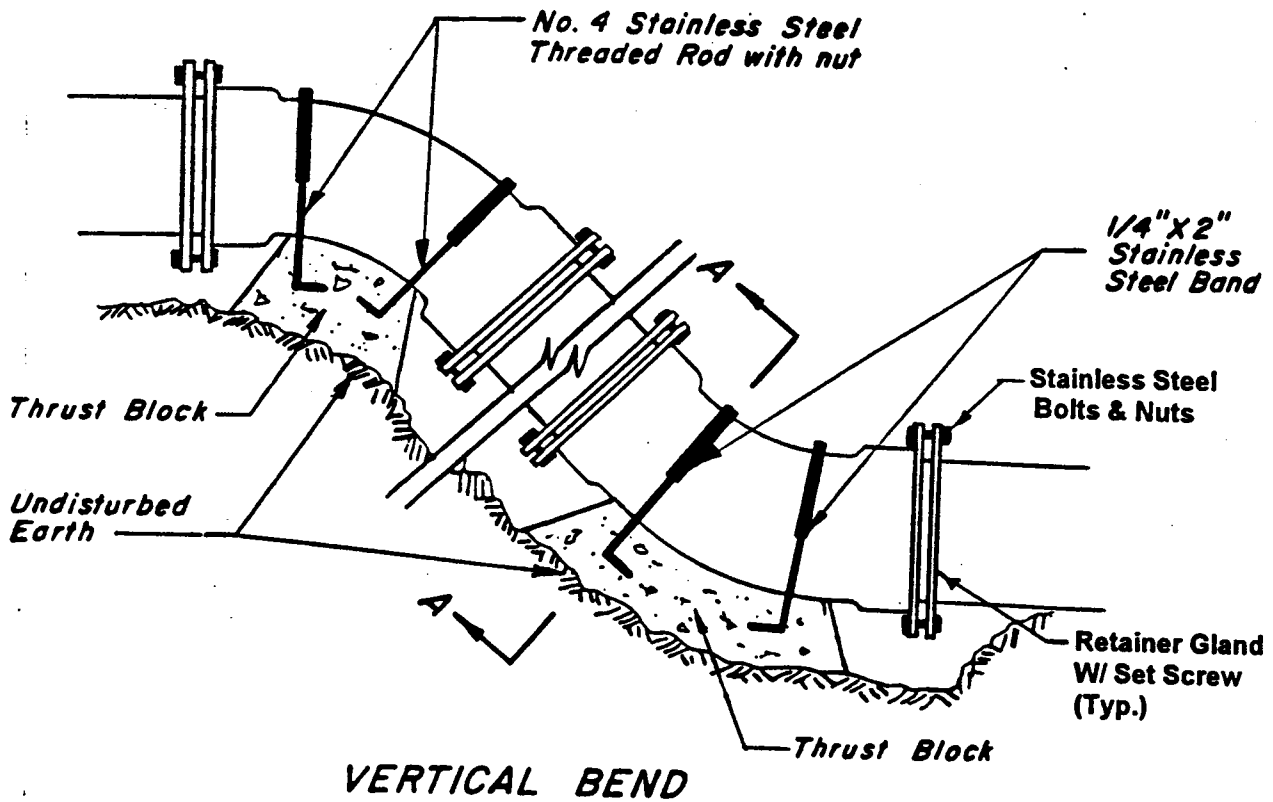
CONSTRUCTION STANDARDS

W - 4





**SECTION A-A**



**VERTICAL BEND**

**Notes:**

1. Notify the Water Superintendent 48 hours prior to commencing work.
2. All material and workmanship shall conform to the Standard Specifications for Water and Sewer Main Construction in Illinois, latest edition.

**THRUST BLOCK INSTALLATIONS**

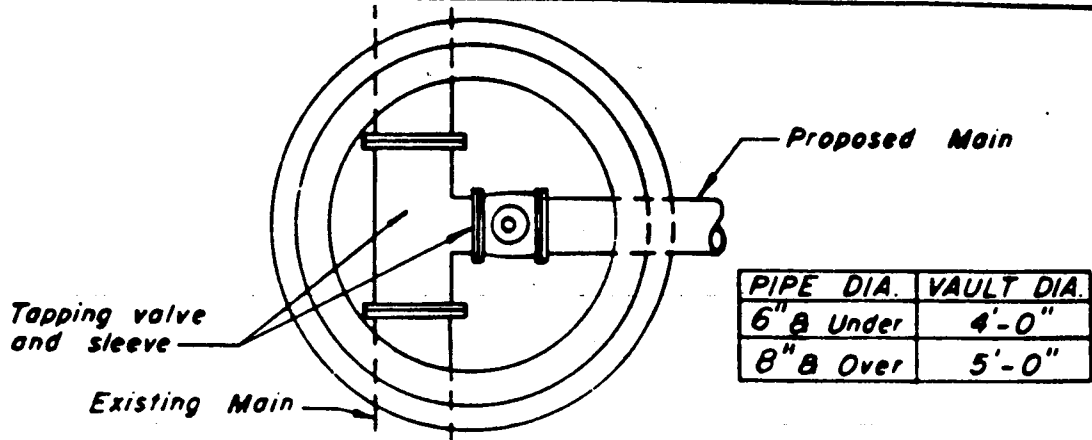
**W - 3A**

**Village of Morton Grove**

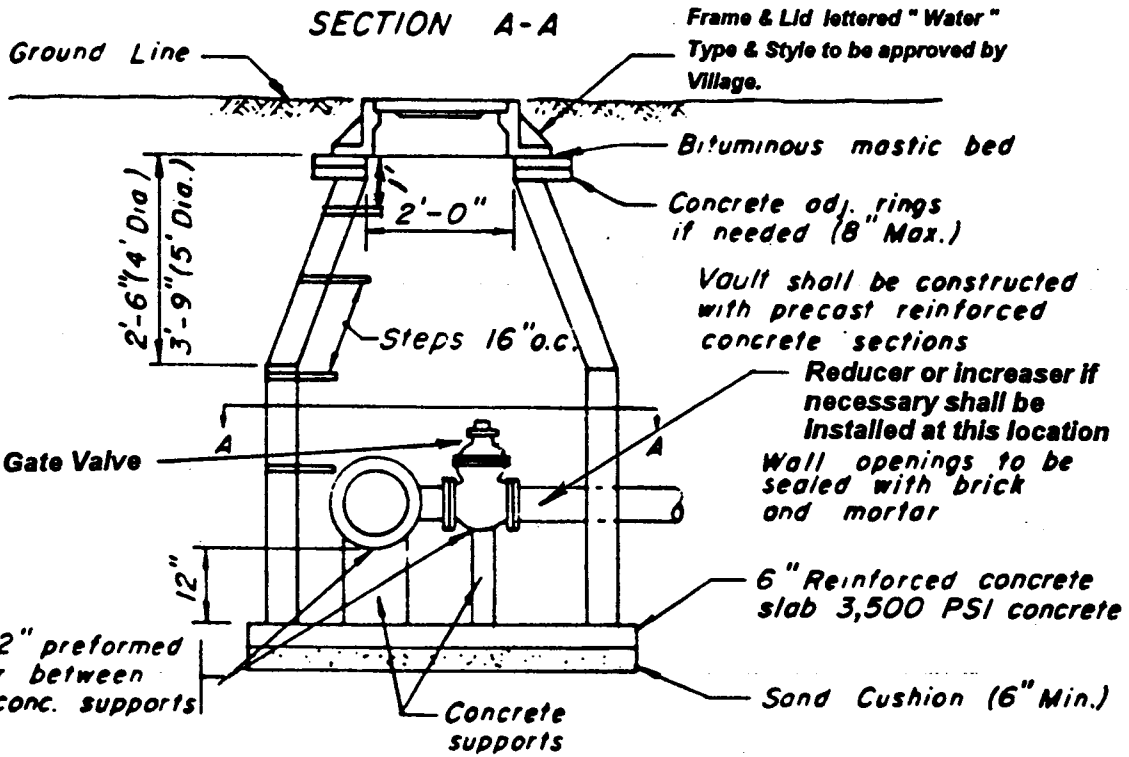
**CONSTRUCTION STANDARDS**







PIPE DIA.	VAULT DIA.
6" & Under	4'-0"
8" & Over	5'-0"



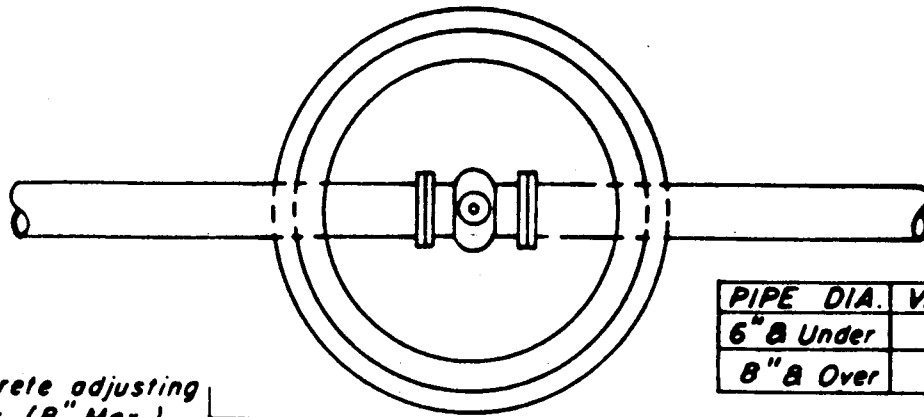
**Notes:**

1. Notify the Water Superintendent 48 hours prior to commencing work.
2. All material and workmanship shall conform to the Standard Specifications for Water and Sewer Main Construction in Illinois, latest edition.
3. All water vaults shall be water tight.
4. No other utilities besides water are allowed inside the water vault. If any utilities are found inside the water vault they shall be relocated at the contractor's expense.

**VALVE VAULT AT PRESSURE CONNECTION**

**Village of Morton Grove**





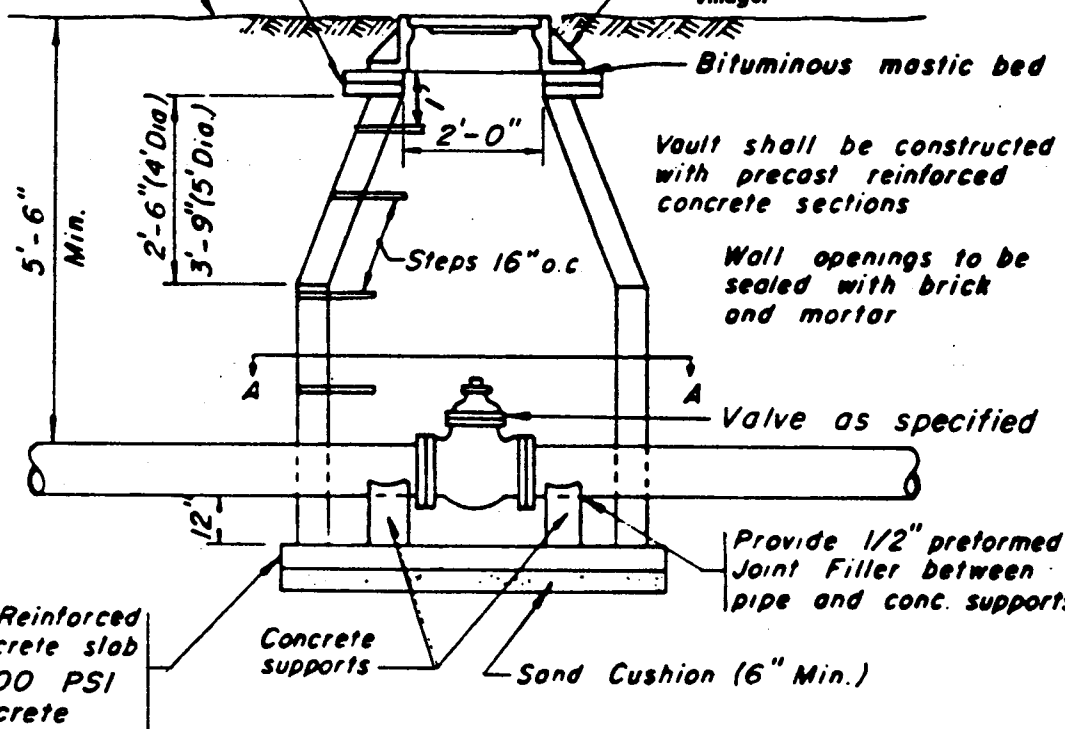
PIPE DIA.	VAULT DIA.
6" & Under	4'-0"
8" & Over	5'-0"

Concrete adjusting rings (8" Max.) if needed

**SECTION A-A**

Frame & Lid lettered "Water"  
Type & Style to be approved by Village.

Ground Line



Vault shall be constructed with precast reinforced concrete sections

Wall openings to be sealed with brick and mortar

6" Reinforced concrete slab  
3,500 PSI concrete

Concrete supports

Sand Cushion (6" Min.)

Provide 1/2" preformed Joint Filler between pipe and conc. supports

**Notes:**

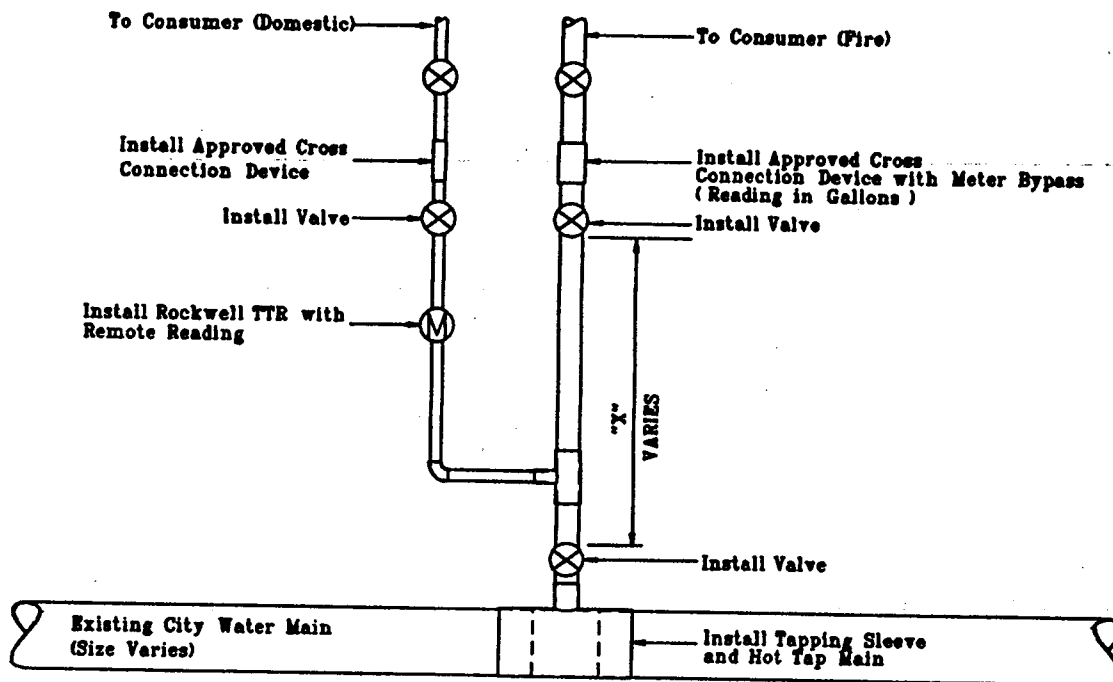
1. Notify the Water Superintendent 48 hours prior to commencing work.
2. All material and workmanship shall conform to the Standard Specifications for Water and Sewer Main Construction in Illinois, latest edition.
3. All water vaults shall be water tight.
4. No other utilities besides water are allowed inside the water vault. If any utilities are found inside the water vault they shall be relocated at the contractor's expense.

**VALVE VAULT**

**Village of Morton Grove**

**CONSTRUCTION STANDARDS**





**NOTES:**

1. X- Size of pipe being installed times 7 and rounded up to the nearest foot.
2. Notify the Water Superintendent 48 hours prior to commencing work.
3. All material and workmanship shall conform to the Standard Specifications for Water and Sewer Main Construction in Illinois, latest edition.
4. All taps will be done by a qualified contractor approved by the Village and are to be inspected by the Village of Morton Grove Water Department, both during and after tapping.
5. Domestic and fire services may be common. The domestic and fire services must be metered separately.
6. This Service Connection Detail is to be used for domestic service and fire service for all commercial property.

**COMMERCIAL SERVICE CONNECTION**

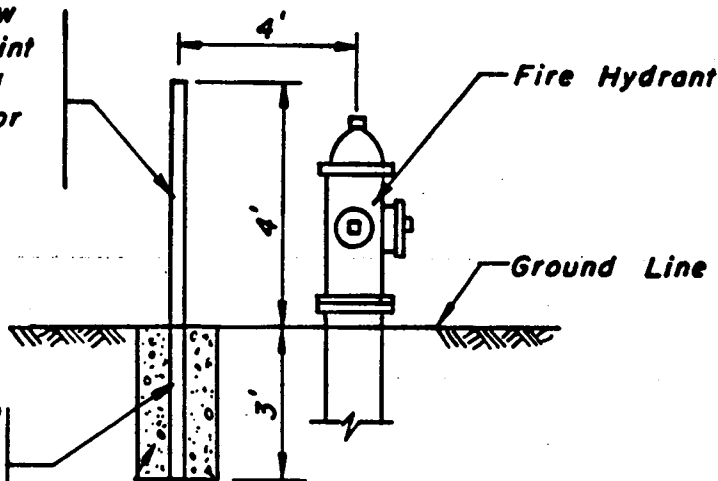
**Village of Morton Grove**



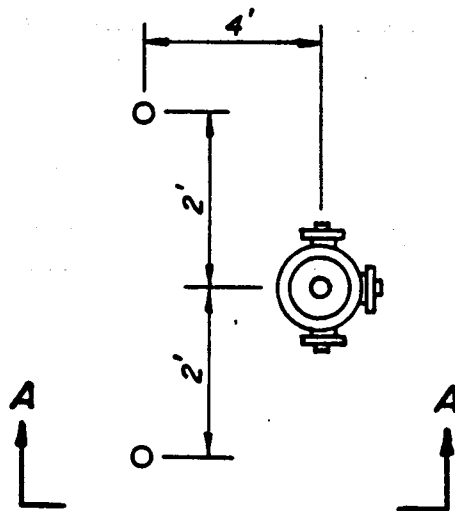
2 coats of yellow traffic signal paint (IDOT Standard Specifications for Traffic Control Items)

4" Ø Schedule 40 Steel Pipe filled with Class X Concrete

Class X Concrete Foundation 12" Ø



SECTION A-A



PLAN

1. Fire hydrants shall be Waterous Pacer with National Standard hose thread.
2. Notify the Water Superintendent 48 hours prior to commencing work.
3. All material and workmanship shall conform to the Standard Specifications for Water and Sewer Main Construction in Illinois, latest edition.
4. Fire hydrant spacing shall not exceed 300 lineal feet.

## FIRE HYDRANT PROTECTORS

Village of Morton Grove

CONSTRUCTION STANDARDS

W - 8



**SECTION 8**  
**WATER AND SEWER**  
**SEPARATION REQUIREMENTS**

**Proposed water main below existing sewer line with 18" minimum separation.**

**Notes:**

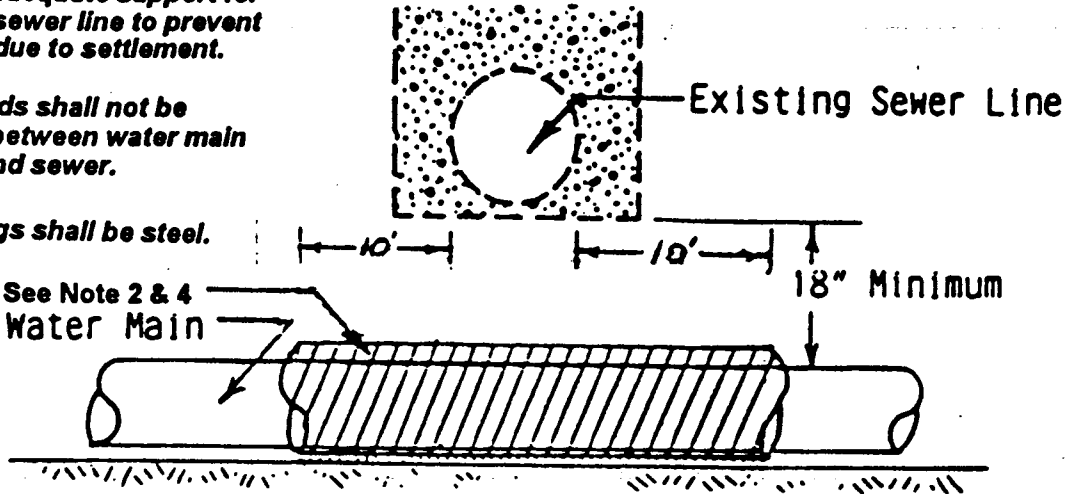
1. Construct Backfill per Village Standard T-1 & T-1A.

2. Provide adequate support for existing sewer line to prevent damage due to settlement.

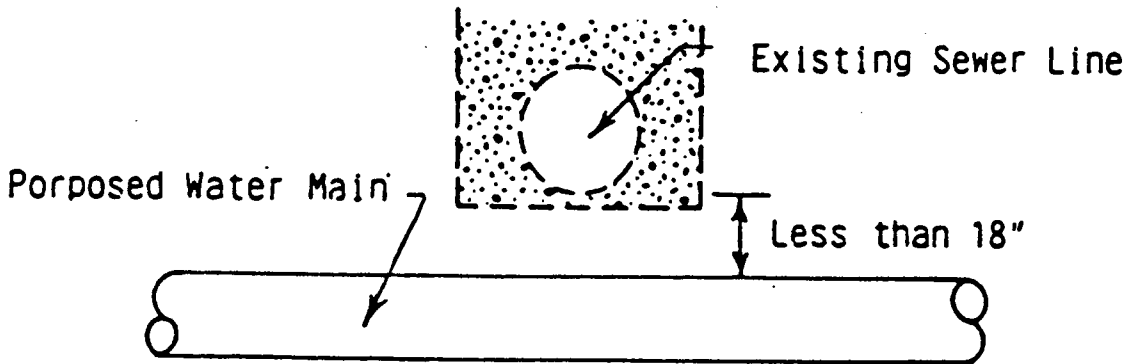
3. Point loads shall not be allowed between water main casing and sewer.

4. All casings shall be steel.

Casing: See Note 2 & 4  
Proposed Water Main



**Proposed water main below existing sewer line with less than 18" minimum separation.**



**NOT ALLOWED\***  
Must Maintain 18" Vertical Separation

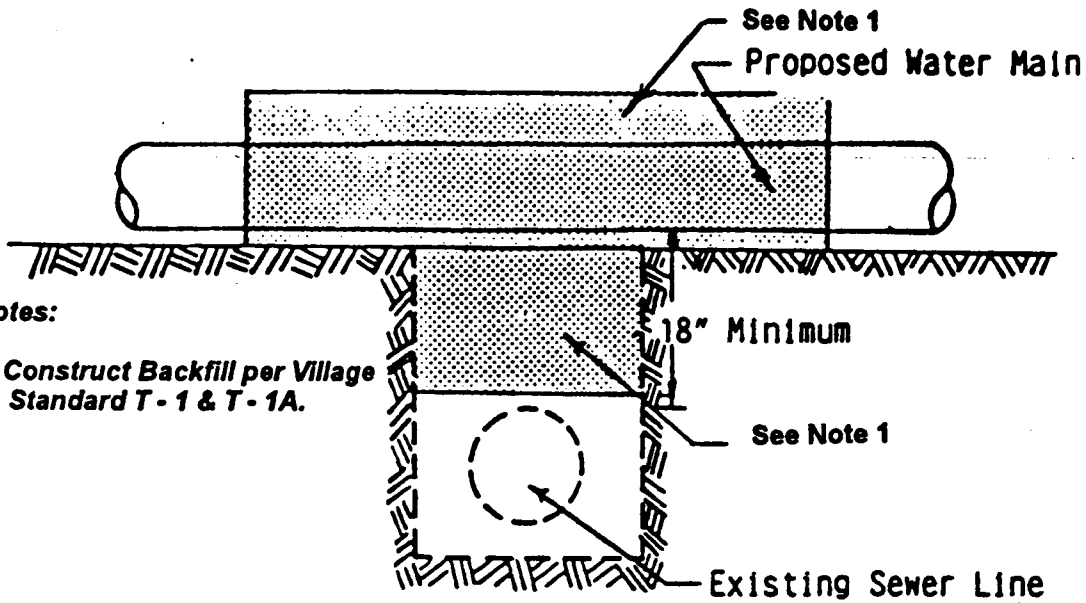
**(VERTICAL SEPARATION)**

**WATER AND SEWER SEPARATION REQUIREMENT**

**Village of Morton Grove**



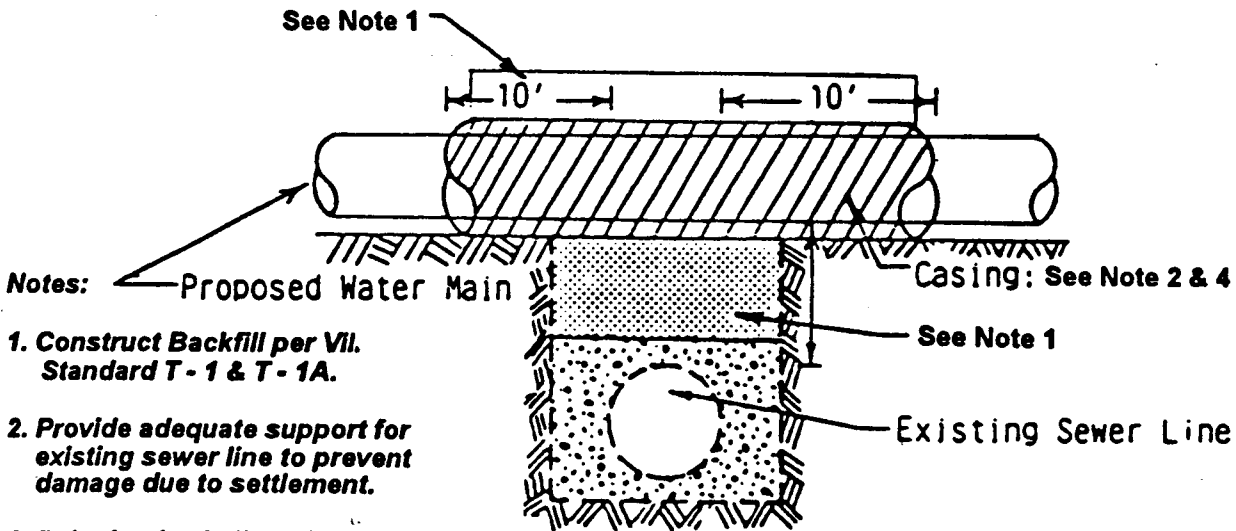
Proposed water main above existing sewer line with 18" minimum separation.



Notes:

1. Construct Backfill per Village Standard T - 1 & T - 1A.

Proposed water main above existing sewer line with less than 18" separation.



Notes:

1. Construct Backfill per VII. Standard T - 1 & T - 1A.
2. Provide adequate support for existing sewer line to prevent damage due to settlement.
3. Point loads shall not be allowed between water main casing and sewer.
4. All casings shall be steel.

(VERTICAL SEPARATION)

**WATER AND SEWER SEPARATION REQUIREMENT**

**Village of Morton Grove**

CONSTRUCTION STANDARDS

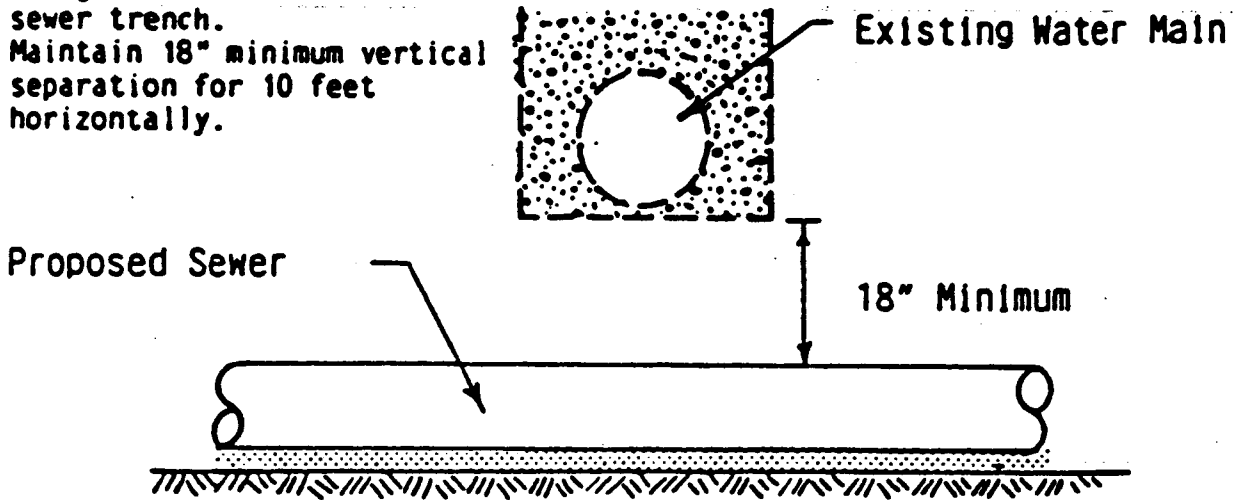
SEP - 2



**Proposed sewer line below existing water main with 18" minimum separation.**

**Notes:**

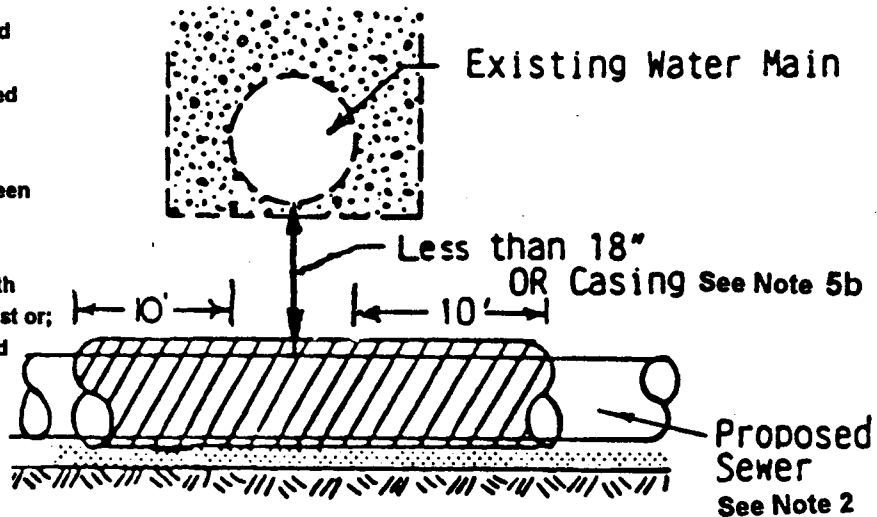
1. Provide adequate support for Existing Water Main to prevent damage due to settlement of sewer trench.
2. Maintain 18" minimum vertical separation for 10 feet horizontally.



**Proposed sewer line below existing water main with less than 18" separation.**

**Notes:**

1. Construct Backfill per Village Standard T - 1 & T - 1A.
2. Provide adequate support for proposed water main to prevent damage due to settlement.
3. Point loads shall not be allowed between water main casing and sewer.
4. All casings shall be steel.
- 5 a. Construct 20' of proposed sewer with water main material and pressure test or;
- b. Use 20' of steel casing for proposed sewer and seal ends of casing.



**(VERTICAL SEPARATION)**

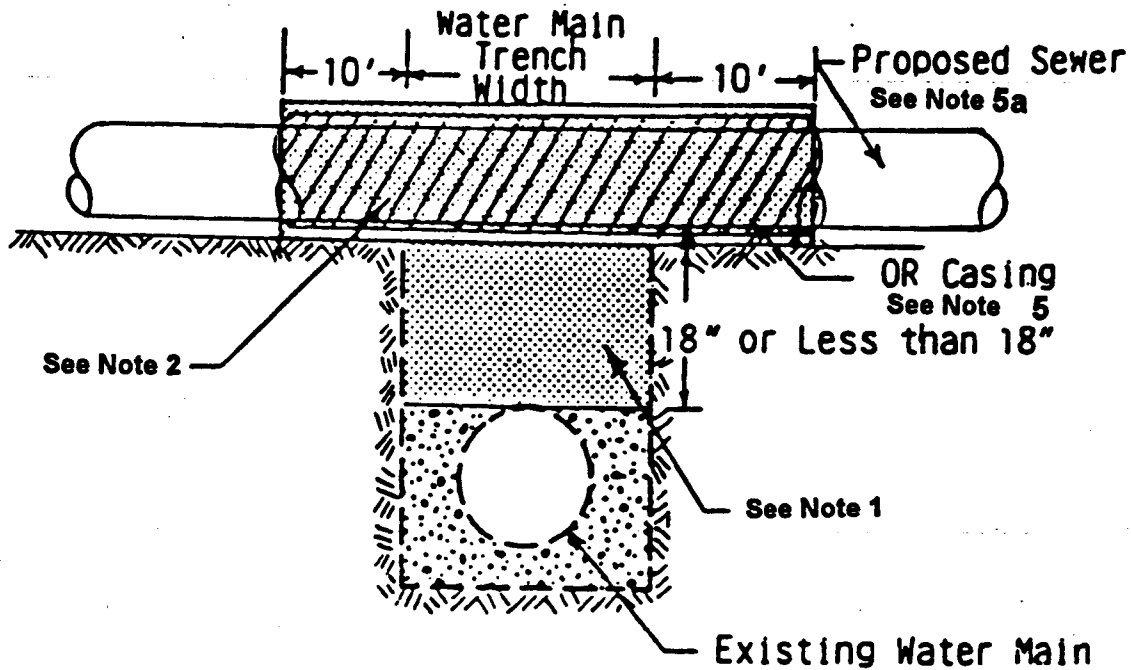
**WATER AND SEWER SEPARATION REQUIREMENT**

**Village of Morton Grove**





Existing water main below proposed sewer line with 18" minimum separation.  
Existing water main below proposed sewer line with less than the 18" minimum separation.



**Notes:**

1. Construct Backfill per Village Standard T - 1 & T - 1A.
2. Provide adequate support for existing water main to prevent damage due to settlement.
3. Point loads shall not be allowed between water main casing and sewer.
4. All casings shall be steel.
- 5 a. Construct 20' of proposed sewer with water main material and pressure test or;  
b. Use 20' of steel casing for proposed sewer and seal ends of casing.

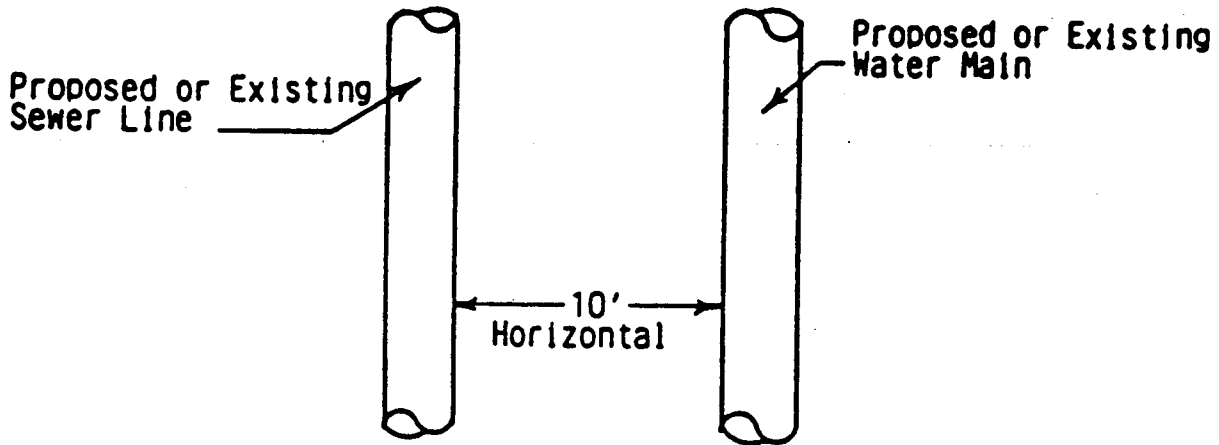
**(VERTICAL SEPARATION)**

**WATER AND SEWER SEPARATION REQUIREMENT**

**Village of Morton Grove**

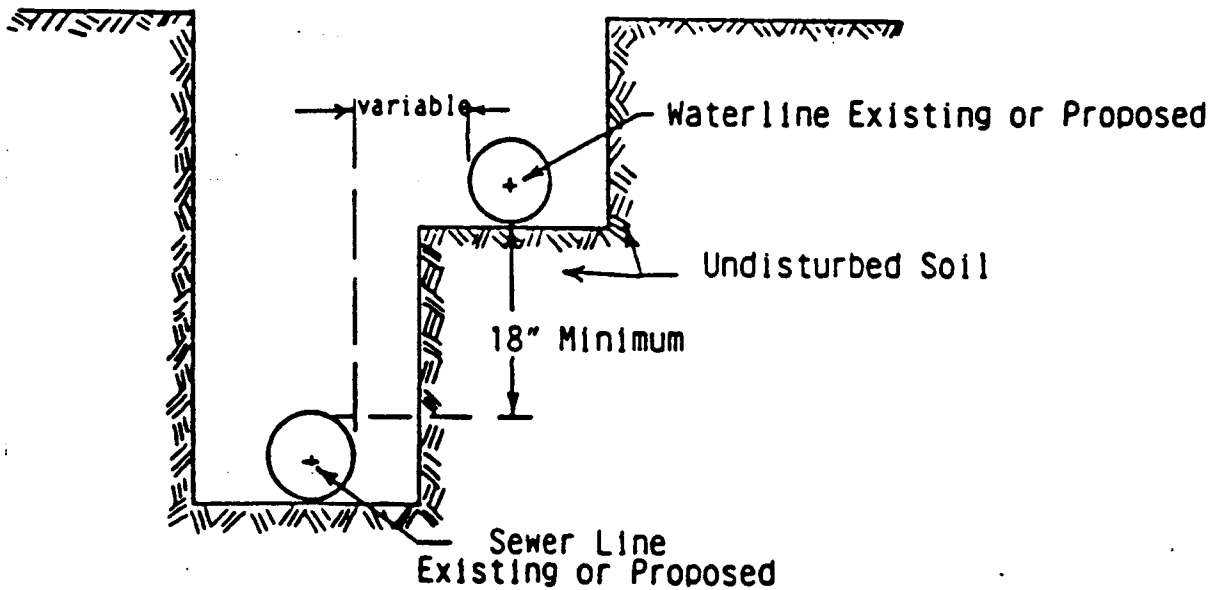


Proposed sewer (or water) is located 10 feet or more from existing water (or sewer).



PLAN VIEW

Proposed sewer (or water) is located less than 10 feet from existing water (or sewer).



(HORIZONTAL SEPARATION)

## WATER AND SEWER SEPARATION REQUIREMENTS

Village of Morton Grove

CONSTRUCTION STANDARDS

SEP - 5

