GENERAL NOTES:

1. REFERENCED SPECIFICATIONS
ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE APPLICABLE SECTIONS OF THE FOLLOWING EXCEPT AS MODIFIED HEREIN OR ON THE PLANS:
   - STANDARD SPECIFICATIONS FOR SEWER AND WATER MAIN CONSTRUCTION IN ILLINOIS, 8TH EDITION (STANDARD SPECIFICATIONS), FOR INSTALLATION OF SEWERS.
   - STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION ADOPTED JANUARY 1, 2022 BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION (IDOT STANDARD SPECIFICATIONS) RIGHT OF WAYS.
   - CITY OF ELGIN ORDINANCES, REQUIREMENTS AND STANDARD DETAIL SHALL GOVERN IN THE EVENT OF CONFLICTING SPECIFICATIONS.
   - STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL PUBLISHED BY ILLINOIS ENVIRONMENTAL PROTECTION AGENCY.
   - ILLINOIS URBAN MANUAL FOR SOIL EROSION CONTROL PRACTICES

2. NOTIFICATION
IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE FOLLOWING:
   - CITY OF ELGIN 48 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
   - THE ELECTRIC, COMMUNICATIONS AND GAS UTILITIES PRIOR TO COMMENCEMENT OF CONSTRUCTION.

3. PERMITS
OWNER SHALL SECURE PERMITS AS FOLLOWS AND COMPLY WITH ALL REQUIREMENTS OF THE PERMITS:
   - CITY OF ELGIN

4. QUANTITIES
THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL QUANTITIES AS INDICATED ON THE PLANS. THE QUANTITIES WHICH ARE INDICATED ARE FOR BIDDING PURPOSES ONLY AND MUST BE VERIFIED. ANY DISCREPANCIES ARE TO BE REPORTED TO THE DESIGN ENGINEER.

5. EXAMINATION OF THE SITE
THE CONTRACTOR IS RESPONSIBLE FOR EXAMINING ALL SITE CONDITIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION AND IS TO COMPARE THE SITE CONDITIONS AS INDICATED ON THE ENGINEERING PLANS.

6. INDEMNIFICATION
THE CONTRACTOR(S) SHALL INDEMNIFY THE ENGINEER AND THEIR AGENTS, CITY OF ELGIN AND THEIR AGENTS FROM ALL LIABILITY INVOLVED WITH THE CONSTRUCTION, INSTALLATION AND TESTING OF THIS WORK ON THIS PROJECT.

7. LOCATION OF EXISTING UNDERGROUND UTILITIES
THE LOCATION OF VARIOUS EXISTING UNDERGROUND UTILITIES WHICH ARE SHOWN ON THE PLANS ARE FOR INFORMATION ONLY AND REPRESENT THE BEST KNOWLEDGE OF THE ENGINEER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THEIR LOCATIONS AND ELEVATIONS PRIOR TO THE CONSTRUCTION OPERATIONS.

8. DAMAGE TO PROPERTY
ANY EXISTING PAVEMENT, SIDEWALK, DRIVEWAYS, ETC., DAMAGED BY THE CONTRACTOR'S OPERATIONS AND NOT CALLED FOR IN THE CONTRACT TO BE REMOVED SHALL BE REPLACED AT THE EXPENSE OF THE CONTRACTOR.

9. CONTRACTOR TO VERIFY ELEVATIONS
THE CONTRACTOR SHALL VERIFY ALL ELEVATIONS PRIOR TO THE START OF WORK AND, IF THERE ARE ANY DISCREPANCIES, IS TO NOTIFY THE ENGINEER AT ONCE. NO WORK SHALL BE DONE UNTIL THE DISCREPANCY IS RESOLVED.

10. EROSION AND SEDIMENTATION CONTROL
THE CONTRACTOR SHALL PROVIDE CONTROL FACILITIES SHOWN ON THE PLANS TO CONTROL EROSION AND SEDIMENTATION. ADDITIONAL MEASURES MUST BE UNDERTAKEN AS REQUIRED TO ACCOMMODATE SPECIAL CONDITIONS THAT ARISE DURING THE INSTALLATION OF THE FACILITIES. THE CONTRACTOR SHALL ALSO PROVIDE SUCH EROSION AND SEDIMENTATION CONTROL AS IS NECESSARY TO MEET THE REQUIREMENTS OF THE REFERENCED SPECIFICATIONS.

12. WATER MAIN

a) PIPE MATERIALS FOR WATER MAIN SERVICE SHALL BE COPPER TY-K AND A MINIMUM WORKING PRESSURE OF 150 PSI.

MINIMUM COVER SHALL BE 5.5' AND MAXIMUM COVER 8.0'.

b) FIRE HYDRANTS, VALVES AND SERVICES SHALL BE INSTALLED ACCORDING TO STANDARD SPECIFICATIONS AND CURRENT CITY OF ELGIN STANDARDS AND DETAILS.

c) VALVES AND VALVE VAULTS SHALL BE IN ACCORDANCE WITH DETAILS SHOWN ON THE PLANS AND THE REQUIREMENTS OF THE CITY OF ELGIN.

d) TESTING AND CHLORINATION – ALL PIPE SHALL BE SUBJECTED TO PRESSURE AND LEAKAGE TESTING IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS AND THE REFERENCED SECTIONS OF THE AWWA STANDARDS. THE PRESSURE TEST PERIOD SHALL BE 2 HOURS AT 125 PSI, INCLUDING THE SERVICE LINE UP TO THE SERVICE VALVE.

e) BACKFILL MATERIAL AND COMPACTION – SEE DETAIL SHEET 9 TYPICAL TRENCH CROSS SECTION.

f) AN 8' – 4" X 4" POST WITH 30" MIN. EXPOSED TO BE PLACED NEXT TO B-BOX AT TIME OF INSTALLATION, AND PAINTED BLUE. PIGTAIL ENDS TO BE MARKED IN A SIMILAR MANNER.

g) CASING PIPE: THE CASING PIPE SHALL BE PVCO PIPE OF A PIPE MATERIAL CONFORMING TO AWWA C909.

13. RIGHTS OF THE CITY OF ELGIN
THE CITY OF ELGIN WATER AND SEWER DEPARTMENT SHALL HAVE THE AUTHORITY TO INSPECT, APPROVE, AND REJECT THE CONSTRUCTION IMPROVEMENTS.

THE PROPOSED IMPROVEMENTS MUST BE CONSTRUCTED IN ACCORDANCE WITH THE ENGINEERING PLANS AS APPROVED BY THE CITY OF ELGIN. THE CONSTRUCTION DETAILS, AS PRESENTED ON THE PLANS, MUST BE FOLLOWED BY THE CONTRACTORS. PROPER CONSTRUCTION TECHNIQUES MUST BE FOLLOWED ON THOSE IMPROVEMENTS INDICATED ON THE ENGINEERING PLAN.

14. AS-BUILT DRAWINGS
THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE ENGINEER WITH AS-BUILT CONDITIONS OF THE IMPROVEMENTS. ANY CHANGES TO THE PLANS OR ADDITIONAL ITEMS MUST BE REPORTED TO THE ENGINEER AS WORK PROGRESSES.

THE CITY OF ELGIN MUST BE FURNISHED A COMPLETE SET OF CONSTRUCTION RECORD DRAWINGS OF THE SANITARY SEWERS AND WATER MAIN CONSTRUCTED FOR A PROJECT WITHIN 60 DAYS OF COMPLETION OF THE SANITARY SEWERS AND WATER MAINS. SANITARY SERVICES AND B-BOX LOCATIONS SHALL ALSO BE PROVIDED ON THE AS-BUILT DRAWINGS.

ALL STORMWATER FACILITIES SHALL BE INCLUDED IN THE AS-BUILT DRAWINGS

A SET OF AS-BUILT DRAWINGS SHALL ALSO BE FURNISHED TO THE CITY OF ELGIN.

15. CITY OF ELGIN NOTIFICATION
THE SANITARY SEWER AND WATER MAIN IMPROVEMENT ARE TO BE CONNECTED TO THE CITY OF ELGIN EXISTING SYSTEMS. THE CONTRACTOR SHALL NOTIFY THE CITY OF ELGIN ENGINEERING DEPARTMENT 48 HOURS PRIOR TO PERFORMING ANY WORK RELATED TO THE CONNECTION TO THE EXISTING SYSTEMS AND CONFORM TO ANY AND ALL ELGIN STANDARDS AND REQUIREMENTS.

16. NO REPAIR SLEEVES ARE ALLOWED ON NEW CONSTRUCTION OF UNDERGROUND UTILITIES.

17. SELECTED GRANULAR BACKFILL MATERIAL SHALL BE APPROVED BY THE ENGINEER. REFER TO CITY STANDARD DETAIL.

18. ALL FIELD TILES TO BE CONNECTED TO STORM SEWER SYSTEM WHEN FOUND. INCLUDING TILES THAT ARE NOT SHOWN ON THE PLANS

19. DUST CONTROL WATERING TO BE PROVIDED AS DIRECTED BY THE CITY OF ELGIN. A WATER TRUCK MUST BE AVAILABLE WITHIN 2 HOURS NOTICE.

BENCHMARKS:

SITE BENCHMARK 1:

EXISTING RIM ELEVATION OF EXISTING SANITARY MANHOLE

ELEVATION: 732.72 (NAVD 88)

SITE BENCHMARK 2:

TOP OF HYDRANT ON CEDAR AVENUE

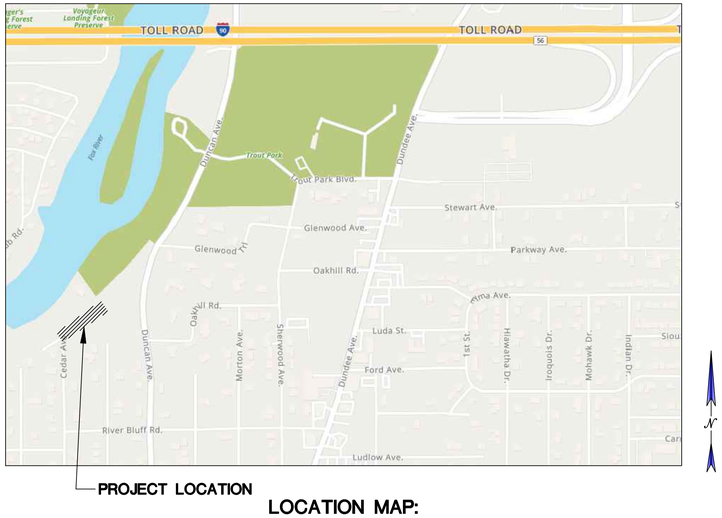
ELEVATION: 753.15 (NAVD 88)

J.U.L.I.E
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
CALL 811
Know what's below. Call before you dig.

6007

ELGIN, ILLINOIS

FINAL ENGINEERING IMPROVEMENT PLANS FOR 1260, 1262, 1264 CEDAR AVE SANITARY AND WATER SERVICE CONNECTION



PROJECT LOCATION

LOCATION MAP:
N.T.S.

INDEX OF SHEETS

OWNER
Paul Sommer
1188 Cedar Ave
Elgin, IL, 60120-2253

CONTRACTOR
Ray Sakolari
37W904 US Hwy 20
Elgin, IL 60124
(847) 214-2944
ray@rayselectrical.com

CIVIL ENGINEER
Scheflow Engineers
1814 Grandstand Pl
Elgin, IL 60123
(847) 697-7095
office@schefloweng.com

CONTACTS

CITY OF ELGIN
Community Development Group, 847-931-5920
150 Dexter Court
Elgin, IL 60120-5555

Public Works Department, 847-697-3160
Engineering Division, 847-931-5955
1900 Holmes Road
Elgin, IL 60120-1200

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY (IEPA)
Main Number 217-782-3397
Water Pollution Control Division 217-782-0610
Public Water Supply Division 217-782-9470
1021 N. Grand Avenue East
P.O. Box 19276
Springfield, IL 62794-9276

Elgin Office 847-608-3131
595 South State
Elgin, IL 60123

FOX RIVER WATER RECLAMATION DISTRICT (FRWRD)
Raymond Street & Purity Drive
P. O. Box 328
Elgin, IL 60121-0328
847-742-2068

U. S. ARMY CORPS OF ENGINEERS - Chicago District
231 S. LaSalle Street, Suite 1500
Chicago, IL 60604
312-353-6400 Main
312-846-5530 Regulatory Branch

KANE-DUPAGE SOIL & WATER CONSERVATION DISTRICT
2315 Dean Street, Suite 100
St. Charles, IL 60175
630-584-7961 x3

COMED
350 S. Second Street
Elgin, IL 60123
847-608-2335

NICOR GAS
1844 Ferry Road
Naperville, IL 60563
630-983-8676

AT&T
255 E. Chicago Street
Elgin, IL 60120
847-888-6863

J.U.L.I.E.
Underground Utility Locations
1-800-892-0123
811

Drainage Statement
To the best of our knowledge and belief, the drainage of surface waters will not be changed by the construction of this subdivision or any part thereof, or, that if drainage will be changed, reasonable provision has been made for the collection and diversion of such surface waters in to the public areas, or drains approved for the use by the municipal engineer, and that such surface waters are planned for in accordance with generally accepted engineering practices so as to reduce the likelihood of damages to the adjoining property because of the construction of this subdivision.

Signature: _____ Date: 5/21/2024

FRANK C. CUDA 62-036658 REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS

11/25 LIC. EXP. DATE
5/21/24 DATE
SIGNATURE

THE CITY OF ELGIN STANDARD DETAILS SUPERSEDE ANY OTHER DETAILS.

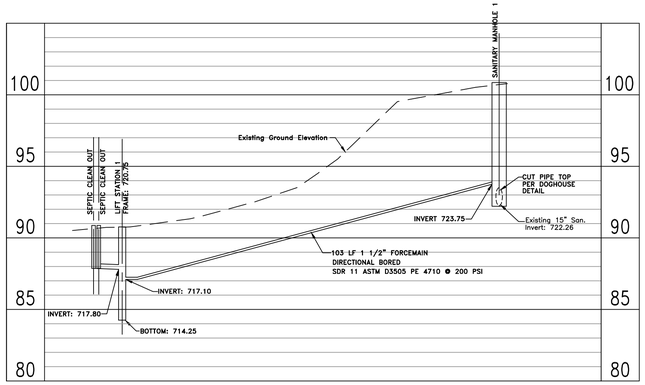
#	DATE	REMARKS
1	3-20-24	PER FRWRD REVIEW
2	5-21-24	PER CITY REVIEW

SCHEFLOW engineers
1814 GRANDSTAND PLACE
ELGIN, ILLINOIS 60123
phone 847.697.7095
fax 847.697.7099
schefloweng.com
Firm License No. 184-001104

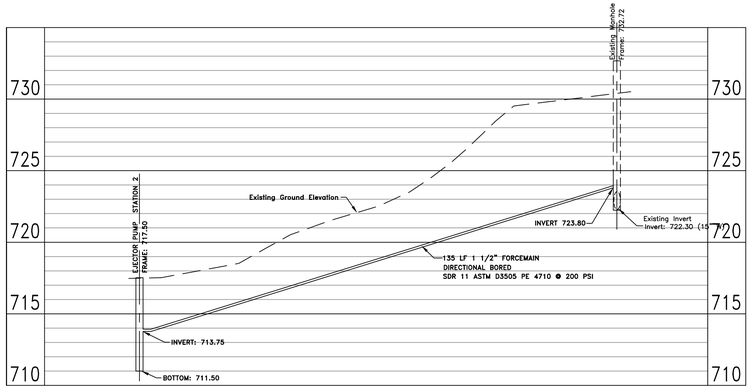
ELGIN ILLINOIS
1260, 1262, 1264 CEDAR AVE
TITLE SHEET

SCALE	DATE
NONE	5/21/24
DRAWN BY	JOB NO.
PCS	6007
CHECKED BY	SHEET NO.
FCC	1 of 10

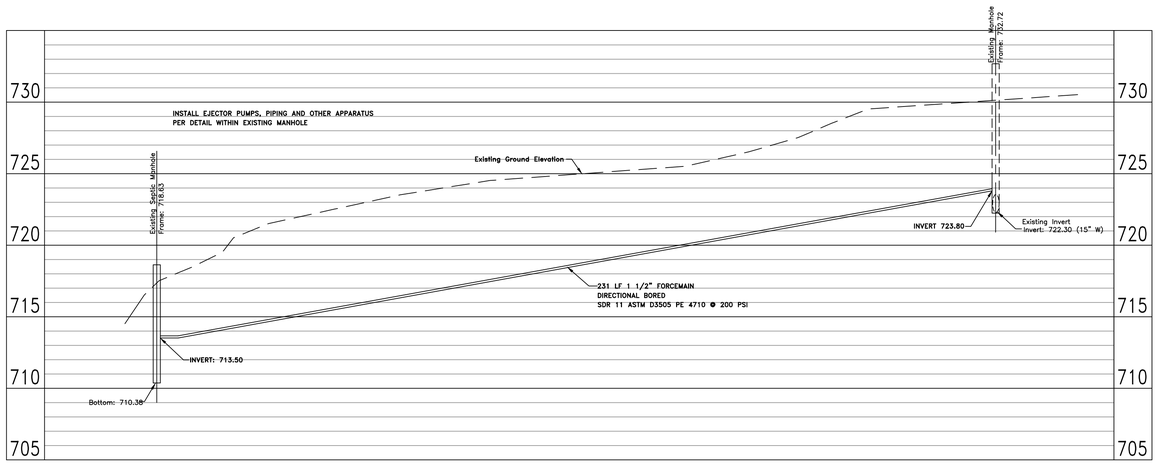
6007



PROFILE EJECTOR PUMP STATION 1



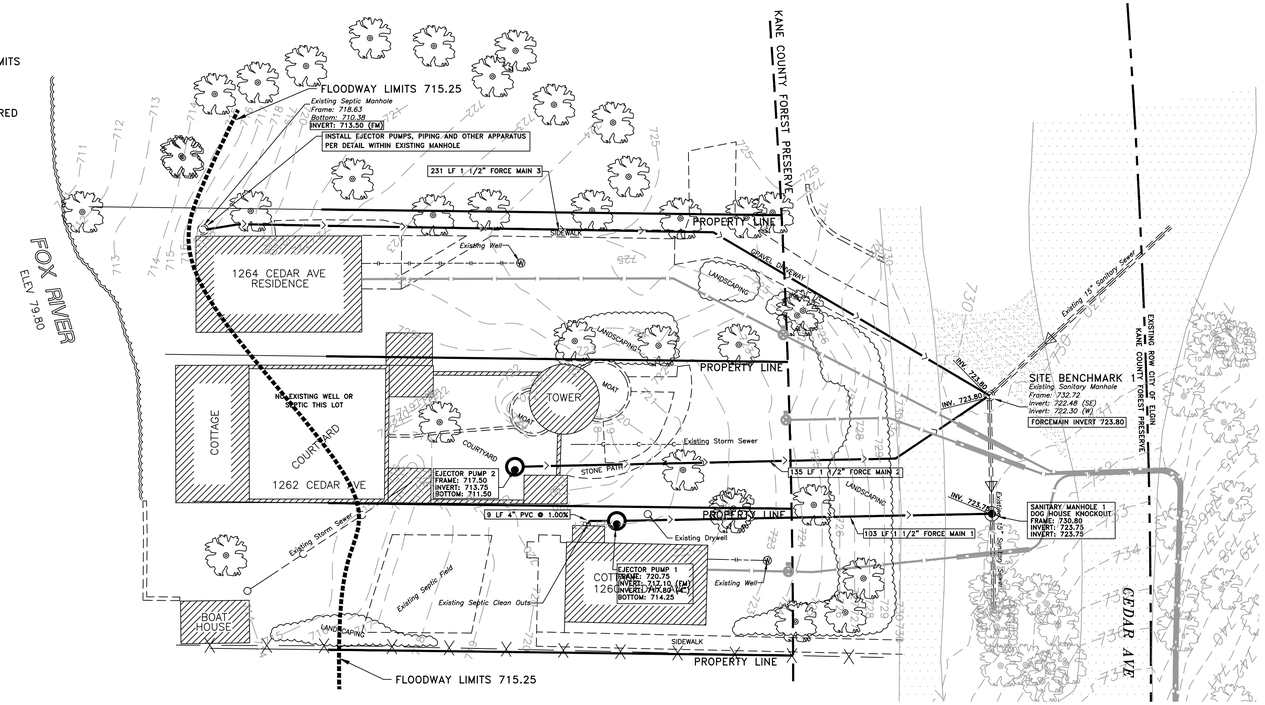
PROFILE EJECTOR PUMP STATION 2



PROFILE EJECTOR PUMP STATION 3

NOTE: FLOODWAY AND FLOODPLAIN LIMITS ARE THE SAME

NOTE: DISTURBED AREA TO BE RESTORED TO PRE-CONSTRUCTION CONDITION



DIRECTIONAL BORE ALL FORCE MAIN PIPING. LOCATION OF ALL BORE PITS TO BE REVIEWED AND APPROVED BY THE OWNER.

EJECTOR PUMP 3
EXISTING TANK
FRAME: 718.63
INVERT: 713.50 (FM)
BOTTOM: 710.38

FLOAT LEVELS	
ALARM LEVEL	ELEV.: 712.50
PUMP ON	ELEV.: 712.00
PUMPS OFF	ELEV.: 710.75

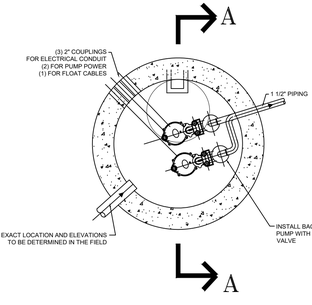
EJECTOR PUMP 2
FRAME: 717.50
INVERT: 713.75
BOTTOM: 711.00

FLOAT LEVELS	
ALARM LEVEL	ELEV.: 713.00
PUMP ON	ELEV.: 712.50
PUMPS OFF	ELEV.: 711.25

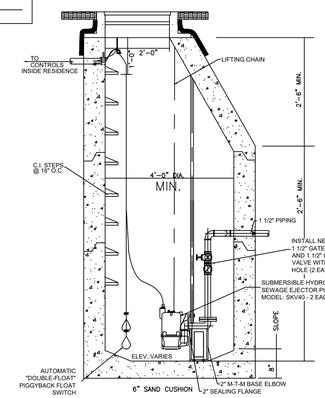
EJECTOR PUMP 1
FRAME: 720.75
INVERT: 717.10 (FM)
INVERT: 717.80 (4")
BOTTOM: 714.25

FLOAT LEVELS	
ALARM LEVEL	ELEV.: 716.25
PUMP ON	ELEV.: 715.75
PUMPS OFF	ELEV.: 714.50

SCALE: 1"= 20'
0 20' 40'



SECTIONAL PLAN



SECTION A-A

CONTRACT PRICE FOR MANHOLE SHALL INCLUDE, FURNISHING AND PLACING CAST IRON FRAME AND LID TO FINISHED GRADE OF EXISTING PAVEMENT, EXISTING GROUND SURFACE OR FINISHED GRADE AS ESTABLISHED BY THE ENGINEER.

MATERIALS:

FRAME AND LID
EQUAL TO NEENAH FOUNDRY CO. CATALOG NO. R-1712B WITH TYPE B LID — 1" CONCEALED PICK HOLE AND THE WORD "SANITARY" CAST IN LID.

WALLS
PRECAST REINFORCED CONRETE RISER UNITS.
MINIMUM THICKNESSES:
5" FOR 4'-0" INSIDE DIAMETER

BOTTOM
PRECAST REINFORCED AND CAST INTEGRAL WITH FIRST VERTICAL SECTION.

RISER JOINTS AND FRAME AND COVER
ALL JOINTS BETWEEN PRE-CAST ELEMENTS, ADJUSTING RINGS AND MANHOLE FRAMES ON ALL UNDERGROUND STRUCTURES, SHALL BE SET IN PLACE WITH ONE OF THE FOLLOWING: BUTYL RUBBER JOINT SEALANTS: CONCRETE PRODUCTS SUPPLY CO. — EZ STIK 6, HAMILTON-KENT GASKET CO. — KENT SEAL, OR EQUAL, AS APPROVED BY DISTRICT ENGINEER AND ALL JOINTS TO BE TUCKPOINTED WITH HYDRAULIC CEMENT.

ADJUSTMENT RINGS
A MAXIMUM OF 8" OF ADJUSTMENT RINGS MAY BE USED

STEPS
STEPS SHALL BE MADE OF STEEL REINFORCED PLASTIC USING AN APPROVED PLASTICE MEETING ASTM D4101, TYPE II, GRADE 49108, OVER #3 GRADE 60, ASTM A615, REINFORCEING BAR. STEPS SHALL BE AT 16" CENTERS.

CHIMNEY SEALS
SHALL BE CANUSA WRAPID SEAL MANHOLE ENCAPSULATION SYSTEM, OR ADAPTOR INC. SYSTEM APPROVED BY UTILITY SUPERINTENDENT WHICH WILL CAPTURE AT LEAST 4" OF FRAME, ALL ADJUSTING RINGS AND 4" OF PRECAST ECCENTRIC CONE SECTION.

PIPE CONNECTION
ALL SANITARY SEWER MANHOLES SHALL BE CONSTRUCTED WITH FLEXIBLE MANHOLE COUPLING AS MANUFACTURED BY INTERFACE CORPORATION (LOCKJOINT FLEXIBLE MANHOLE SLEEVE) PRESS-SEAL GASKET CORPORATION (PRESS WEDGE II), OR EQUAL AS APPROVED BY DISTRICT ENGINEER. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL COMPLY WITH THOSE SPECIFIED BY THE MANUFACTURER OR DISTRICT ENGINEER.

ALL EXTERIOR SURFACES SHALL HAVE A BITUMINOUS COATING FACTORY APPLIED.

EJECTOR PUMP DETAIL

#	DATE	REMARKS
1	3-20-24	PER FRWRD REVIEW
2	5-21-24	PER CITY REVIEW

SCHEFLOW engineers
1814 GRANDSTAND PLACE
ELGIN, ILLINOIS 60123
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Firm License No. 184-001104

ELGIN ILLINOIS

1260, 1262, 1264 CEDAR AVE

SANITARY - FORCE MAIN

SCALE	DATE
1"=20'	3/19/24
DRAWN BY	JOB NO.
PCS	6007
CHECKED BY	SHEET NO.
FCC	2 of 10

6007

FRWRD - MINIMUM PROJECT SPECIFICATION REQUIREMENTS

1. THE PROPOSED IMPROVEMENTS SHALL BE CONSTRUCTED ACCORDING TO THE ORDINANCE AND REQUIREMENTS OF THE "STATE STANDARD SPECIFICATION FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS" CURRENT EDITION, AND THE FOX RIVER WATER RECLAMATION DISTRICT.
2. THE CONTRACTOR SHALL NOTIFY THE FOX RIVER WATER RECLAMATION DISTRICT 48 HOURS PRIOR TO START OF THE CONSTRUCTION TO ARRANGE FOR APPROPRIATE CONSTRUCTION INSPECTION .
3. THE FOX RIVER WATER RECLAMATION DISTRICT SHALL HAVE THE AUTHORITY TO INSPECT, APPROVE, AND REJECT THE CONSTRUCTION IMPROVEMENTS.
4. THE CONTRACTOR(S) SHALL INDEMNIFY THE FOX RIVER WATER RECLAMATION DISTRICT, THEIR AGENTS ETC. , FROM ALL LIABILITY INVOLVED WITH THE CONSTRUCTION, INSTALLATION AND TESTING OF THIS WORK ON THIS PROJECT.
5. THE PROPOSED IMPROVEMENTS MUST BE CONSTRUCTED IN ACCORDANCE WITH THE ENGINEERING PLANS AS APPROVED BY THE FRWRD .
6. SANITARY MANHOLE FRAMES SHALL BE NEENAH R-1772 WITH TYPE B SELF-SEALING RUBBER GASKET COVER WITH CONCEALED PICK HOLES OR EQUAL WITH THE WORD "SANITARY" CAST IN THE COVER.
7. THE EXTERIOR OF THE PROPOSED MANHOLES SHALL BE WATERPROOFED WITH A BITUMASTIC MATERIAL AS PER FRWRD ORDINANCE NO. 323, ARTICLE 4, SECTION 16.
8. ALL JOINTS BETWEEN PRE-CAST ELEMENTS, ADJUSTING RINGS AND MANHOLE FRAMES ON ALL UNDERGROUND STRUCTURES, SHALL BE SET IN PLACE WITH ONE OF THE FOLLOWING BUTYL RUBBER JOINT SEALANTS:
   CONCRETE PROJECTS SUPPLY CO. - EZ STIK8
   HAMILTON-KENT GASKET CO. - KENT SEAL
   OR EQUAL, AS APPROVED BY THE DISTRICT ENGINEER, AND ALL JOINTS TO BE TUCKPOINTED WITH HYDRAULIC CEMENT OR MORTAR WITH A BRUSH FINISH. ALL JOINTS BETWEEN ADJUSTING RINGS , AND MANHOLE FRAMES TUCKPOINTED WITH HYDRAULIC CEMENT OR MORTAR WILL NOT BE ACCEPTED BY FRWRD.
9. ALL SANITARY SEWER MANHOLES SHALL BE CONSTRUCTED WITH FLEXIBLE MANHOLE COUPLING, AS MANUFACTURED BY INTERPACE CORPORATION (LOCKJOINT FLEXIBLE MANHOLE SLEEVE) , PRESS-SEAL GASKET CORPORATION (PRESS WEDGE II) , OR EQUAL AS APPROVED BY THE DISTRICT ENGINEER. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL COMPLY WITH THOSE SPECIFIED BY THE MANUFACTURER.
10. A WATER-TIGHT PERMANENT MASONRY BULKHEAD SHALL BE INSTALLED IN THE DOWNSTREAM SEWER PIPE AT THE POINT OF SEWER CONNECTION PRIOR TO COMMENCING ANY SEWER CONSTRUCTION . THE BULKHEAD SHALL REMAIN IN PLACE UNTIL REMOVAL IS AUTHORIZED BY THE FOX RIVER WATER RECLAMATION DISTRICT AFTER THE SANITARY SEWERS HAVE BEEN TESTED AND ACCEPTED.
11. THE CONTRACTOR SHALL TAKE MEASURES TO PREVENT ANY UNPOLLUTED WATER SUCH AS GROUND AND SURFACE WATER FROM ENTERING THE EXISTING SANITARY SEWERS .
12. THE CONTRACTOR SHALL BE PROHIBITED FROM DISCHARGING ANY UNPOLLUTED WATER INTO THE SANITARY SEWER SYSTEM FOR THE PURPOSE OF SEWER FLUSHING OR FLOATING LINES FOR THE DEFLECTION TEST WITHOUT PRIOR APPROVAL FROM THE FOX RIVER WATER RECLAMATION DISTRICT.
13. ALL SEWERS, INCLUDING TRUNK LINE SEWERS AND LATERAL SEWERS, THAT WILL DISCHARGE SEWAGE FOR TREATMENT BY THE FOX RIVER WATER RECLAMATION DISTRICT, SHALL BE INSTALLED UNDER THE SUPERVISION OF A FULL TIME RESIDENT ENGINEER. NO WORK SHALL BE DONE IN THE ABSENCE OF THE RESIDENT ENGINEER.
14. THE DISTRICT SHALL HAVE THE RIGHT TO APPROVE THE SELECTION OF A RESIDENT ENGINEER. THE DISTRICT SHALL HAVE THE RIGHT TO REQUEST A SUBSTITUTE RESIDENT ENGINEER IN THE EVENT OF UNSATISFACTORY PERFORMANCE BY THE RESIDENT ENGINEER.
15. THE RESIDENT ENGINEER ON ANY SEWER CONSTRUCTION PROJECT SHALL PROVIDE THE DISTRICT WITH DAILY REPORTS NO LESS THAN EVERY TWO (2) WEEKS.
16. ALL NEW SANITARY SEWERS SHALL BE PRESSURE TESTED TO THE PROCEDURE OUTLINED IN THE "SPECIFICATIONS FOR LOW PRESSURE AIR TESTS OF THE SANITARY SEWERS" AVAILABLE AT THE FOX RIVER WATER RECLAMATION DISTRICT OFFICE. THE DISTRICT MAY REQUIRE SUCH OTHER TEST AS CONDITIONS MAY REQUIRE.
17. THE COST OF PROVIDING RESIDENT ENGINEERING AND PRESSURE TESTING SHALL BE BORNE BY THE OWNER OR DEVELOPER.
18. THE FOX RIVER WATER RECLAMATION DISTRICT MUST BE FURNISHED A COMPLETE SET OF CONSTRUCTION RECORD DRAWINGS OF THE SANITARY SEWERS CONSTRUCTED FOR A PROJECT WITHIN 60 DAYS OF COMPLETION OF THE SEWERS.
19. SANITARY SEWER MANHOLES WITH INTERNAL DROPS TWO FEET OR LESS SHALL HAVE A PRECAST CONCRETE TROUGH BUILT IN THE STRUCTURE TO OBTAIN A SMOOTH FLOW TRANSITION FROM THE UPSTREAM PIPE INVERT TO THE DOWNSTREAM PIPE INVERT .
20. ALL MANHOLES AND STRUCTURES SHALL BE CLEANED OF ANY ACCUMULATION OF SILT, DEBRIS, OR FOREIGN MATTER OF ANY KIND, AND SHALL BE FREE FROM SUCH ACCUMULATIONS AT THE TIME OF FINAL INSPECTION. ALL MANHOLES AND STRUCTURES SHALL BE INSPECTED BY THE FRWRD PRIOR TO ACCEPTANCE.

Fox River **Water Reclamation** District Minimum Requirements for Manhole Structures

1. Sanitary manhole lid must have concealed pick holes and have the word “SANITARY” stamped in the cover with an intact rubber gasket seal.

2. The frame lip shall be cleaned of all mud and debris to provide a watertight seal between the frame and the manhole cover gasket.

3. In **non-paved** areas - ***ONLY*** butyl rubber joint sealant shall be used between all joints, adjusting rings and manhole frames.

4. In **paved** areas - all sanitary structures are to be adjusted with a full mortar bed along with a six inch minimum concrete collar encasing the frames, all adjusting rings, and the top three inches of the cone or down to the flat top.

5. All steps must be installed, aligned and clean.

6. The barrel section joints **must be** tuckpointed with hydraulic cement or mortar with a brush finish.

7. All pinholes must be mortared with a brush finish to provide a watertight seal.

8. The upstream and downstream pipe cavities must be filled with mortar and smoothed with a brush finish.

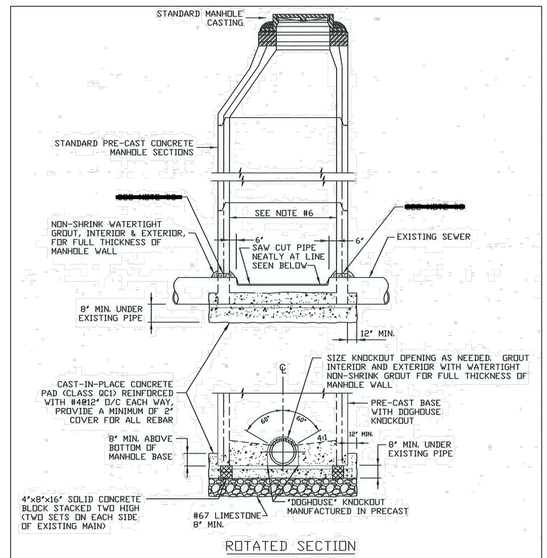
9. The upstream and downstream flow lines (inverts) shall have a smooth transition from the pipe to the manhole invert.

10. All manhole structures shall be free of any type of infiltration (water leaking into the structure).

11. If there is an internal drop in the structure there must be a smooth transition from the pipe to the invert (i.e. channel the flow from the pipe to the manhole invert).

12. All manholes shall be cleaned of any accumulation of silt, debris, or foreign matter of any kind, and shall be free from such accumulations at the time of final inspection.

13. Manholes in the parkway shall have a final frame elevation which is curb height or higher.



ROTATED SECTION

#	DATE	REMARKS
1	3-20-24	PER FRWRD REVIEW
2	5-21-24	PER CITY REVIEW

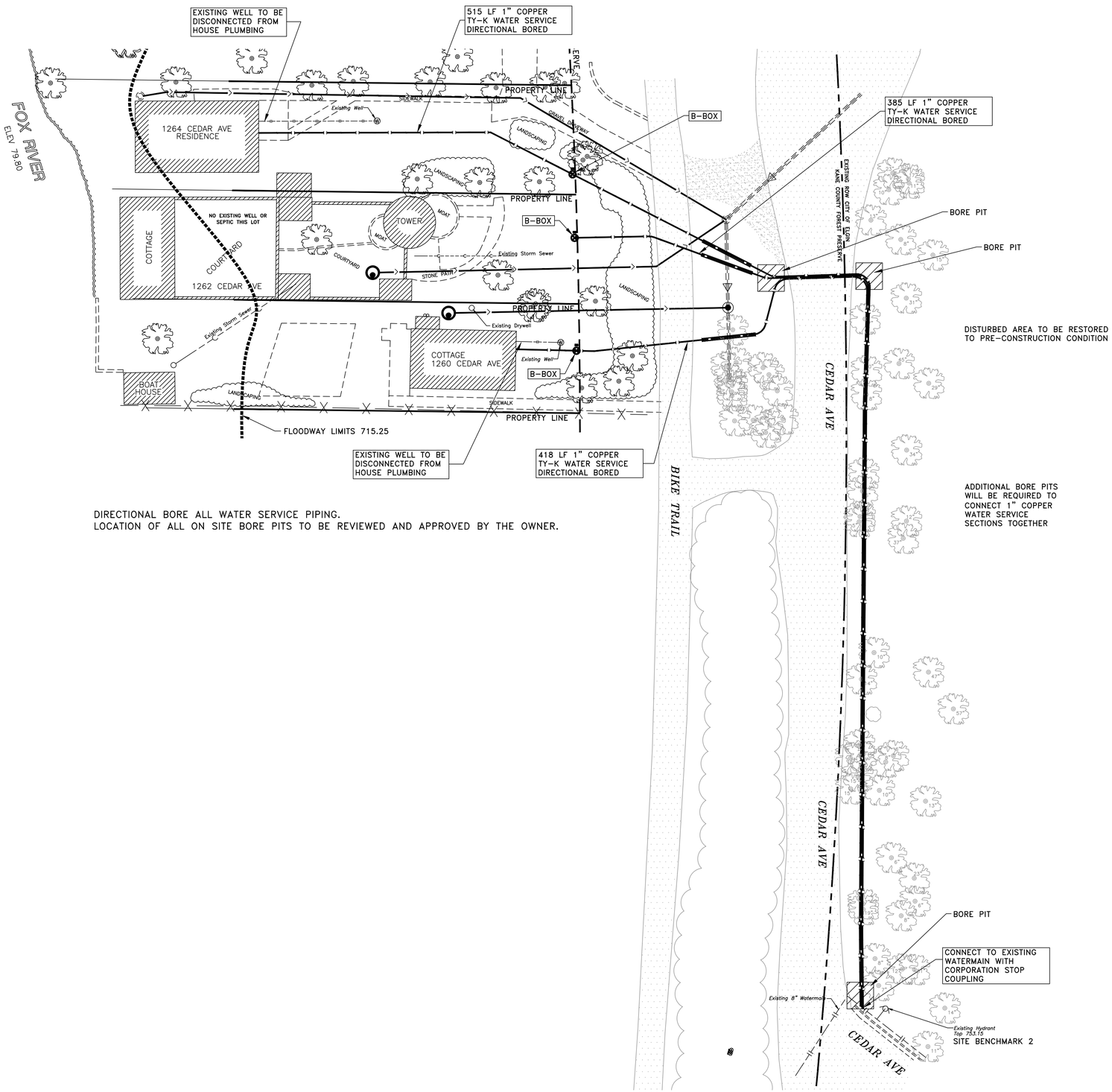
SCHEFLOW engineers
1814 GRANDSTAND PLACE
ELGIN, ILLINOIS 60123
phone 847.697.7095
fax 847.697.7099
schefloweng.com
Firm License No. 184-001104

ELGIN ILLINOIS
1260, 1262, 1264 CEDAR AVE

SANITARY NOTES AND DETAILS

SCALE	DATE
NONE	3/19/24
DRAWN BY	JOB NO.
PCS	6007
CHECKED BY	SHEET NO.
FCC	3 of 10

6007



DIRECTIONAL BORE ALL WATER SERVICE PIPING.
LOCATION OF ALL ON SITE BORE PITS TO BE REVIEWED AND APPROVED BY THE OWNER.

#	DATE	REMARKS
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2	5-21-24	PER CITY REVIEW

SCHEFLOW engineers
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ELGIN ILLINOIS

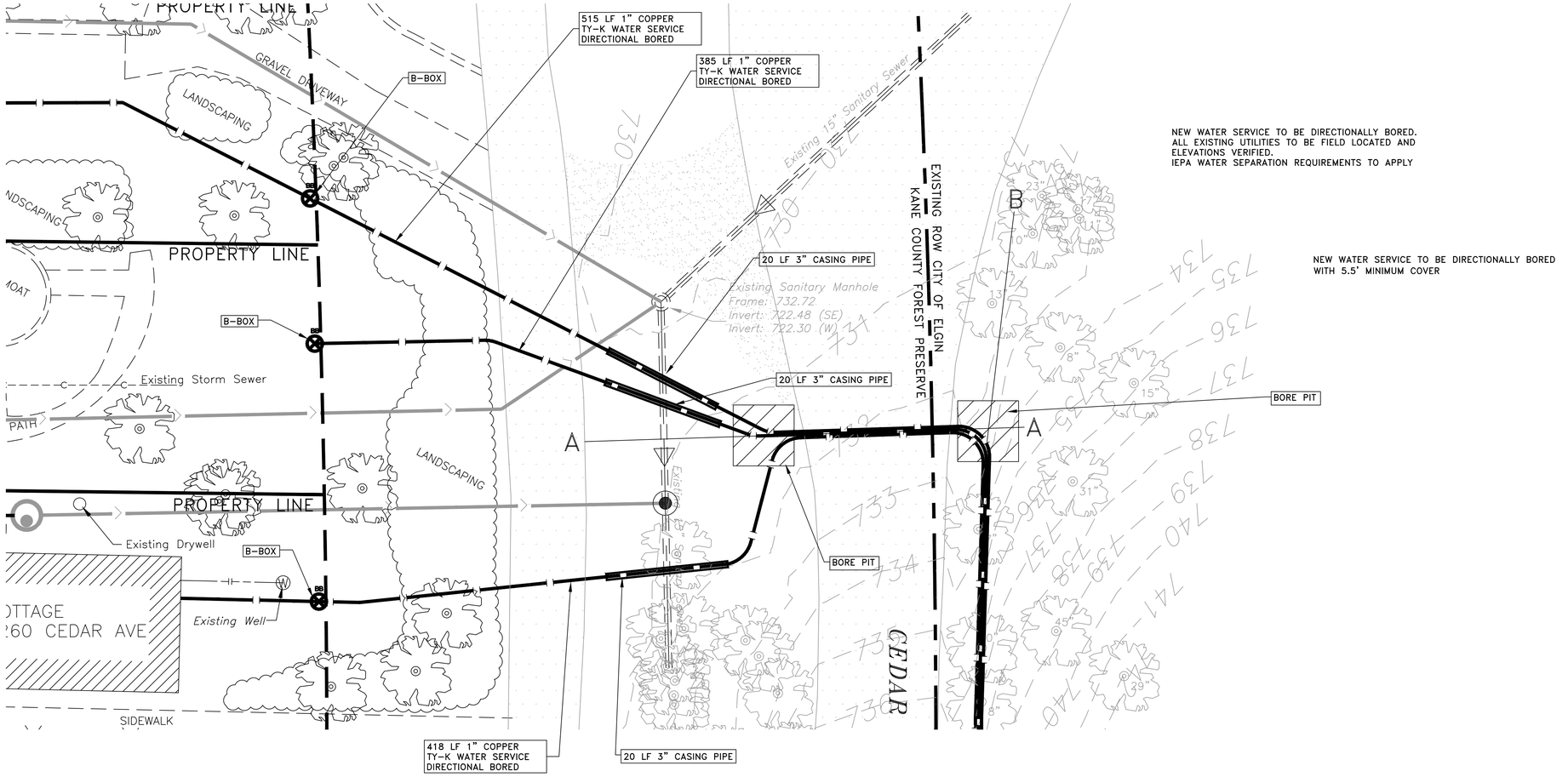
1260, 1262, 1264 CEDAR AVE

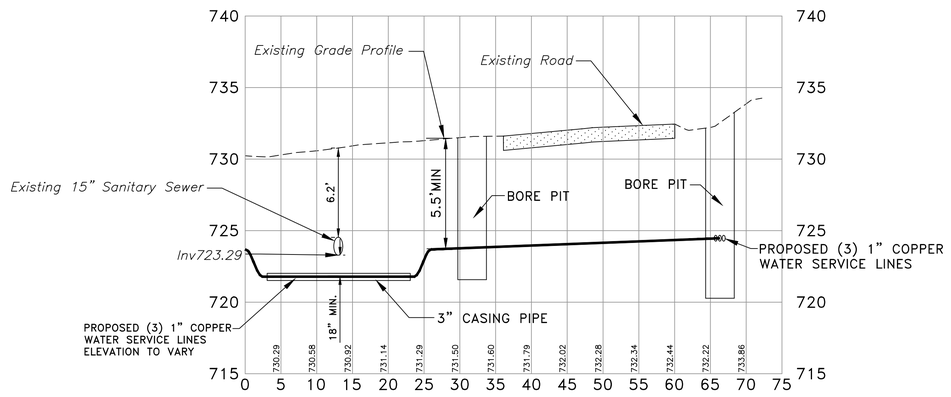
OVERALL WATERMAIN PLAN

SCALE	DATE
1"=20'	5/21/24
DRAWN BY	JOB NO.
PCS	6007
CHECKED BY	SHEET NO.
FCC	4 of 10

6007

6007





Scale Horiz:1"=10' Vert:1"=5'

SECTION A-A

"Water main must be routed either over existing sewers with a required separation minimum of 18-inches AND the required minimum bury depth of 5.5 feet, or under the existing sewers with a separation minimum of 18-inches AND the water main MUST be cased. If the water main is to be routed over the sewers with less than the required separation it MUST be cased"

NOTES:
EXISTING UNDERGROUND UTILITIES LOCATION SHOWN ARE BEST ESTIMATION BY ENGINEER BASED ON PROVIDED INFORMATION.

EXISTING UNDERGROUND UTILITIES TO BE FIELD VERIFIED BY CONTRACTOR PRIOR TO CONSTRUCTION.

ALL PROPOSED WATER SERVICES SHALL BE 1" COPPER WATER SERVICE WITH B-BOX.

EXISTING WATER SYSTEM TO REMAIN ONLINE DURING CONSTRUCTION OF PROPOSED IMPROVEMENTS.

DISTURBED AREA TO BE RESTORED TO PRE-CONSTRUCTION CONDITION

SCALE: 1"= 10'
0 10' 20'

#	DATE	REMARKS
2	5-21-24	PER CITY REVIEW

SCHEFLOW engineers
1814 GRANDSTAND PLACE
ELGIN, ILLINOIS 60123
phone 847.697.7095
fax 847.697.7099
schefloweng.com
Firm License No. 184-001104

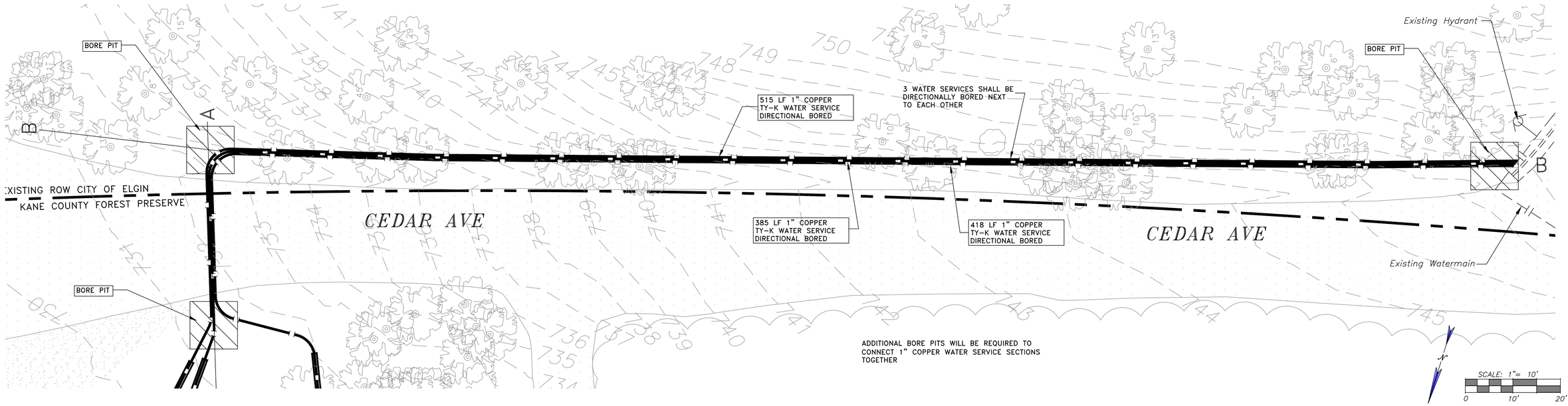
ELGIN ILLINOIS
1260, 1262, 1264 CEDAR AVE
WATER SERVICE

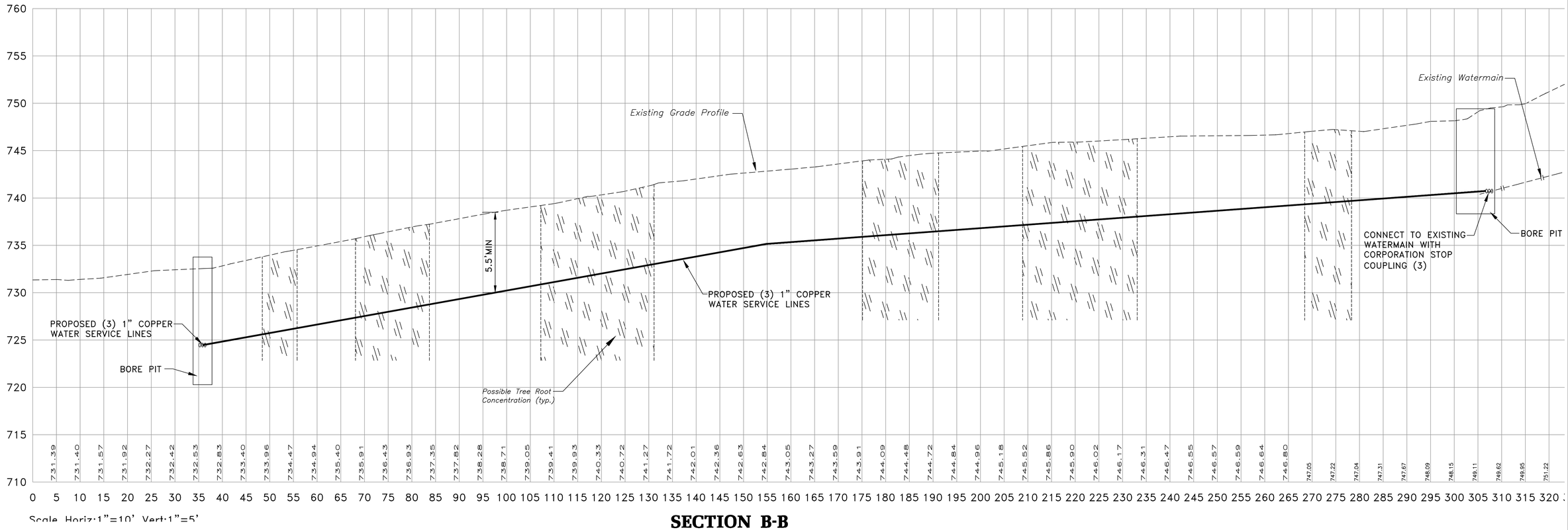
PLAN AND PROFILE: A-A

SCALE	DATE
1"=10'	5/21/24
DRAWN BY	JOB NO.
PCS	6007
CHECKED BY	SHEET NO.
FCC	5 of 10

6007

6007





SECTION B-B

NOTES:
EXISTING UNDERGROUND UTILITIES LOCATION SHOWN ARE BEST ESTIMATION BY ENGINEER BASED ON PROVIDED INFORMATION.

EXISTING UNDERGROUND UTILITIES TO BE FIELD VERIFIED BY CONTRACTOR PRIOR TO CONSTRUCTION.

NEW WATER SERVICE TO BE DIRECTIONALLY BORED WITH 5.5' MINIMUM COVER

DISTURBED AREA TO BE RESTORED TO PRE-CONSTRUCTION CONDITION

#	DATE	REMARKS
1	3-20-24	PER FRWRD REVIEW
2	5-21-24	PER CITY REVIEW

SCHEFLOW engineers
1814 GRANDSTAND PLACE
ELGIN, ILLINOIS 60123
phone 847.697.7095
fax 847.697.7099
schefloweng.com
Firm License No. 184-001104

ELGIN ILLINOIS
1260, 1262, 1264 CEDAR AVE
WATER SERVICE
PLAN AND PROFILE: B-B

SCALE	DATE
1"=10'	5/21/24
DRAWN BY	JOB NO.
PCS	6007
CHECKED BY	SHEET NO.
FCC	6 of 10

6007

General Notes

1) All construction shall comply with the applicable ordinances and requirements of the City of Elgin, unless noted otherwise, and shall conform to the specifications of the "Illinois Department of Transportation (IDOT) Standard Specifications for Road and Bridge Construction" and the "Illinois Society of Professional Engineers (ISPE) Standard Specifications for Water and Sewer Main Construction in Illinois", both of which shall be the latest edition. All construction shall also conform to the Fox River Water Reclamation District (FRWRD) ordinances (or the Metropolitan Water Reclamation District of Greater Chicago (MWRD) as applicable) and the Illinois Recommended Standards for Sewage works, latest edition published by the Illinois Environmental Protection Agency (IEPA) except for conflicts with the Fox River Water Reclamation District sewer permit and manual of procedures ordinances. These specifications shall be considered a part of Elgin's Standard Specifications. In the event of a conflict between the State Specifications and the Elgin Standard Specifications, the most restrictive provisions shall take precedence. Any variations or alternatives to the Elgin Standard Specifications must be submitted to and approved by the City Engineer or their designee(s) (herein after City Engineer) in writing.
2) As applicable, all projects must comply with section 404 of the Clean Water Act, Section 10 of the Rivers and Harbors Act of 1899 and the rules and regulations enforced by the US Army Corps of Engineers, Chicago District.
3) All paving and excavation work shall comply with the applicable ordinances of the City of Elgin and the Illinois Department of Transportation "Specifications for Road and Bridge Construction" latest edition. In case of a conflict, the most restrictive provisions shall govern.
4) It shall be the responsibility of the developer (owner) and the contractor to abide by, adhere to and perform all work in accordance with the requirements, specifications, standards, practices, policies and codes of the City of Elgin which includes but is not limited to labor, materials, procedures and safety.
5) Any changes, revisions or substitutions to the plans, specifications, materials, requirements or work shall be submitted to the City Engineer, in writing, with written approval by the City Engineer received prior to beginning of said work. All such materials and construction whether implicitly or explicitly stated or covered within the requirements, codes or specifications shall be approved by the City Engineer, prior to commencing the installation and construction. The changed, revised and substituted items must be accounted for in the record drawings.
6) The contractor shall field check and verify all existing utility locations, dimensions and elevations in the field prior to the commencement of construction of the improvements or proposed work. All existing utility locations shown on the plans are based on best available information. Contractor will notify the City Engineer immediately if discrepancies are found.
7) All vertical control records (elevations) shall be referenced upon USGS NAVD 88 datum. For horizontal control, Illinois Coordinate System, East Zone (NAD 83) shall be used.
8) A minimum of one (1) 2nd order class II permanent benchmark shall be required to be established in all developments, location specified by the City Engineer. The benchmark shall reference at least two (2) existing City benchmarks, be tied to the NAVD 88 datum, and be recorded to the nearest 0.01 feet.
9) The contractor shall refer to landscape plans for complete information regarding planting locations, wetlands, walkways, walls, streams and pond shorelines, if applicable.
10) The contractor shall notify the City of Elgin Engineering Department 311 or (847) 931-6001, the Fox River Water Reclamation District (847) 742-2068 and J.U.L.I.E. (800) 892-0123 at least 48 hours prior to starting construction. All other agencies shall also be notified as required.
11) It shall be the responsibility of the contractor to call the assigned City Engineering Inspector at least 48 hours in advance and set up the necessary and proper inspection(s) for all work performed.
12) The contractor shall restore all disturbed off-site areas to a condition equal to or better than what existed prior to construction.
13) All existing field drainage tiles encountered or damaged during construction are to be restored to their original condition, properly rerouted and/or connected to the storm sewer system. Connections shall be made at structures; preferably catch basins only. No blind taps are allowed. As-built drawings shall be provided to the City's Engineering Department.
14) All independent testing, if required by the City Engineer or their designee, is to be paid for by the owner/developer. Testing is to be at the discretion of the City Engineer. Results shall be provided to the City Engineer within 48 hours of testing.
15) The developer shall verify that all public improvements are constructed within public right-of-way or granted public easements.
16) One set of approved plans as well as approved permit(s) shall be on site at all times during construction of the project.
17) The contractor shall provide a record of pre-development conditions at the site utilizing video tape or still pictures as required by the City Engineer.
18) Storm and sanitary sewer lines shall be cleared of all construction debris and silt prior to requesting inspection.
19) Contractor shall maintain public right-of-way free and clear of any obstruction(s) including but not limited to rocks, boulders, debris, mud, equipment or material.

General Underground Utilities

1) Trench backfill shall be provided for any trench excavated under and within 2' of all existing and proposed roadway. Backfill material shall be approved and inspected by the City of Elgin. For restoring cuts in existing roadways, Controlled Low Strength Material (CLSM) - Flowable Fill, shall be used per IDOT specifications and procedure in lieu of trench backfill.
2) All publicly owned and maintained sanitary manholes and similar structures shall be a minimum of 48" diameter. Valve vaults must be a minimum of 48" diameter for watermain up to 8" diameter; minimum 60" diameter for watermain greater than 8" diameter but less than 16" diameter and minimum 72" diameter for watermain 16" diameter or greater.
3) No shear or mechanical joint gasket couplings shall be used in the connection of sewer pipe of dissimilar materials. No dissimilar materials shall be allowed between structures in new developments except as noted for drop manhole connections.
4) The contractor shall mark the location of the end of sanitary, water and storm services with buried 2" x 4" wood posts extending a minimum of 3' out of the ground and painted red, blue and green respectively. Curb shall be marked at appropriate locations where service lines cross with an "S" for sanitary and a "W" for water.
5) All storm, sanitary and watermain services are to end at the right-of-way line with proper termination.
6) Sewer connections to an existing manhole shall be machine cored.
7) Eccentric cone sections shall be used on all manholes and catch basins unless approved otherwise by the City Engineer. Valve vaults shall have their openings centered over the valve.
8) All sewer construction requires bedding with select granular backfill (IDOT equivalent CA-6, CA-7, FA-6) with a minimum thickness equal to ¼ the outside diameter of the sewer pipe, but not less than 4 inches, or greater than 8 inches.
9) All sewer construction shall conform to the approved permit and plans unless revisions have been approved by the City, as well as any and all other regulating agencies.
10) Maximum height attained by adjusting rings for a sanitary structure shall be 8 inches. Maximum height attained by adjusting rings for a water or storm structure shall be less than 12 inches. For 12 inches or greater, a barrel riser shall be used. No more than two rings shall be used for adjustment.

Earthwork / Erosion Control

1) All erosion control work shall comply with Kane County Stormwater Management Ordinance and Technical Manual as amended by the City of Elgin and per the latest addition of the Illinois Urban Manual.
2) Stripping of vegetation, grading or other soil disturbance, especially in designated wetland areas shall be done in a manner which will minimize soil erosion, and shall be in accordance with the approved drawings, mitigation and permit requirements.
3) The extent of the exposed area and duration of exposure shall be kept within practical limits as directed by the City Engineer.
4) All temporary stockpiles of earth shall be stabilized per the conditions of the Elgin Municipal Code, Title 21 "Stormwater Management."
5) Sediment shall be retained on site. Erosion control devices shall be installed along the perimeter of all regraded areas or as required to prevent sediment from entering and/or leaving the site.
6) Management areas shall be inspected per approved schedule and a weekly maintenance report shall be submitted to the City Engineer upon request.
7) Dust produced from the site shall be kept to a minimum.
8) All mud shall be removed from all vehicles before leaving the site and the roads shall be kept clean and clear of mud and debris at all times.
9) Culverts and drainage ditches shall be kept clean and clear of obstructions.
10) The contractor shall maintain existing positive drainage from off-site at all times.
11) Water courses and drainage swales adjacent to construction activities shall be monitored weekly for evidence of silt intrusion and other adverse environmental impacts. Any problems or deficiencies shall be corrected immediately upon their discovery.
12) Any wetland mitigation shall begin prior to any grading work and shall be in accordance with the approved mitigation permit plan and requirements.
13) The contractor shall install temporary orange fence around all trees to remain and wetland areas to be preserved.
14) In order to ensure protection against flooding, the lowest point of opening of foundations for proposed structures shall be set at a minimum of 2 feet above the following:
   a) HWL of adjacent stormwater management facilities such as retention/detention ponds.
   b) HGL of overland flow route(s).
   c) BFE of any adjacent water body including waters of U.S., except adjacent to the Fox River where the minimum shall be 3 feet above the BFE.
15) Within the limits of proposed grading the soil shall be compacted to not less than the following percentages of Modified Proctor Dry Density in accordance with ASTM D 1157-78:
   a) Under structures and pavements:
      Compact 6 inch maximum lifts of dry subgrade, backfill or fill material at 95% modified proctor dry density.
   b) Under parkway or unpaved areas:
      Compact 6 inch maximum lifts of dry subgrade, backfill or fill material at 85% modified proctor dry density.
   c) Under public sidewalks:
      Compact 6 inch maximum lifts of dry subgrade, backfill or fill material at 95% modified proctor dry density.

Storm Sewer

1) All storm sewer pipes shall be reinforced concrete pipe conforming to ASTM C-76 class IV with confined O-ring gasketed joints in compliance with ASTM C-361.
2) All sump pump and drain tile discharges shall be routed to a structure on the storm sewer system. Sump pump drain service connections shall be 4" PVC at a minimum slope of 2% and buried. The discharge pipe shall be SDR 26, and shall conform to ASTM D2751 or ASTM D3034 specifications.
3) Privately owned or maintained sump pump connection or junction structures shall be minimum 2-foot diameter concrete structures.
4) Minimum size of main line storm sewer shall be 12" diameter for concrete pipe.
5) Rim elevations for curb inlet box type storm sewer structures shall be taken at the flow line and recorded on the "As-Built" drawing.
6) All open grate storm sewer structure shall have "Dump No Waste, Drains to River" and appropriate symbol (fish symbol) cast in the grate or curb box.
7) All flared end sections shall have grates which follow the intent of the IDOT standard.
8) All downspouts, footing drains and outside drains shall discharge to the storm sewer or over ground as approved by the City Engineer.
9) All storm sewer mains shall be inspected with a video camera prior to acceptance after all utilities are installed (i.e. electric, phone, gas) and at least one year after construction per the direction of the City Engineer. The sewer shall be cleared of all construction debris and silt prior to televising. The report accompanying video shall accurately state structure #, type, pipe size & length, and location of all services. All defects in pipes and construction shall be called out. Provide a copy of the video to the City Engineer via an online document sharing link. Any discrepancy found in the system shall be corrected and re-televised prior to final acceptance.

Watermain

1) All watermains shall be pressure tested per requirements of the City of Elgin. Test method shall be a leakage test of 150 pounds per square inch (psi) held for 2 hours. The total leakage shall not exceed the allowable leakage requirements of AWWA C600.
2) Water lines 4" and larger must be pressure tested and chlorinated from the point of connection at the existing watermain to a permanently installed valve located inside the building. The contractor shall contact the City of Elgin Water Department at 311 or (847) 931-6001 at least 48 hours prior to making a tap.
3) Pressure testing of water piping shall be witnessed by the Engineering Inspector, Water Distribution Inspector, or the plumbing inspector, as appropriate.
4) All watermains shall be chlorinated per the requirements of the City of Elgin. Bacterial tests will be performed by the City of Elgin Water Department Laboratory.
5) All watermains to be ductile iron pipe per ANSI A21.51 (AWWA C151), (class 52) with "push on" or mechanical joints as required by the Water Department. All bends shall be mechanical joints. All mechanical joints are to be mega-lug restrained with coated stainless steel bolts. All push on joints shall incorporate 2 brass wedges per joint and 4 brass wedges per joint on main larger than 12" diameter. Pipe to be cement lined per ANSI A21.4 (AWWA C104).
6) The exterior of all ductile iron pipe shall be coated with a factory-applied layer of arc-sprayed zinc per ISO 8179. The mass of the zinc applied shall be 200 g/m2 of pipe surface area. A finishing layer topcoat shall be applied to the zinc. The mean dry film thickness of the finishing layer shall not be less than 3 mils with a local minimum not less than 2 mils. The coating system shall conform in every respect to ISO 8179-1 "Ductile iron pipes - External zinc-based coating - Part 1: Metallic zinc with finishing layer, Second edition 2004-06-01". Any damage to the zinc coating shall be repaired per the manufacturer's specification. All ductile iron pipe shall have appropriate manufacturer labeling on each pipe, indicating that zinc coating has been applied. Any ductile iron pipe delivered to the site without the required zinc coating or labeling will be rejected and shall be immediately removed from the project site. In addition, polyethylene encasement for use with ductile iron pipe systems shall consist of three layers of co-extruded linear low density polyethylene (LLDPE) fused into a single thickness of not less than eight mils. The inside surface of the polyethylene wrap to be in contact with the pipe exterior shall be infused with a blend of anti-microbial biocide to mitigate microbiologically influenced corrosion and a volatile corrosion inhibitor to control galvanic corrosion.
7) The minimum cover for watermain shall be 5.5 feet from finished grade to top of main. Top of pipe elevations shall be provided every 50' and recorded on "As-Built" drawings. The maximum depth of the operating nut of a valve shall be 7.0 feet from finished grade unless approved otherwise by the Water Director.
8) All water services to be minimum 1", type "K" copper. 1" taps shall be direct tap, 1 ¼" through 2" taps shall be saddle tapped. Saddle clamp shall be stainless steel epoxy coated. All flare connections, no compression allowed. Corporation stop coupling is to be at a 45 degree angle upwards off the main. Sleeves are prohibited.
9) All water services from main up to the B-box are to be installed by the Water Department personnel, unless approved in writing by the Water Department.
10) The City of Elgin Plumbing Inspector shall be notified (847) 931-5920 for requesting all private water service line and fire suppression line inspections. The Engineering Inspector shall be notified at 311 or (847) 931- 6001 for requesting public and quasi-public watermain inspections. Inspections shall be scheduled a minimum of 48 hours in advance of starting work.
11) Only City of Elgin Water Department personnel shall operate all water main, hydrant and auxiliary valves.
12) Any deviation from these specifications must receive written approval from the City of Elgin Water Department or its representatives. Requests for deviations must be submitted a minimum of 4 weeks prior to proposed installation. Any requests received after this deadline will be rejected.
13) Hydrants shall fully comply with the National Fire Protection Association, Fire Protection Handbook, latest Edition.
14) All valves shall be American Flow Control Series 2500-1 Ductile Iron Resilient Wedge Gate Valves or Clow Series C515 rated for 250 psi cold water working pressure with stainless steel hardware. All valves shall have an operating nut made of ductile iron that has four flats at stem connection to assure even torque input on the stem during opening and exercising. The valves shall have factory installed 304 stainless steel exterior bolting. All bolts to be no smaller than 5/8" diameter. Metric size and socket head cap screw are NOT allowed. Valves 18" and larger shall have an enclosed gear case. Design shall be of the bevel or spur type dependent upon the installation conditions of the valve. All tapping sleeves shall be stainless steel.
15) PVC sleeves for copper water services are not allowed. Any sleeve necessary for protection of the service shall be stainless steel.
16) 3" Ductile iron pipe, fittings and valves are not allowed.
17) Water service lines up to and including 2" services shall be pressure tested against a permanently installed valve, located inside of the building.
18) Service connections 4" and larger shall have valves located in vaults, unless otherwise approved by the Water Department.
19) At all locations where watermains and sewers cross material and jointing shall be in accordance with the Illinois Environmental Protection Agency Public Water Supplies Technical Policy Statements.

Sanitary Sewer

1) All sanitary sewer main and fittings shall meet the following specifications or as approved by the City Engineer.

MATERIAL (8" MIN.)	PIPE SPEC.	JOINT SPEC.
DIP - Class 52 (wrapped)	ANSI A-21.51	AWE C111 & C600
P.V.C --	ASTM D-3034	ASTM D-3212
SDR 26 for 3.5' - 15' cover		
SDR 21 for over 15' - 20' cover		
SDR 18 for over 20' cover		

P.V.C. pipe shall utilize elastomeric gaskets complying with F-477

2) All sanitary sewer mains shall be tested as required by the City of Elgin and the Fox River Water Reclamation District (FRWRD) or the Metropolitan Water Reclamation District of Greater Chicago (MWRD), as applicable, prior to acceptance.
3) All sanitary sewer mains shall be inspected with a video camera prior to acceptance after all utilities are installed (i.e. electric, phone, gas) and at least one year after construction per the direction of the City Engineer. The sewer shall be cleared of all construction debris and silt prior to televising. The sewer shall have water flowing through it during television. The report accompanying video shall accurately state structure #, type, pipe size & length, and location of all services. All defects in pipes and construction shall be called out. Provide a copy of the television to the City Engineer via an online document sharing link. Any discrepancy found in the system shall be corrected and re-televised prior to final acceptance.
4) Sanitary sewer service lines within the public right-of-way shall be 6" diameter with a minimum slope of 1% and shall match material specifications for public main. A clean-out shall be located on every service line per City of Elgin Building Department direction.
5) Sanitary sewer services shall be connected to the main by use of approved fitting. For connections to new sewer main, a manufactured wye or wye-tee shall be used. For existing sewer main, approved saddle connection shall be used. Any sanitary sewer connection to an existing sanitary sewer greater than 15 feet deep shall be made with a cut in ductile iron tee with mechanical joint gaskets and ductile iron sleeve.
6) Manholes shall utilize a reinforced precast monolithic bottom section with integral fillet or a poured concrete bench and trough and shall have a smooth finish. The bench shall be a minimum height of one-half of the diameter of the connecting pipe and extend to the inside walls of the manholes. Changes in direction should be made with the use of rounded turns. The radius of the channel centerline shall be at least 1/2 the inner diameter of the manhole, min. 2 feet. Sharp angles will not be permitted in the redirection of sewer flow.
7) When connecting to an existing sewer main by means other than an existing wye, tee or an existing manhole, one of the following methods shall be used:
   a) Circular saw-cut of the sanitary sewer main by proper tools ("sewer tap" machine or similar) and proper installation of hub-wye saddle or hub-tee saddle. The cored section shall be provided to the Engineering Department.
   b) With a pipe cutter, neatly and accurately cut out desired length of pipe for insertion of proper fitting to be held firmly in place using "band-seal" or similar type couplings with prior approval from the City Engineer. If existing bedding is disturbed, connection shall be supported with proper bedding.
9) A flexible rubber boot shall be used at all connections and penetrations into precast sanitary sewer manholes. Connections into existing brick manholes shall utilize brick and hydro-cement.

Paving

1) Sub-base course shall be minimum 4" thick, compacted CA-6, aggregate type B, conforming to IDOT requirements.
2) Base course shall be 5" thick Bituminous Aggregate Mixture (BAM) with composition as follows:
   IL-19.0 Bituminous Base Course, Superpave, N30, 2% air voids, maximum RAP allowed shall be 50%, PG 58-22. The BAM shall be allowed to cool for 24 hours prior to placement of the bituminous binder course. If BAM is not available, N50 binder shall be substituted.
3) Bituminous Binder Course shall be 2.5" thick with composition as follows:
   IL-19.0, Bituminous Concrete Binder Course, Superpave, N50, 4% air voids, maximum RAP allowed 25%, PG 64-22. The binder shall be allowed to cool for 24 hours prior to placement of the bituminous surface course.
4) Bituminous Surface Course shall be 1.5" thick with composition as follows:
   IL-12.5, Bituminous Concrete Surface Course, Superpave, N50 Mix D, 4% air voids, maximum RAP allowed 15%, PG 64-22.
5) A cross slope of 2% shall be maintained from the pavement centerline to the curb and gutter.
6) Curb and gutter and barrier curb shall be continuously reinforced with two #4 bars. Curing compound shall be applied after finishing. Winter protection per IDOT specifications shall be provided. If paved after October 1, the curing compound shall contain 25% sealer. Backfilling of curb or paving adjacent to curb, shall not commence within 72 hours of curb placement. Locations of water and sewer service lines shall be clearly marked on all new curbs. Testing of concrete shall be per IDOT standard. Results shall be provided to the City Engineer within 48 hours of testing.
7) A 1/2" fiber expansion joint shall be installed when the curb abuts a sidewalk or existing curb. Fiber expansion joints shall be excluded at handicap ramps abutting curb.
8) Curb and gutter and barrier curb shall have sawed contraction joints at maximum intervals of ten (10) feet. A 1/2" fiber expansion joint shall be installed at a maximum interval of sixty (60) feet. A 1/2" fiber expansion joint shall be used at 5 feet on both side of a curb line structure. Two 18" long, 1" diameter smooth steel dowel bars with greased caps shall be used at expansion joints.
9) All curbs shall be stamped with a "W" or "S" to identify water or sanitary lines, respectively.
10) Pavement subgrade shall be finished to ± 0.1 foot of design subgrade elevations.
11) The base course shall be cleaned and primed at the rate of 0.25 to 0.50 gallons per square yard with liquid asphalt conforming to IDOT standards and shall be appropriate for prevailing weather conditions.
12) Prior to placement of any public pavement including curbs, the subgrade and subbase shall be proof rolled with a fully loaded tandem axle dump truck (minimum 20 tons). Proof rolling shall be witnessed by the materials consultant and the engineering inspector. The density of the subbase material and bituminous materials shall be tested by the materials consultant. Provide a copy of the test results to the City Engineer within 48 hours of testing.
13) Structures within pavement areas shall be plated during paving operations (BAM & Binder)
14) All existing structures (manholes, catch basins, valve boxes, etc.) shall be adjusted to meet the final pavement or ground surface elevation as required.
15) Removal of all pavement, sidewalk and/or curb shall be accomplished by saw cutting in accordance with IDOT Standard Specifications.
16) Saw cutting of existing curb head to provide depressed curb at entrances is prohibited. The contractor shall saw cut existing curb at limits of work and replace with depressed curb at all entrances. Drill and dowel all new curb including depressed curb to existing curb as required.

Tree Planting

1) All City owned trees and shrubs shall be planted at the approval and direction of the City and in accordance with ANSI A300 (Part 6) latest edition. Contact Engineering & Forestry prior to selecting, planting, or trimming trees by calling 311 or (847) 931-6001.
2) All trees shall have a minimum diameter of 2"-2.5" measured 6" off of the ground, depending on species. Trees shall be placed no more than 40' apart on both sides of the street.
3) The following guidelines shall be followed when placing trees. No tree shall be planted closer than:
   10 feet from hydrants, driveways, b-boxes & underground utility structures
   15 feet from street lights
   50 feet of any right-of-way intersection
   100 feet from any traffic control device (traffic light)
   Additionally, trees may need to be withheld from corners where sound engineering practice requires longer sight lines.
4) Trees subject to disease or with fast growing brittle wood are prohibited. These include: American Elm, Chinese Elm, all species of ash, cottonwood, box elders, silver maples, female ginkgo, Bradford pear, poplars all varieties, Pin Oak, willows all varieties and evergreens. This list includes examples; additional species may be added as deemed necessary by the City of Elgin.
5) A full list of acceptable trees can be found on the City of Elgin Engineering Department website in the document center. The City reserves the right to remove any tree or individual variety from the list.
6) Trees selected for planting shall be locally grown within a 100 mile radius of the City of Elgin. They shall be true to species and variety specified by the City of Elgin planting list and shall be tagged with the scientific and common names. The contractor installing the trees shall supply the City with a letter stating where the trees were grown. They shall be healthy, free of insects and disease and shall conform to the American Association of Nurseryman's Standard for Nursery Stock ANSI Z 60.1 latest edition. The City reserves the right to tag trees in the ground.
7) In an effort to have greater diversity of planting, the following is the minimum requirement:

When planting:

1 to 3 trees	1 tree variety;
4 to 5 trees	2 different species from 2 different genera;
6 to 9 trees	3 different species from 2 different genera;
10 to 24 trees	4 different species from 3 different families;
25 to 49 trees families;	6 different tree species from 4 different genera and 3 different
50 or more trees species.	Max. of 25% from 1 family, 16% from 1 genus and 8% from 1

8) Trees in common areas of a subdivision shall be planted within one year of obtaining the first building permit.
9) Trees planted adjacent to constructed lots in a subdivision shall be planted within one year of occupancy.
10) Trees planted under utility wires shall be smaller stature when mature. Contact City of Elgin Forestry Department at (847) 931-6001 for a list of acceptable trees.
11) Trees determined to be unsatisfactory by the City of Elgin shall be required to be removed and replaced by the Contractor with the same or larger size tree and species originally planted, within thirty (30) days of written notification by the City of Elgin.
12) Trees shall be trimmed annually until accepted by the City. This trimming shall conform to ANSI Z133 and A300 latest edition. The goal is to prune for clearance, single leader, and long term tree health.
   a) Canopy elevations will be performed to improve the general appearance of the tree and the street, as well as to provide adequate clearance of the streets and sidewalks. State requirements shall be followed when applicable. Extreme care must be taken to maintain a visually aesthetic shape and appearance.
   b) All trees not posing a hazard to road traffic shall be elevated to an easy walking clearance of no less than ten (10) feet on sidewalks, curbs, and driveways, also providing access to and from parked cars.
   c) Trees on primary and secondary access roads shall be elevated to a height of no less than fourteen (14) feet over said road.
   d) All tree branches obstructing traffic control devices and signs shall be trimmed back to allow vehicular and pedestrian traffic a clear line of sight.
   e) All waterspouts, and trunk sprouts shall be removed from all main leaders from a tree if the sprout is lower than fifteen (15) feet from ground level.
   f) Three (3) feet of overhead clearance, and three (3) feet of side clearance will be trimmed away from any utility service line providing that the line is not an OSHA EHAP electrical hazard.
13) For Tree Pruning & Removal, contact Forestry at 311 for approval of all City owned trees.

Requirements for As-Built Record Drawings

1) The contractor shall maintain and keep at job site, an up to date set of "As-Built" drawings showing changes from original plans. These drawings shall include all public improvements and information for stormwater management areas.
2) "As-Built" drawings shall be submitted to the City Engineer in a pdf or other unalterable electronic format at the conclusion of the project, prior to any final inspections for their review. After approval of "As-Built" drawings, the developer/owner's engineer will transfer the information on original plans and furnish the City a final pdf version. Electronic media shall be sent via an online document sharing link.
3) Record drawings shall be submitted in plan form. Digital copies shall include a Title sheet, all Plan and Profile sheets, all overall plan sheets and all detail and note sheets. All sheets must be labeled "Record Drawing" with the date and engineers initials. The title sheet must have the engineer's seal and signature.
4) Record Drawings shall clearly show the following:

Watermain
   a) Rim elevations and numbering of valve vaults; breakaway flange elevation of fire hydrants; top of pipe elevations of watermain at valve boxes, vaults and every 50' between.
   b) Linear distance along watermain from appurtenance (i.e. valve vault to tee, tee to bend, bend to valve, etc.); also verification of pipe sizes installed.
   c) Horizontal ties to all valve vaults, boxes, hydrants and sampling stations (1 foot tolerances).
   d) Location of service connection along main, including horizontal ties on B-Box.
   e) Public irrigation systems including all valve vaults, location of sprinkler heads, RPZ, meters and piping.
   f) Casing locations tied to valve vaults.

Sanitary
   a) Rim elevations and numbering of manholes; invert elevation for all pipes in manholes; top of pipe elevations of sanitary forcemain at every structure, bend and at 50' intervals.
   b) Linear distance along sewer from structure to structure; also verification of pipe sizes and material installed.
   c) Recalculated pipe slopes based on invert to invert elevations along the linear distance between manholes.
   d) Service connections on the main line with distance to downstream manhole. Stub location at property line tied to property corner.

Storm
   a) Rim elevations and numbering of all structures including manholes, catch basins, inlets, end sections, and top and bottom of slope boxes, headwalls and other special structures; invert elevation for all pipes in all structures listed above including culverts.
   b) Linear distance along sewer or subdrain from structure to structure; also verification of pipe sizes and material installed.
   c) Recalculated pipe slopes based on invert to invert elevations along the linear distance between structures.
   d) All publicly and privately owned utility mains must be clearly labeled as such on the record drawing together with a note that states the agencies that will be responsible to own and maintain the utility mains.

Stormwater Management
   A topographical survey prepared by an Illinois Licensed Professional Engineer or Illinois Professional Land Surveyor of the following:
   a) Detention and retention basins, including spot elevations and grading contour lines to show those areas have been constructed in compliance with the approved engineering plans
   b) Constructed or regraded streams and channels.
   c) Overflow routes (including street areas that act as overflow routes) and verify all cross sections called out in the plans.
   d) Street depressions and parking lots which are planned detention areas.
   e) Permanent and/or temporary diversion berms, swales and control structures.
   f) Detail for outlet control structure.
   g) HWL numerically and graphically as a contour line.
   h) Invert elevation of the restrictor.
   i) A table for stormwater detention for the following values: detention volume required, detention volume proposed, detention volume provided, maximum allowable release rate, proposed release rate, and as-built release rate
   j) Detail for underground detention system, including critical elevations such as vault ceiling and floor.
   k) Record information for all public improvements within the stormwater management area must be depicted on the record drawings.

Miscellaneous
   a) Street light poles and cable locations. Please note power connection location also.
   b) Parkway tree locations with common name and trunk diameter measured 6" off the ground.
   c) Pavement centerline and top of curb elevations at intervals as necessary to easily identify location of the pavement and overflow locations.
   d) Any unusual conditions which may affect the public or private improvements such as field tiles.
   e) The engineer shall provide documentation regarding deviations from the plans. This may be done in letter form.
   f) Engineer's Statement to be included on record drawing:

ENGINEER'S STATEMENT OF PUBLIC IMPROVEMENTS -
RECORD DRAWINGS
CONSTRUCTED PER PLANS

Pursuant to Elgin Municipal Code 18.20.050, I, _______________, a licensed Professional Engineer in the State of Illinois, Hereby declare that these record drawings pertaining to water main, sanitary sewer, storm sewer, detention basin grades have been prepared for a certain project known as ____________________ and contain information as obtained by the surveyor ____________________. It is my professional opinion that the furnished information regarding completed construction, as reflected on these plans, is in general conformance with the approved plans and specifications for this project.

Date ________________________
Signed _______________________
Illinois License Number: ______________
My License expires on ______________________

Note:
The City of Elgin may be reached during regular business hours by dialing 311 within the city limits or 847-931-6001 outside of Elgin.

General questions or requests may also be e-mailed to elgin311@cityofelgin.org

ENGINEERING DEPARTMENT
CITY OF ELGIN
1900 Holmes Road
Elgin, IL 60123
www.cityofelgin.org
Phone: 847-931-6001

GENERAL NOTES

ELGIN THE CITY IN THE SUBURBS

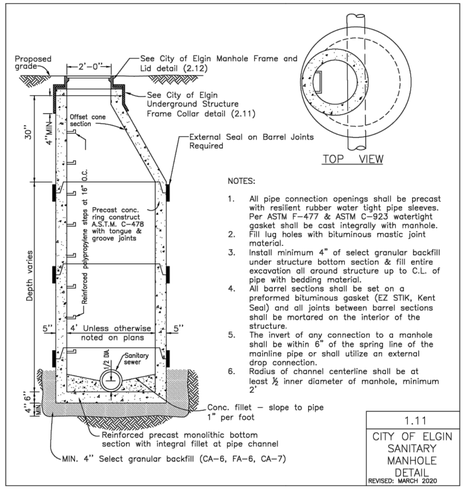
PROJ. MGR.:
PROJ. ENG.:
DRAWN BY: M.L.H.
CHECKED BY:
DATE: 01-13-04
SCALE: N.T.S.
SHEET 1 OF 1

#	DATE	REMARKS
1	3-20-24	PER FRWRD REVIEW
2	5-21-24	PER CITY REVIEW

SCHEFLOW engineers
1814 GRANDSTAND PLACE
ELGIN, ILLINOIS 60123
phone 847.697.7095
fax 847.697.7099
scheflowеng.com
Firm License No. 184-001104

ELGIN ILLINOIS
1260, 1262, 1264 CEDAR AVE
CITY OF ELGIN
GENERAL NOTES

SCALE	DATE
NONE	5/21/24
DRAWN BY	JOB NO.
AI	6007
CHECKED BY	SHEET NO.
FCC	7 of 10



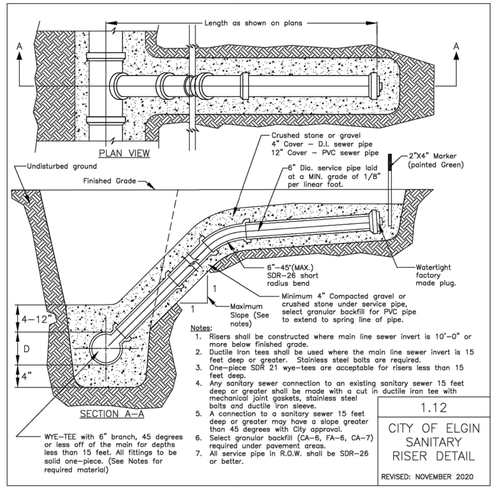
NOTES:

1. All pipe connection openings shall be precast with resilient rubber water tight pipe sleeves. Per ASTM F-477 & ASTM C-923 watertight gasket shall be cast integrally with manhole.
2. Fill lug holes with bituminous mastic joint material.
3. Install minimum 4" of select granular backfill under structure bottom section & fill entire excavation all around structure up to C.L. of pipe with bedding material.
4. All barrel sections shall be set on a preformed bituminous gasket (EZ STIK, Kent Seal) and all joints between barrel sections shall be mortared on the interior of the structure.
5. The invert of any connection to a manhole shall be within 6" of the spring line of the mainline pipe or shall utilize an external drop connection.
6. Radius of channel centerline shall be at least ½ inner diameter of manhole, minimum 2'

1.11

CITY OF ELGIN SANITARY MANHOLE DETAIL

REVISED: MARCH 2020



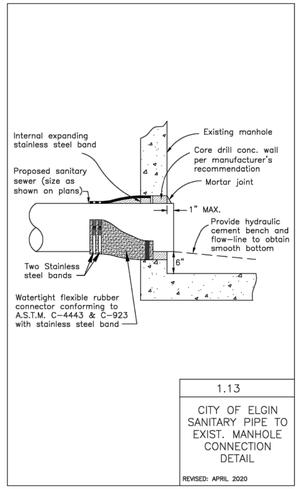
Notes:

1. Risers shall be constructed where main line sewer invert is 10'–0" or more below finished grade.
2. Ductile iron tees shall be used where the main line sewer invert is 15 feet deep or greater. Stainless steel bolts are required.
3. One–piece SDR 21 wye–tees are acceptable for risers less than 15 feet deep.
4. Any sanitary sewer connection to an existing sanitary sewer 15 feet deep or greater shall be made with a cut in ductile iron tee with mechanical joint gaskets, stainless steel bolts and ductile iron sleeve.
5. A connection to a sanitary sewer 15 feet deep or greater may have a slope greater than 45 degrees with City approval.
6. Select granular backfill (CA–6, FA–6, CA–7) required under pavement areas.
7. All service pipe in R.O.W. shall be SDR–26 or better.

1.12

CITY OF ELGIN SANITARY RISER DETAIL

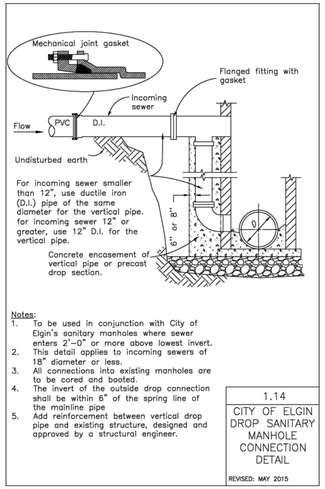
REVISED: NOVEMBER 2020



1.13

CITY OF ELGIN SANITARY PIPE TO EXIST. MANHOLE CONNECTION DETAIL

REVISED: APRIL 2020



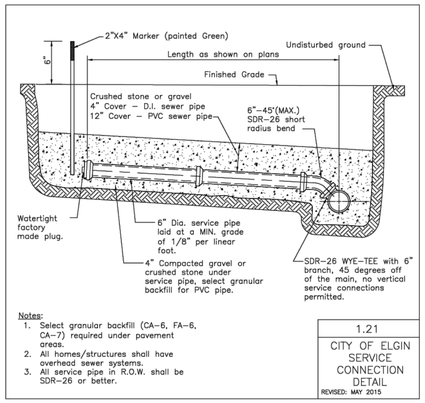
Notes:

1. To be used in conjunction with City of Elgin's sanitary manholes where sewer enters 2'–0" or more above lowest invert.
2. This detail applies to incoming sewers of 18" diameter or less.
3. All connections into existing manholes are to be cored and booted.
4. The invert of the outside drop connection shall be within 6" of the spring line of the mainline pipe
5. Add reinforcement between vertical drop pipe and existing structure, designed and approved by a structural engineer.

1.14

CITY OF ELGIN DROP SANITARY MANHOLE CONNECTION DETAIL

REVISED: MAY 2015



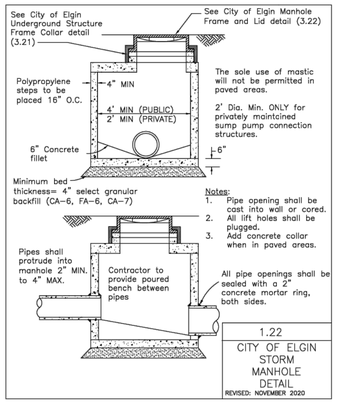
Notes:

1. Select granular backfill (CA–6, FA–6, CA–7) required under pavement areas.
2. All homes/structures shall have overhead sewer systems.
3. All service pipe in R.O.W. shall be SDR–26 or better.

1.21

CITY OF ELGIN SERVICE CONNECTION DETAIL

REVISED: MAY 2015



The sole use of mastic will not be permitted in poved areas.

2' Dia. Min. ONLY for privately maintcined sump pump connection structures.

Notes:

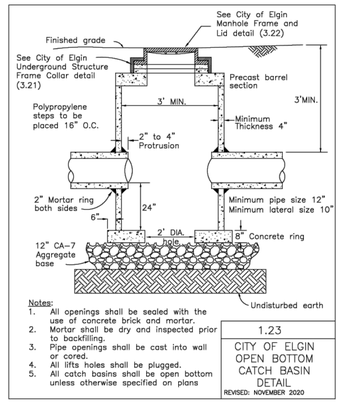
1. Pipe opening shall be cast into wall or cored.
2. All lift holes shall be plugged.
3. Add concrete collar when in paved areas.

All pipe openings shall be sealed with a 2" concrete mortar ring, both sides.

1.22

CITY OF ELGIN STORM MANHOLE DETAIL

REVISED: NOVEMBER 2020



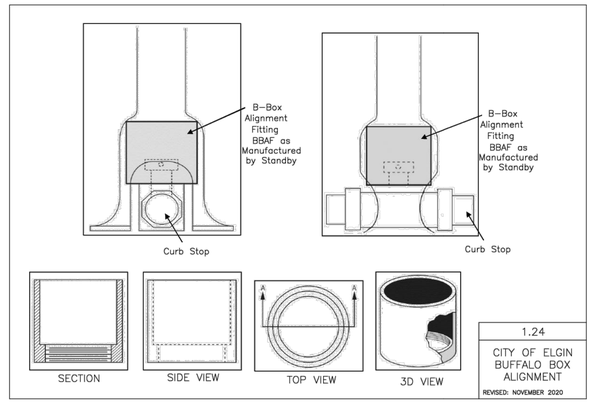
Notes:

1. All openings shall be sealed with the use of concrete brick and mortar.
2. Mortar shall be dry and inspected prior to backfilling.
3. Pipe openings shall be cast into wall or cored.
4. All lifts holes shall be plugged.
5. All catch basins shall be open bottom unless otherwise specified on plans

1.23

CITY OF ELGIN OPEN BOTTOM CATCH BASIN DETAIL

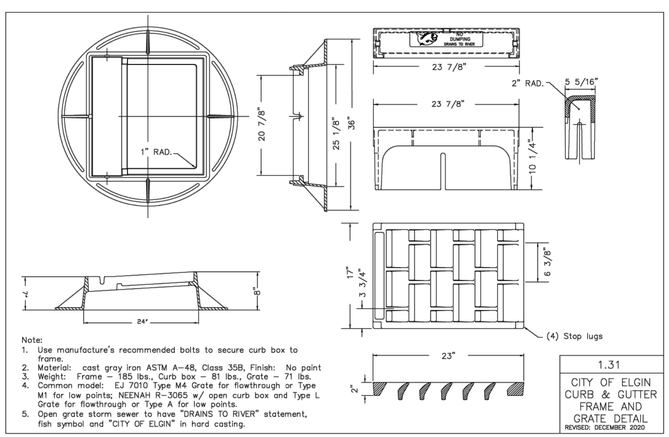
REVISED: NOVEMBER 2020



1.24

CITY OF ELGIN BUFFALO BOX ALIGNMENT

REVISED: NOVEMBER 2020



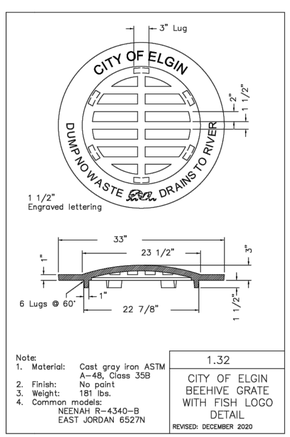
Note:

1. Use manufacture's recommended bolts to secure curb box to frame.
2. Material: cast gray iron ASTM A–48, Class 35B, Finish: No paint
3. Weight: Frame – 185 lbs., Curb box – 81 lbs., Grate – 71 lbs.
4. Common model: EJ 7010 Type M4 Grate for flowthrough or Type M1 for low points; NEENAH R–3065 w/ open curb box and Type L Grate for flowthrough or Type A for low points.
5. Open grate storm sewer to have "DRAINS TO RIVER" statement, fish symbol and "CITY OF ELGIN" in hard casting.

1.31

CITY OF ELGIN CURB & GUTTER FRAME AND GRATE DETAIL

REVISED: DECEMBER 2020



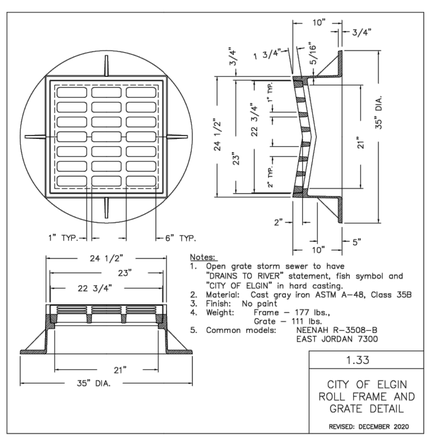
Note:

1. Material: Cast gray iron ASTM A–48, Class 35B
2. Finish: No paint
3. Weight: 181 lbs.
4. Common models: NEENAH R–4340–B EAST JORDAN 6527N

1.32

CITY OF ELGIN BEEHIVE GRATE WITH FISH LOGO DETAIL

REVISED: DECEMBER 2020



Notes:

1. Open grate storm sewer to have "DRAINS TO RIVER" statement, fish symbol and "CITY OF ELGIN" in hard casting.
2. Material: Cast gray iron ASTM A–48, Class 35B
3. Finish: No paint
4. Weight: Frame – 177 lbs., Grate – 111 lbs.
5. Common models: NEENAH R–3508–B EAST JORDAN 7300

1.33

CITY OF ELGIN ROLL FRAME AND GRATE DETAIL

REVISED: DECEMBER 2020

#	DATE	REVISIONS	DRAWN BY	CHECK BY
	12/22/2020	WATER DEPARTMENT – CHANGES TO 3.13	BS	AD
	06/23/2021	ADD. 3.34 UNDERDRAIN DETAIL	BS	AD

STANDARD DETAILS

CITY OF ELGIN
ENGINEERING DEPARTMENT
1900 Holmes Road
Elgin, IL 60123
Phone: 847-931-6100
Fax: 847-931-5965
www.cityofelgin.org

PROJ. MGR.:
PROJ. ENG.:
DRAWN BY: BAS
CHECKED BY:
DATE: 12-04-20
SCALE: N.T.S.

SHEET 1 OF 3

#	DATE	REMARKS
1	3-20-24	PER FRWRD REVIEW
2	5-21-24	PER CITY REVIEW

SCHEFLOW engineers
1814 GRANDSTAND PLACE
ELGIN, ILLINOIS 60123
phone 847.697.7095
fax 847.697.7099
schefloweng.com
Firm License No. 184–001104

ELGIN ILLINOIS

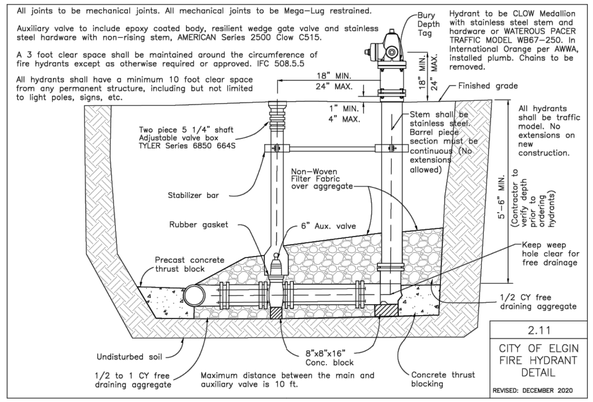
1260, 1262, 1264 CEDAR AVE
CITY OF ELGIN

DETAILS SHEET 1

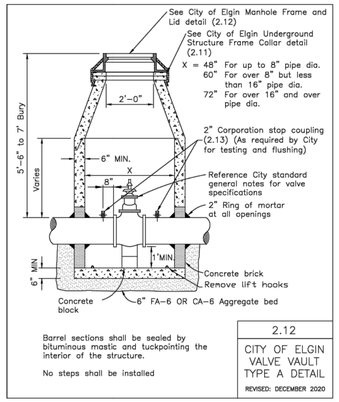
SCALE	DATE
NONE	5/21/24
DRAWN BY	JOB NO.
PCS	6007
CHECKED BY	SHEET NO.
FCC	8 of 10

6007

6007



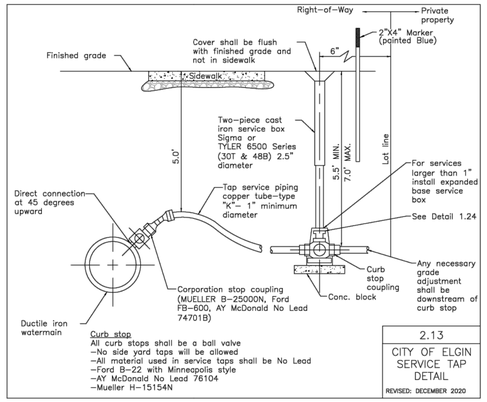
2.11
CITY OF ELGIN
FIRE HYDRANT
DETAIL
REVISED: DECEMBER 2020



Barrel sections shall be sealed by bituminous mastic and tuckpointing the interior of the structure.

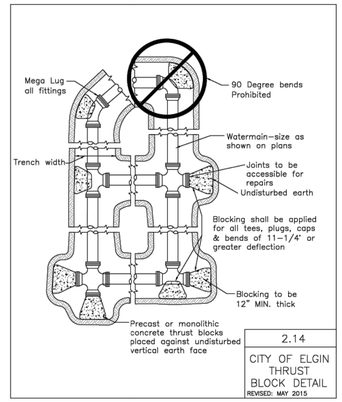
No steps shall be installed

2.12
CITY OF ELGIN
VALVE VAULT
TYPE A DETAIL
REVISED: DECEMBER 2020

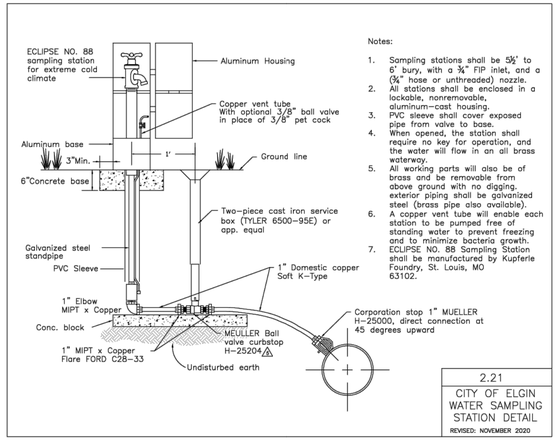


Curb stop
All curb stops shall be a ball valve
-No side yard taps will be allowed
-All material used in service taps shall be No Lead
-Ford B-22 with Minneapolis style
-AY McDonald No Lead 76104
-Mueller H-15154N

2.13
CITY OF ELGIN
SERVICE TAP
DETAIL
REVISED: DECEMBER 2020

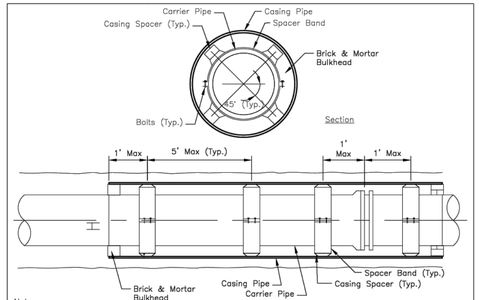


2.14
CITY OF ELGIN
THRUST
BLOCK DETAIL
REVISED: MAY 2015



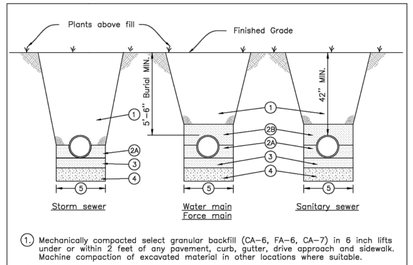
Notes:
1. Sampling stations shall be 5½' to 6' bury, with a ¾" FIP inlet, and a (¾" hose or unthreaded) nozzle.
2. All stations shall be enclosed in a lockable, nonremovable, aluminum-cast housing.
3. PVC sleeve shall cover exposed pipe from valve to base.
4. When opened, the station shall require no key for operation, and the water will flow in an all brass waterway.
5. All working parts will also be of brass and be removable from above ground with no digging. exterior piping shall be galvanized steel (brass pipe also available).
6. A copper vent tube will enable each station to be pumped free of standing water to prevent freezing and to minimize bacteria growth.
7. ECLIPSE NO. 88 Sampling Station shall be manufactured by Kupferle Foundry, St. Louis, MO 63102.

2.21
CITY OF ELGIN
WATER SAMPLING
STATION DETAIL
REVISED: NOVEMBER 2020



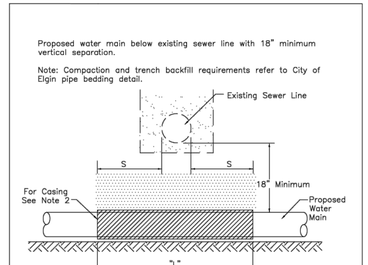
Notes:
1. Use restrained joint carrier pipe through casing pipe.
2. Casing pipe must be new smooth wall, welded steel pipe fabricated from ASTM A36 plate or ASTM A570 sheet with a minimum yield point of 36,000 PSI per AWWA C200. Minimum wall thickness under roadways shall be 0.344 inches.
3. All joints in casing pipe shall be field welded to conform to API 1104 or AWWA C206. Clean joints to SSPC-SP3 and apply iron oxide field coating to all exterior joints after field welding. Clean to SSPC-SP3 and apply iron oxide field coating to all interior joints on casing pipe 24-inch diameter and larger after field welding.
3. Exterior and interior of all casing pipe will be coated with iron oxide primer applied at a minimum of 1.5 mils thick. Hold coating back from end joints to be welded a minimum of 2 inches each side of joint.
4. All carrier pipe will be installed through casing pipe with casing spacers. Casing spacers shall be stainless steel with plastic runners. Casing spacers shall be cascade waterworks style CCS.

2.22
CITY OF ELGIN
CASING PIPE
DETAIL
REVISED: DECEMBER 2020



1. Mechanically compacted select granular backfill (CA-6, FA-6, CA-7) in 6 inch lifts under or within 2 feet of any pavement, curb, gutter, drive approach and sidewalk. Machine compaction of excavated material in other locations where suitable.
2. Storm sewer:
   A) Haunching, select granular backfill tamped into place up to spring line of pipe
   B) Initial backfill, select granular backfill tamped into place up to 12" above top of pipe.
3. 4" MIN. bed mechanically compacted select granular backfill.
4. Unsuitable material to be removed and replaced with select granular backfill.
5. Trench width per IDOT standards.

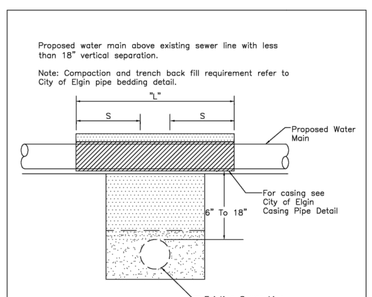
2.23
CITY OF ELGIN
PIPE BEDDING
DETAIL
REVISED: MAY 2015



Note: "S" the length necessary to provide 10 feet of separation as measured perpendicular to the outside of existing sewer line pipe.

Notes:
1. Provide adequate support for existing sewer line to prevent damage due to settlement.
2. Use "L" for casing of proposed water main and seal ends of casing per City of Elgin casing pipe detail.

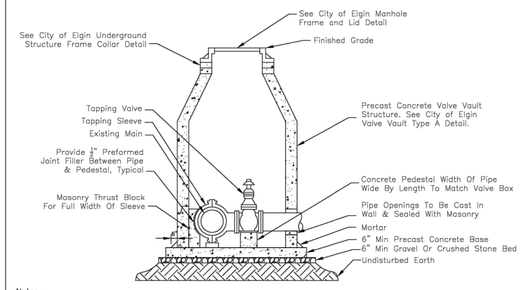
2.24
CITY OF ELGIN
WATER MAIN
PROTECTION AT
PIPE CROSSINGS
REVISED: OCTOBER 2017



Note: "S" the length necessary to provide 10 feet of separation as measured perpendicular to the outside of existing sewer line pipe.

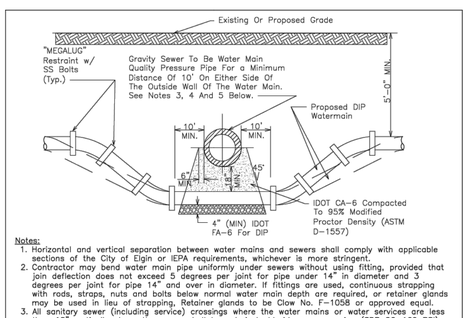
Notes
1. Use "L" feet for casing of proposed water main and seal ends of casing per City of Elgin casing pipe detail.
2. Point loads shall not be allowed between water main casing and sewer.

2.31
CITY OF ELGIN
WATER MAIN
PROTECTION AT
PIPE CROSSINGS
REVISED: DECEMBER 2020



Notes:
1. Tapping sleeves shall be cascade CST-EX, Smith-Blair, or Ford FTSS all stainless steel style conforming to MSS-SP112. All stainless steel sleeves must be constructed entirely of T-304 stainless steel including flange, fasteners, and test plugs. All sleeves must be equipped with ¾ - inch test plugs to allow seal testing prior to tapping.
2. Tapping valves shall conform to ANSI/AWWA C-515 and shall have one flange connection with raised set ring conforming to MSS-SP60 and one Mechanical Joint Connection. Acceptable tapping valve brands are Clow and Waterous.
3. Pressure connections between pipes of the same diameter will not be allowed without City of Elgin approval.
4. Four inch taps and greater shall be made through a resilient wedge tapping valve and a tapping sleeve.
5. All pressure connections must be enclosed in a pre-cast concrete vault.

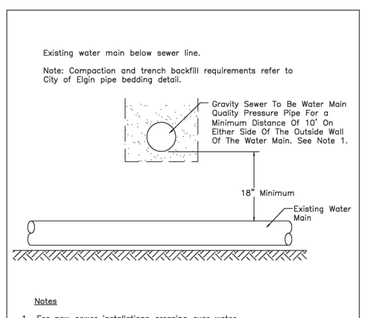
2.32
CITY OF ELGIN
PRESSURE
CONNECTION
DETAIL
REVISED: DECEMBER 2020



Notes:
1. Horizontal and vertical separation between water mains and sewers shall comply with applicable sections of the City of Elgin or IEPA requirements, whichever is more stringent.
2. Contractor may bend water main pipe uniformly under sewers without using fitting, provided that join deflection does not exceed 5 degrees per joint for pipe under 14" in diameter and 3 degrees per joint for pipe 14" and over in diameter. If fittings are used, continuous strapping with rods, straps, nuts and bolts below normal water main depth are required, or retainer glands may be used in lieu of strapping. Retainer glands to be Clow No. F-1058 or approved equal.
3. All sanitary sewer (including service) crossings where the water mains or water services are less than 18" vertically above the sewer shall be polyvinyl chloride pressure pipe (SDR 26-160 PSI) and shall conform with the latest revision of ASTM D-2241. Joints shall conform to ASTM D-3139 and elastometric gaskets shall conform to ASTM F-477. The same pipe and joint materials shall be used whenever water main crosses below the sewer.
4. All storm sewer (including service) crossings where the water mains are less than 18" vertically above the sewer shall be reinforced concrete pipe, ASTM C-361, Class D-25, with bell and spigot joints. The same pipe and joint material shall be used whenever water main crosses below the sewer.
5. For new sewer installations crossing over water mains, the entire run of new sewer shall be water main quality pipe, extending from structure to structure on each side of the crossing.

NOT TO SCALE

2.33
CITY OF ELGIN
WATER MAIN
CROSSING DETAIL
REVISED: DECEMBER 2020



Notes
1. For new sewer installations crossing over water mains, the entire run of new sewer shall be water main quality pipe, extending from structure to structure on each side of the crossing.

NOT TO SCALE

2.34
CITY OF ELGIN
WATER MAIN
CROSSING DETAIL
REVISED: DECEMBER 2020

DRAWN BY: BS
CHECK BY: AD

DATE	REVISIONS
12/22/2020	WATER DEPARTMENT - CHANGES TO 2.12
05/29/2021	ADD 2.24 WATERMAIN DETAIL

STANDARD DETAILS

CITY OF ELGIN
ENGINEERING DEPARTMENT
1900 Holmes Road
Elgin, IL 60123
Phone: 847-931-6100
Fax: 847-931-5965
www.cityofelgin.org

ELGIN THE CITY ON THE SUBLIME

PROJ. MGR.:
PROJ. ENG.:
DRAWN BY: BAS
CHECKED BY:
DATE: 12-04-20
SCALE: N.T.S.

SHEET 2 OF 3

#	DATE	REMARKS
1	3-20-24	PER FRWRD REVIEW
2	5-21-24	PER CITY REVIEW

SCHEFLOW engineers
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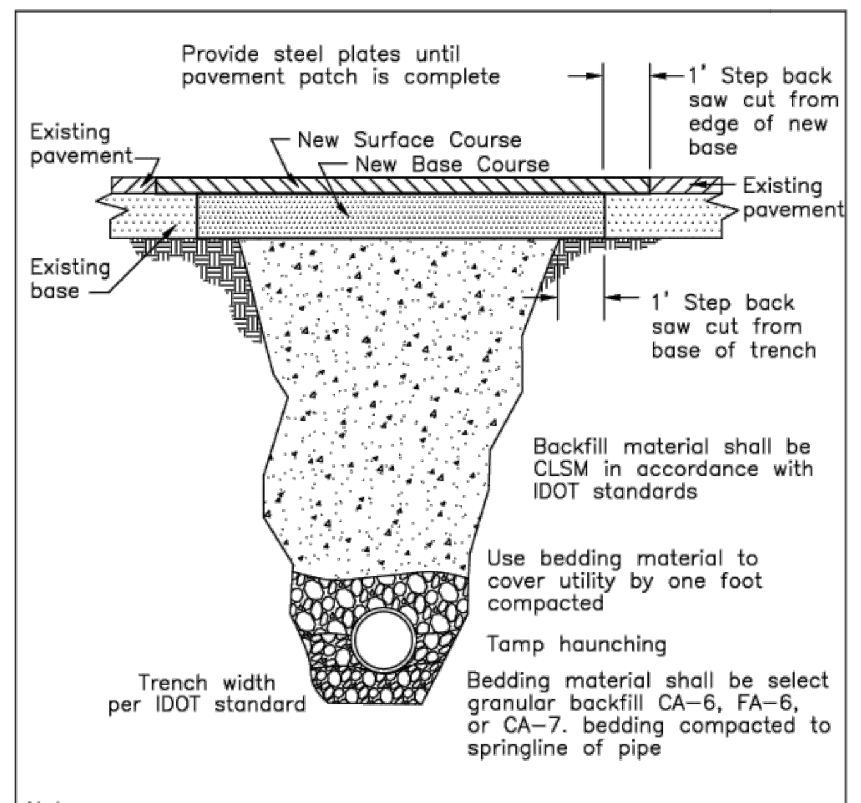
schefloweng.com
Firm License No. 184-001104

ELGIN ILLINOIS
1260, 1262, 1264 CEDAR AVE
CITY OF ELGIN
DETAILS SHEET 2

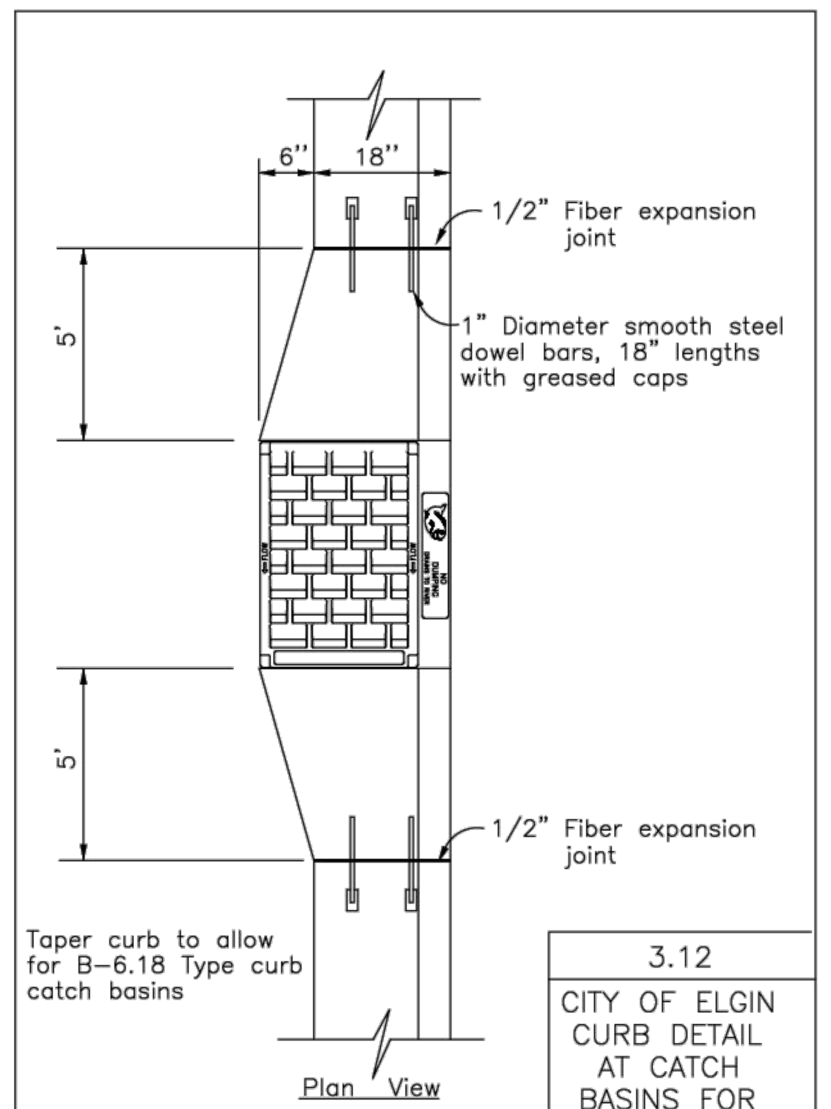
SCALE	DATE
NONE	5/21/24
DRAWN BY	JOB NO.
PCS	6007
CHECKED BY	SHEET NO.
FCC	9 of 10

6007

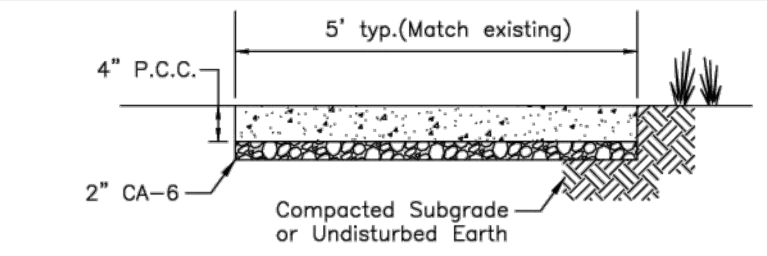


Notes:
1. All saw cuts shall be full depth
2. For concrete/brick base streets, repair of pavement shall include PCC base equal or greater thickness than existing with a 6" MIN. 2-1/2" binder course followed by a 1-1/2" surface course.
3. For all other base types the street repair shall be the same except the pcc base shall be replaced with a bituminous base course.
4. No blocking for pipe construction shall be left under pipe

3.11
CITY OF ELGIN STREET CUT REPAIR STANDARD
REVISED: MARCH 2020



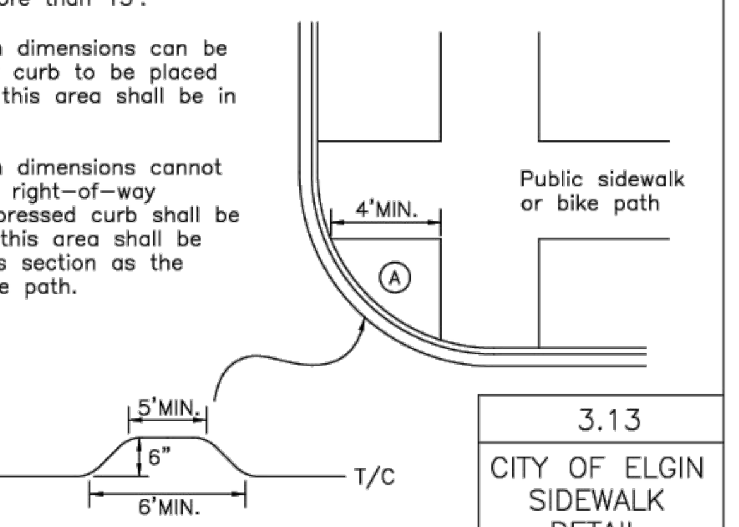
3.12
CITY OF ELGIN CURB DETAIL AT CATCH BASINS FOR B-6.12 C&G
REVISED: MAY 2015



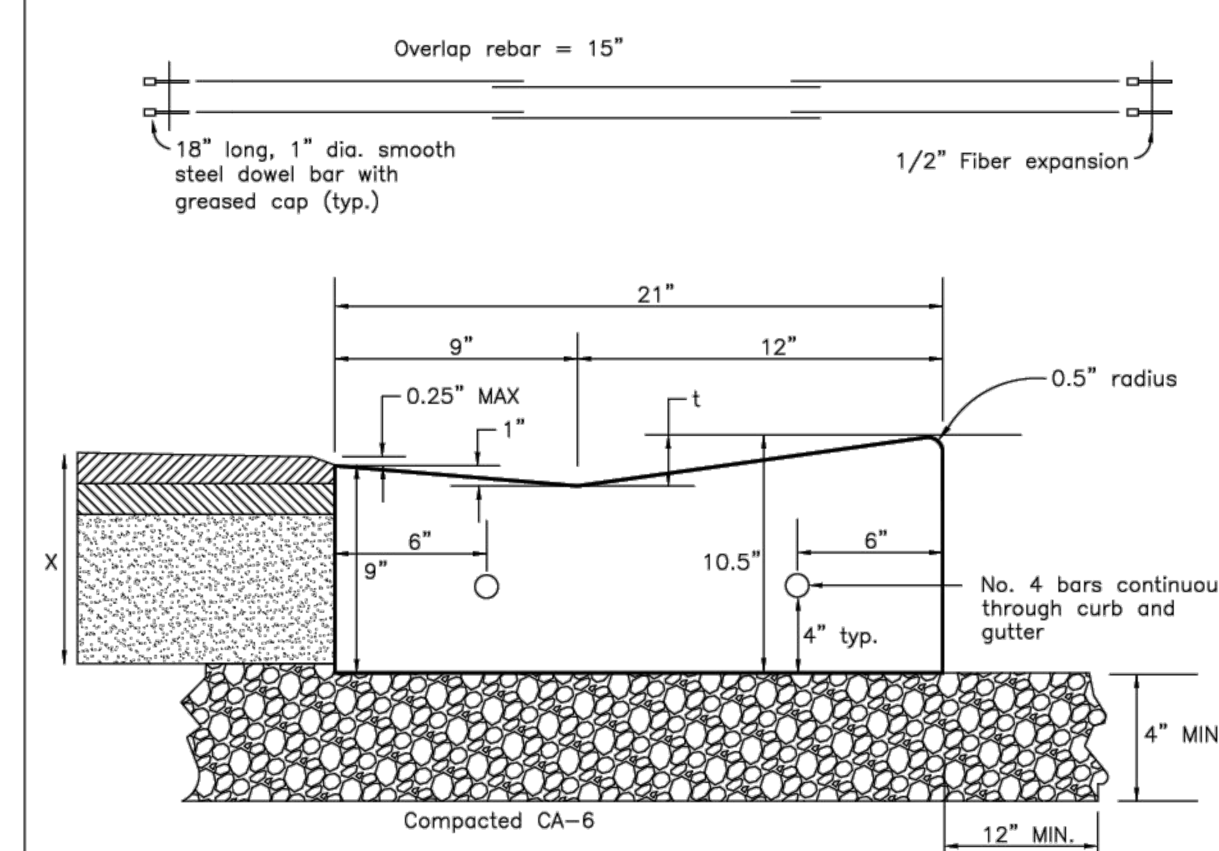
Notes:
1. Expansion joints located at 50' o.c. using full depth 1/2" pre-molded expansion joint filler recessed 1/2" from the surface
2. 1/2" tooled contraction joints located at 5' o.c.
3. Concrete to be IDOT approved 6.1 bag mix with light broom finish in direction of sidewalk width
4. All sidewalk not to exceed 2% cross slope and meet current ADA requirements
5. Use two (2) #4 reinforcing bars across utility trenches with a 2' overhang outside the trench limits
6. Dowel two (2) #4 reinforcing bars when tieing into existing.
7. Expansion joints located on one side for replacements less than 15', both sides for replacements more than 15'.

(A) If the minimum dimensions can be met for barrier curb to be placed at the corner, this area shall be in grass.

If the minimum dimensions cannot be met due to right-of-way restrictions, depressed curb shall be continued and this area shall be the same cross section as the sidewalk or bike path.



3.13
CITY OF ELGIN SIDEWALK DETAIL
REVISED: APRIL 2020



t = Standard curb 2.50"
Handicap ramp 1.00"
X = 1 ½" Surface course
2 ½" Binder course
5" B.A.M. course

Notes:
1. Contraction joints to be tooled or sawcut every 10'
2. Fiber expansion joints to be placed every 60' (every 3rd rebar of 20' length) use ½" expansion material full depth with two – 18" long, 1" dia. smooth steel dowel bars with greased caps.

3.14
CITY OF ELGIN B-MODIFIED CURB DETAIL
REVISED: MAY 2015

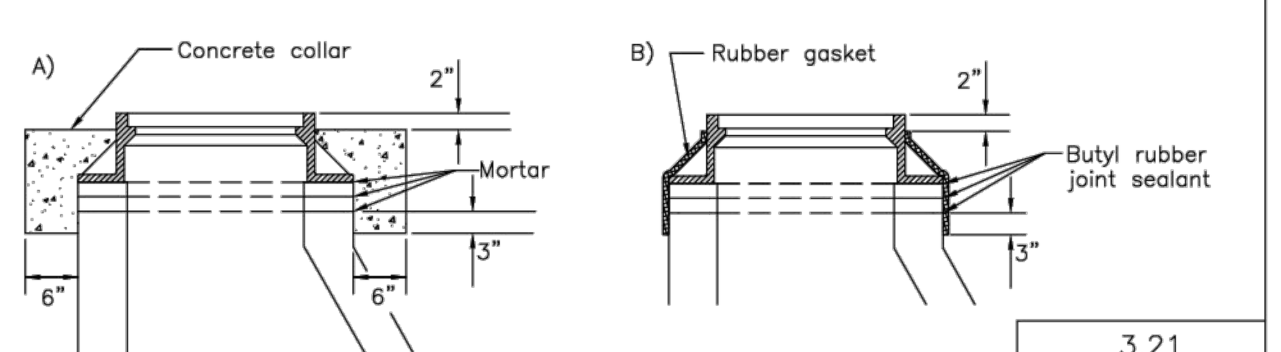
The City of Elgin Engineering Department has observed problems with the structural integrity of storm, sanitary and water structures. The adjusting ring and frames of these structures are occasionally displaced by surrounding construction operations, after the underground contractor has placed and sealed them. As a result, the displaced frames and adjusting rings lose the water tight nature of the structure and allows sub-base material to penetrate the structure leaving an underground void that creates damaging settlement including potholes.

This detail illustrates the policy for frames and adjusting rings required as part of the City of Elgin Engineering and Construction Standards.

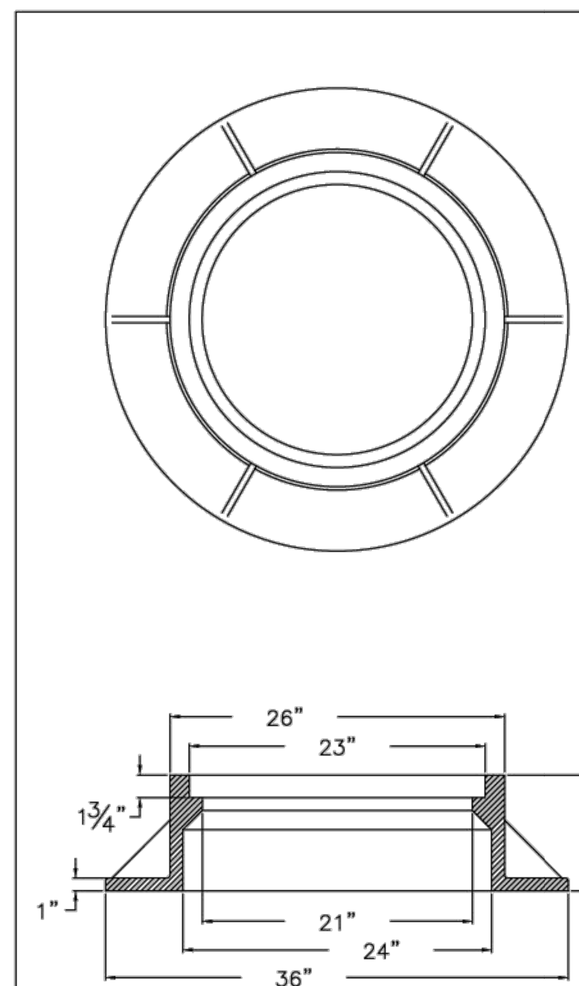
General
1. Adjusting rings and frames shall be aligned.
2. Adjusting rings shall be free of any cracks, chips and damage
3. Maximum adjusting height shall be 12" for storm and water structures and 8" for sanitary structures.
4. Minimum number of adjusting rings shall be used. Maximum of two (2).

A) All public and private utilites in hard surface areas (right of way or easements)
5. Adjusting rings and frames shall be set in place on full mortar bed.
6. A 6" wide concrete collar shall be installed from 3" below lowest ring to 2" below finish grade of top of frame in all water and sewer structures.

B) All public and private utilities in landscaped areas
7. Adjusting rings and frames shall be set in place with a butyl rubber joint sealant (EZ STICK, Kent Seal).
8. An exterior rubber gasket shall be installed from 3" below lowest ring to 2" top of frame over all adjusting rings.

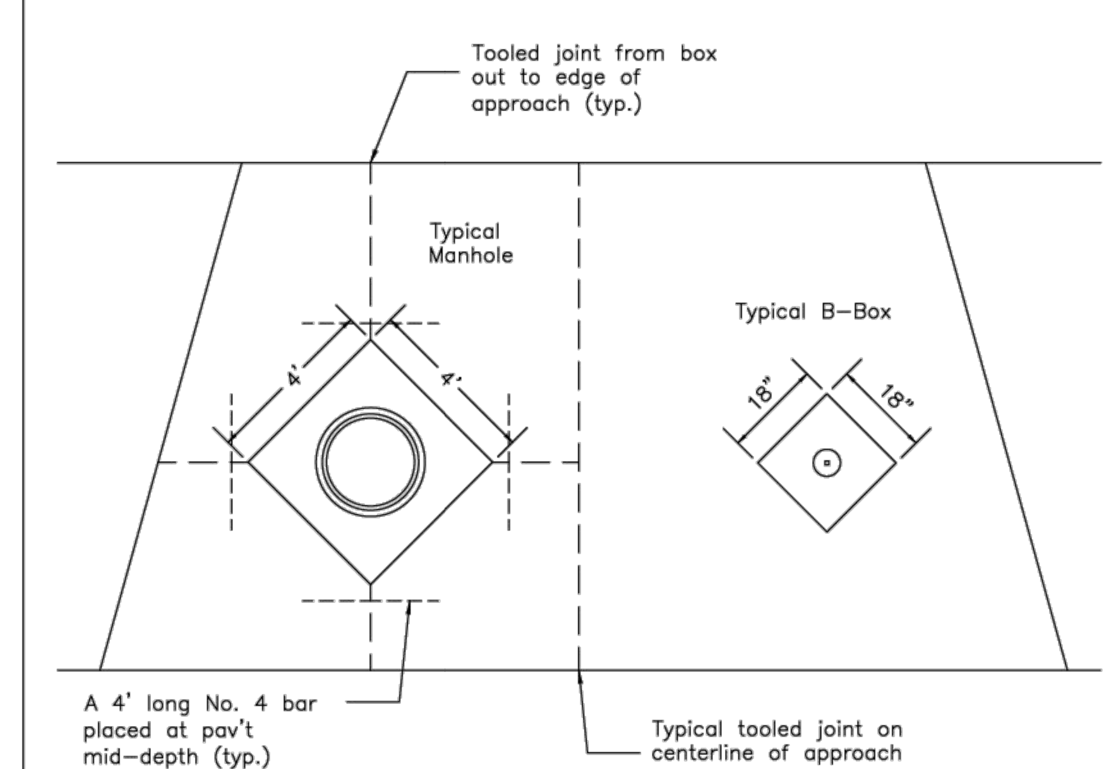


3.21
CITY OF ELGIN UNDERGROUND STRUCTURE FRAME COLLAR
REVISED: MAY 2015



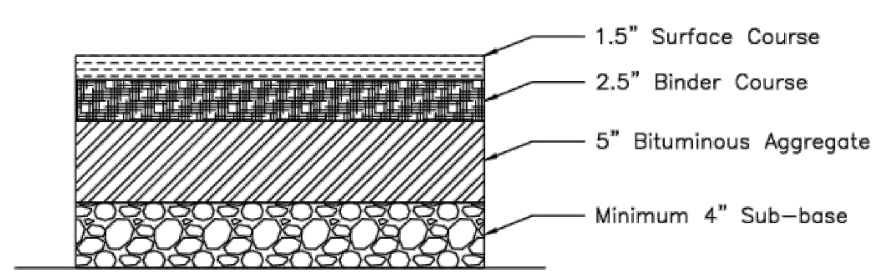
NOTES:
1. Material is cast gray iron ASTM A-48, Class 35B with non-painted finish.
2. Frame = 370 lbs. or greater.
3. Lid = 180 lbs. or greater.
4. Closed lids to have blind pick hole and machined horizontal bearing surface and:
   a. Sanitary manholes to have self sealing lid or gasket sealed cover, and to have "SANITARY" cast in lid.
   b. Valve vaults to have "WATER" cast in lid.
   c. Storm manholes to have "STORM" cast in lid.
   d. "City of Elgin" shall be cast in all lids.
5. Open grate storm sewer to have "DRAINS TO RIVER" statement and fish symbol cast into grate.
6. Common model: NEENAH R-1712
7. Sanitary frames shall be bolt-down (NEENAH R-1915-J or equal) in floodplain or flood prone areas.

3.22
CITY OF ELGIN MANHOLE FRAME AND LID DETAIL
REVISED: MARCH 2020



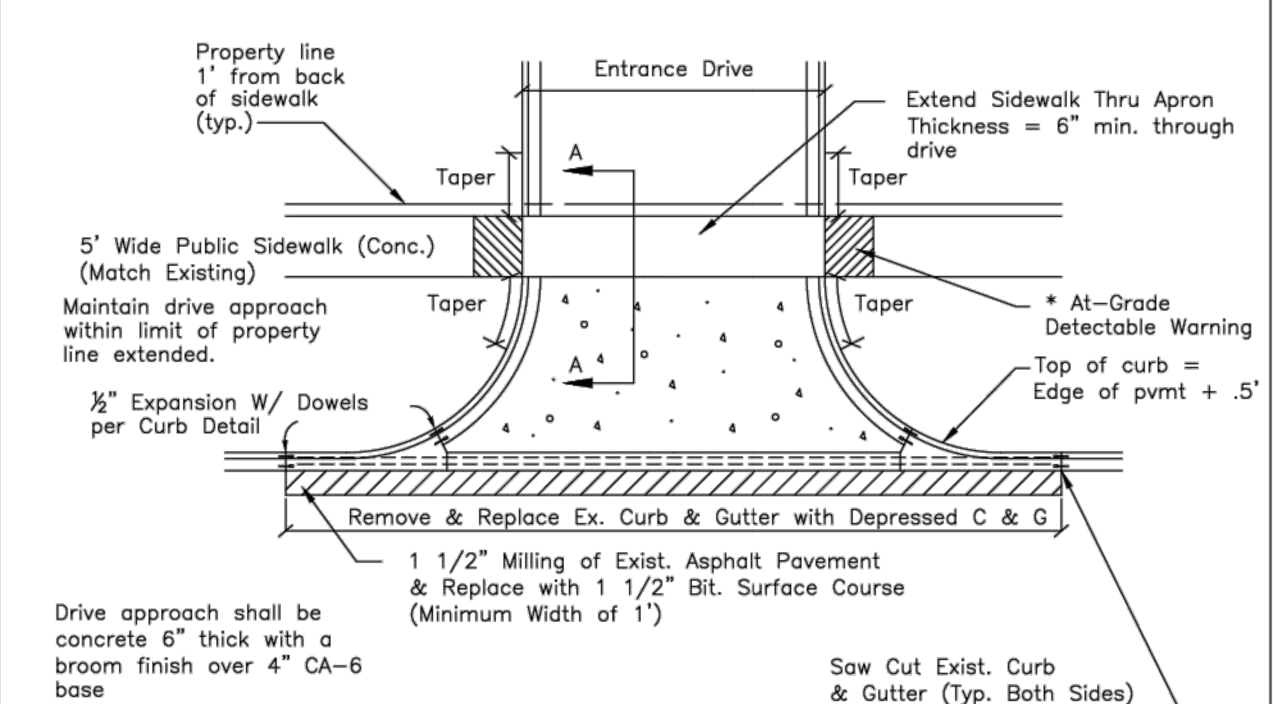
Notes:
1/2" Fiber expansion material on all faces of box out. B-box, manhole frame or other structure frame shall be flush with top of concrete approach.

3.23
CITY OF ELGIN STRUCTURE BOX OUT DETAIL
REVISED: MAY 2015

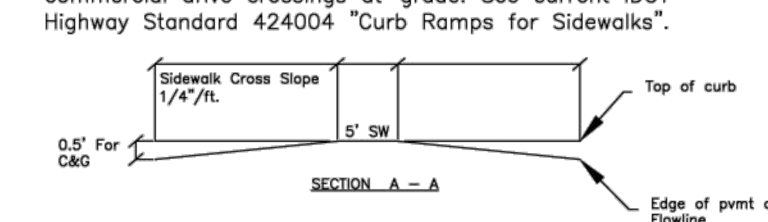


Notes:
1. Sub-base course shall be compacted CA-6, aggregate type B, conforming to IDOT requirements.
2. Base course shall be Bituminous Aggregate Mixture (BAM) IDOT IL-19.0 Bituminous Base Course, Superpave, N30, 2% air voids, maximum RAP allowed shall be 50%, PG 58-22. The BAM shall be allowed to cool for 24 hours prior to placement of the bituminous binder course. If BAM is not available, N50 binder shall be substituted.
3. Bituminous Binder Course shall be IDOT IL-19.0, Bituminous Concrete Binder Course, Superpave, N50, 4% air voids, maximum RAP allowed shall be 25%, PG 64-22. The binder shall be allowed to cool for 24 hours prior to placement of the bituminous surface course.
4. Bituminous Surface Course shall be IDOT IL-12.5, Bituminous Concrete Surface Course, Superpave, N50 Mix D, 4% air voids, maximum RAP allowed shall be 15%, PG-22.

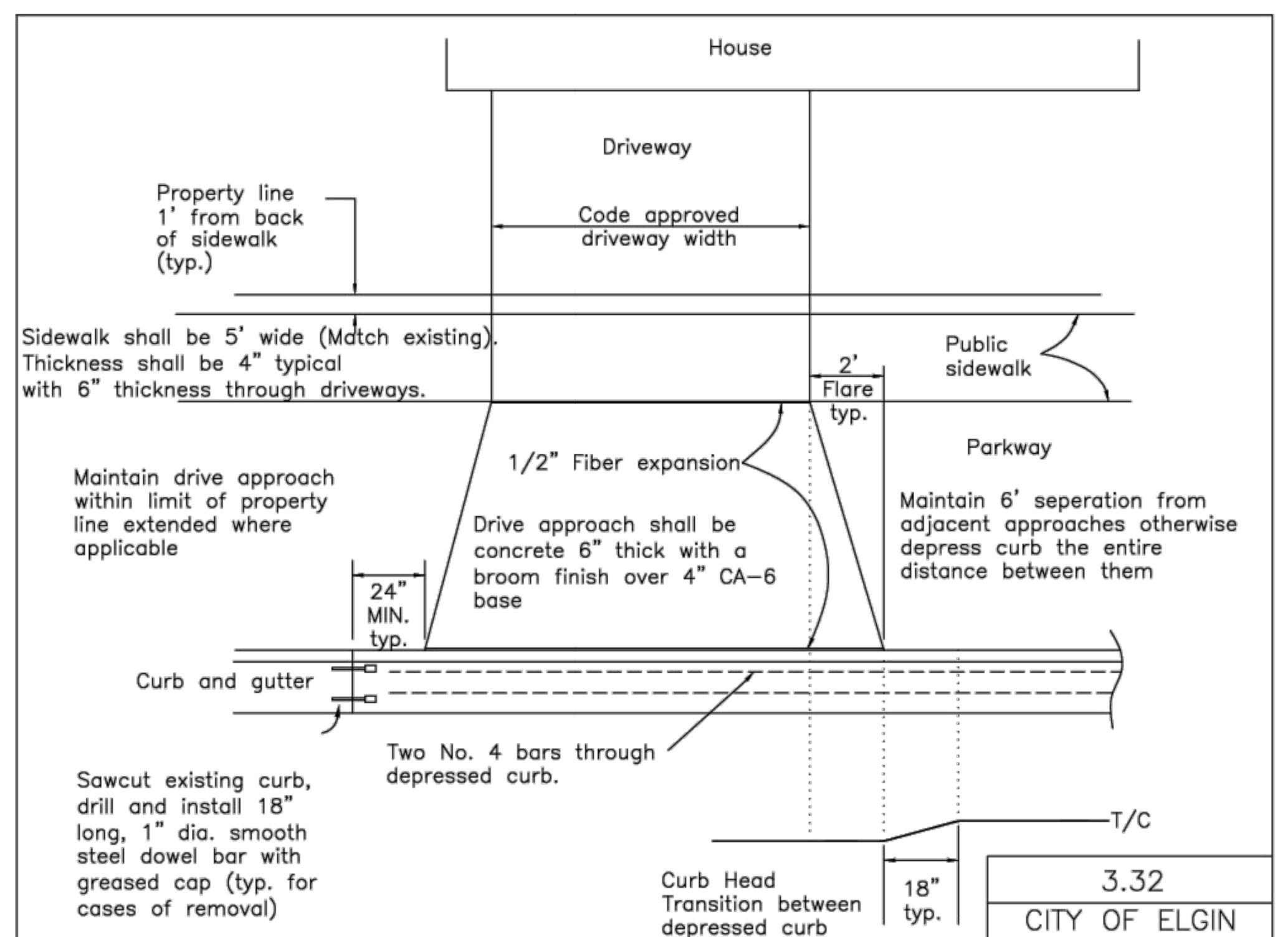
3.24
CITY OF ELGIN MINIMUM PAVEMENT DETAIL
REVISED: NOVEMBER 2020



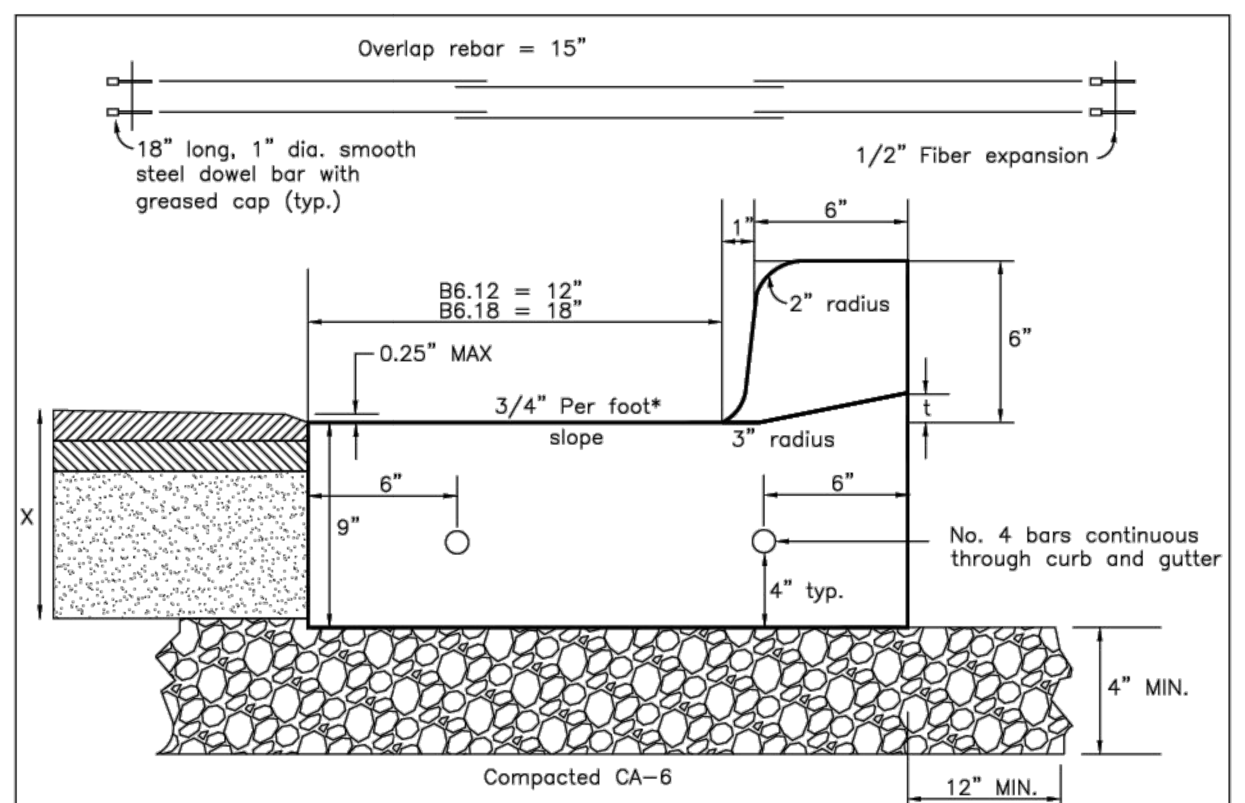
* To comply with ADAAG, truncated domes in Federal Standard color 30166 are required at commercial drive crossings at-grade. See current IDOT Highway Standard 424004 "Curb Ramps for Sidewalks".



3.31
CITY OF ELGIN COMMERCIAL DRIVE APPROACH DETAIL
REVISED: APRIL 2020



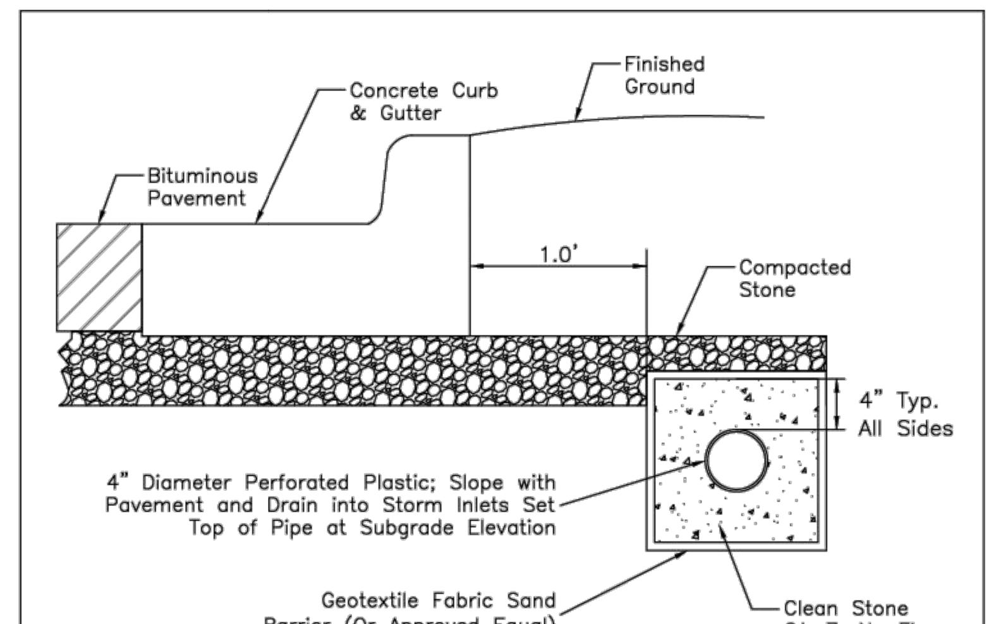
3.32
CITY OF ELGIN RESIDENTIAL DRIVE APPROACH DETAIL
REVISED: APRIL 2020



t = Depressed curb 1.50"
Handicap ramp 0.50"
X = 1 ½ " Surface course
2 ½" Binder course
5" B.A.M. course

Notes:
1. Contraction joints to be tooled or sawcut every 10'
2. Fiber expansion joints to be placed every 60' (every 3rd rebar of 20' length) use ½" expansion material full depth with two – 18" long, 1" dia. smooth steel dowel bars with greased caps.
3. *For reversed pitch gutter flag maintain a ¾" per ft. cross slope

3.33
CITY OF ELGIN BARRIER CURB DETAIL
REVISED: MAY 2015



Notes:
1. 25 LF 4" PVC SDR 26 under drains shall be provided at all catch basin sag locations, except that the length may be reduced to avoid utility conflicts and water main service crossings.
2. A minimum of 10 feet of separation is required between under drains and water main service locations.
3. Under drains shall outlet into existing storm sewer manholes or catch basins that exist adjacent to the curb and gutter at various locations.
4. Existing drainage structure shall be cored to facilitate the installation of the tubing.
5. The space between the outside edge of the tubing and the inside of the cored opening shall be completely filled with mortar from both sides of the structure.

3.34
CITY OF ELGIN UNDER DRAIN DETAIL
REVISED: JUNE 2021

DATE	REVISIONS	DRAWN BY	CHECK BY
1 12/22/2020	WATER DEPARTMENT – CHANGES TO 2.12	BS	AO
2 06/23/2021	ADD 3.34 UNDERDRAIN DETAIL	BS	AO

STANDARD DETAILS

CITY OF ELGIN
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www.cityofelgin.org
Phone: 847-931-6100
Fax: 847-931-5965

ENGINEERING DEPARTMENT

ELGIN THE CITY IN THE SUBURBS

PROJ. MGR.:
PROJ. ENG.:
DRAWN BY: BAS
CHECKED BY:
DATE: 12-04-20
SCALE: N.T.S.
SHEET 3 OF 3

#	DATE	REMARKS
1	3-20-24	PER FRWRD REVIEW
2	5-21-24	PER CITY REVIEW

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scheflowenG.com
Firm License No. 184-001104

ELGIN ILLINOIS
1260, 1262, 1264 CEDAR AVE
CITY OF ELGIN
DETAILS SHEET 3

SCALE	DATE
NONE	5/21/24
DRAWN BY	JOB NO.
PCS	6007
CHECKED BY	SHEET NO.
FCC	10 of 10

6007

6007