

GENERAL NOTES

1. The Village of Frankfort, Department of Public Works, and Department of Engineering, (Telephone 1-815-469-2177), and Joseph A. Schudt & Associates (Telephone 1-708-720-1000) must be notified 2 working days prior to commencement of work.
2. Elevation is U.S.G.S. Datum, (NAVD 88)
3. All floor drains shall discharge to the sanitary sewer.
4. All downspouts and footing drains shall discharge to the storm sewer.
5. All sanitary sewer construction requires stone bedding 1/4 inch to 1 inch in size, with a minimum thickness equal to 1/4 the outside diameter of the sewer pipe, but not less than 4 inches, nor greater than eight inches. Bedding material shall be CA-11 and shall be extended at least 12 inches above top of pipe when using non-rigid (PVC) pipe.
6. "Band Seal" or similar flexible-type couplings shall be used for the connection of sewer pipe of dissimilar materials.
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 sewer main by proper tools ("Sewer Tap" machine or similar) and proper installation of hub-wye saddle or hub-tee saddle.
- b. Remove an entire section of pipe (breaking only the top of the bell) and replace with a wye or tee branch section.
- c. With pipe cutter, neatly and accurately cut out desired length of pipe for insertion of proper fitting, using "Band-Seal" or similar couplings to hold it firmly in place.
8. Whenever a sewer crosses under a watermain, the minimum vertical distance from the top of the sewer to the watermain shall be 18 inches. Furthermore, a minimum horizontal distance of 10 feet between storm and/or sanitary and watermains shall be maintained unless: the sewer is laid in a separate trench, keeping a minimum 18 inch vertical separation; or the sewer is laid in the same trench with the watermain located at the opposite side on a bench of undisturbed earth, keeping a minimum 18 inch vertical separation. If either the vertical or horizontal distances described above cannot be maintained, or the sewer crosses above the watermain, then, for a distance of 10 feet on either side of the watermain, the sewer pipe shall be PVC pressure pipe material or the watermain shall be constructed in a watertight casing.
9. Contractor shall bend watermain pipe uniformly under sewers without using fittings providing that joint deflection does not exceed 5 degrees per joint for pipe under 12 inches in size and 3 degrees per joint for pipe 14 inches and over in size. All crossing (including services) shall have a minimum of 18 inches of clearance and should extend 10 feet each side of the center of the crossing.
10. All sanitary manholes shall have a minimum inside diameter of 48 inches. Manhole steps shall be 16" min. wide plastic w/continuous 1/2 steel reinforcement, M.A. Industries or equal.
11. All sanitary sewer, storm sewer, and water system construction shall conform to the "Standard Specifications for Water and Sewer Main Construction in Illinois", current edition.
12. All paving and related improvements shall be constructed in accordance with the Illinois Department of Transportation, "Standard Specifications for Road and Bridge Construction in Illinois", current edition. As noted on plans.
13. All trenches caused by the construction of sewers, watermains, water service pipes, and in excavation around catch basins, manholes, inlets, and other appurtenances which occur within the limits of, or within 3 feet of existing or proposed pavements, sidewalks, and curb and gutters shall be backfilled with trench backfill. Trench backfill shall be CA-5 Grade 8 material to subgrade and shall be mechanically compacted in 12" lifts.
14. 12", 10" & 8" diameter sanitary sewer pipe and fittings shall be PVC pipe, SDR 26 (ASTM D-3034) with flexible elastomeric (O-ring) gaskets (ASTM D-3212), unless otherwise noted. Where 6" diameter sanitary service crosses below watermain with less than 18 inches of separation, or where indicated elsewhere on plans, 6" service shall be DIP pipe (ANSI 2151) with gasket joints (ANSI 21.11). Sanitary sewers shall be air tested, mandrel tested, and televised. Sanitary sewer manholes shall be provided with internal chimney seals (Cretex or equal). All Sanitary Manholes shall be provided with mac wrap at barrel section joints. Sanitary sewer manholes shall be air tested in accordance with ASTM C-1244-93, Standard Test Method for Concrete Sewer Manholes by Negative Air Pressure (Vacuum) Test.
15. All new watermain shall be C900 PVC pipe. All watermain fittings, valves, and hydrants shall have stainless steel bolts and shall be secured using Meg-A-Lug restrained joints. Thrust blocking shall also be provided, with precast blocking permitted. Watermain shall be pressure tested at 150psi for two hours. A leakage test will be performed in accordance with "Standard Specifications for Water and Sewer Construction in Illinois", current edition. A disinfection test shall be completed using an initial chlorine concentration of 50 mg/l and a minimum residual concentration of 25 mg/l after 24 hours. All work shall comply with Village of Frankfort standards.
16. Watermains and lot services shall be a minimum of 5.0 feet below finished ground surface. A 5 foot patch on both sides of the trench. Full depth Class D patch within the trench area. The 5 foot areas on both sides of the trench are required to be patched with 2-1/2" binder and 1-1/2" of surface. Public Works inspections are required during the restoration process.
17. a. All storm sewer must be reinforced concrete pipe in paved areas.
- b. All reinforced concrete pipe shall be ASTM C76 CL IV.
- c. Sump pump discharge piping shall be PVC Schedule 40.
- d. Joints shall conform to ASTM C443.
18. Where storm sewers cross over the tops of watermains and are designated as "LHP" type, they shall be reinforced concrete low head pressure pipe (ASTM C-361-76). Alternately, proper watermain protection per note (8.) shall be provided.
19. All bends in the watermain of 10 degrees or greater shall be installed with restrained joints (Meg-A-Lug or equal). Restrained joints (Meg-A-Lug or equal) shall be used within three pipe lengths of a fitting. No thrust blocking is allowed.
20. All rims and inverts of existing sanitary and storm sewer shall be field verified prior to the start of construction, and any discrepancies between the plan and existing elevations shall be reported to the Engineer immediately.
21. All coordinates refer to back of curb, centerline of manhole, pipe, or structure, or as shown.
22. All curb radii refer to back of curb. Lane dimensions refer to face of curb or edge of pavement.
23. The Contractor shall subscribe to all governing regulations and shall obtain all necessary public agency permits.
24. Field check all dimensions, coordinates, and elevations before proceeding with new work. Notify the Engineer of any discrepancies immediately.
25. The Contractor shall provide for the safe and orderly passage of traffic and pedestrians where his operations abut public thoroughfares and adjacent property.
26. Construction access points to the site shall be protected in such a way as to prevent tracking of mud or soil onto public thoroughfares. At the end of each day, the Contractor shall clean up all mud or soil which has been tracked onto public streets or as required by the Village of Frankfort.
27. Street paving and curbs to remain shall be protected from damage and, if damaged, shall be replaced promptly to meet Village of Frankfort Standard Specifications in materials and workmanship.
28. Prior to new work, the Contractor shall verify the location and elevation of existing utility lines and structures to be connected to proposed work. Discrepancies shall be reported to the Engineer immediately.
29. All sediment will be prevented from entering any existing storm drainage systems by the use of hay bales, interceptor dikes or other approved functional methods. The Contractor shall be responsible for removing sediment resulting from this project from storm sewers and drainage structures.
30. All utility connections shall be constructed in accordance with the regulations of the utility owner and to the satisfaction of the utility owner.
31. All work shall be in accordance with the specifications for the Village of Frankfort.
32. New watermain valves, including pressure tap valves, adjacent to an existing watermain, and existing watermain valves shall only be operated by the Village of Frankfort, Department of Public Works personnel with a 48-hour notice (Monday-Friday).
33. Any existing utility structures requiring adjustment are to be adjusted (up to 6" total adjustment allowed with a maximum of 2 precast concrete rings) or reconstructed by the contractor to the utility owner's satisfaction. Adjustments or reconstructions not called for on the plans shall be considered incidental to the contract. A total of no more than 6" and no less than 4 inches of adjusting rings shall be provided at all utility structures. Adjusting rings shall be set in a bed of preformed non-hardening mastic (RUB-R-NEK or approved equal). The upper adjusting ring shall be made of recycled rubber (Infra-Riser brand or equal).
34. All connections to existing manholes shall be made by coring the existing manhole using a diamond or carbide tip cutter and installing a press seal PSX or CORE-N-SEAL boot in the cored opening.
35. All storm sewer flared end sections for pipes greater than 12 inch diameter shall be provided with grates per I.D.O.T. standards.
36. Reproducible "Record" drawings shall be provided by the contractor to the Village of Frankfort and Owner following completion of improvements.
37. Structures shall be stamped "VILLAGE OF FRANKFORT" and "SANITARY", "STORM", or "WATER" for appropriate utilities.
38. Sanitary and Water stubs shall be marked with 4" x 4" wood posts.
39. One lane in each direction shall be open to traffic at all times except between the hours of 9 A.M. to 3 P.M. During this period all work must be performed in accordance with standards 701201, 701206, and 701401.
40. Traffic control standards which shall be included for use during construction are: 702001, 701201, 701206, 701301, 701401, 701501, 701606, and 701701.
41. The owner and/or contractor shall be responsible for verifying soil conditions and subgrade conditions.

INDEMNIFICATION LANGUAGE

INDEMNIFICATION AND INSURANCE REQUIREMENTS - The Applicant and the Contractor shall indemnify the Municipality and the Municipal Engineer, their officials, officers, employees, and agents acting in the scope and course of their employment and shall protect them from claims arising out of or in connection with any operation of the Applicant or Contractor including personal injury, death; or, for destruction of or damage to property.

The Applicant and Contractor shall also protect the Municipality and the Municipal Engineer by including them as additional insured on their Comprehensive General Liability Insurance Policy. The minimum level of insurance shall be as specified in Section 107.27 GENERAL REQUIREMENTS AND COVENANTS of the Standard Specifications for Road and Bridge Construction by the Illinois Department of Transportation. "Claims Made" type policies are unacceptable. Certificates of Insurance shall be filed and approved by the Municipality and Robinson Engineering, Ltd., the Municipal Engineer, a minimum of 5 days before starting construction.

PERSONAL LIABILITY - In carrying out any of their duties or in exercising any power or authority granted to the Applicant or Contractor by the Municipality, there shall be no personal liability upon the Applicant or Contractor or their authorized representative, it being understood that in such matters they act as agents and representatives of the Municipality. By beginning work, the Applicant and Contractor covenants and agrees that it shall neither commence nor prosecute any action or suit whatsoever against the Municipal Engineer or Municipality, their officials, officers, employees or agents in any action or omission done or not done in the course of their duties. Further, by beginning work, the Applicant and Contractor agrees to pay all attorney fees and all costs incurred by the Municipality or Municipal Engineer, its officials, officers, employees or agents because of any action or suit in violation of this Article.

HOLD HARMLESS - The Applicant and Contractor doing work, shall hereby defend, indemnify, keep, and save harmless the Municipality and the Municipal Engineer, and their respective legislative and board members, representatives, agents, and employees in both individual and official capacities against all suits, claims, damages, losses, and expenses, including attorney's fees, caused by or growing out of, or incidental to, the performance of the work by the Applicant or the Contractor to the full extent allowed by the laws of the State of Illinois and not beyond any extent which would render these provisions void or unenforceable.

CONSTRUCTION OBSERVATION - All materials and each part of detail of the work portrayed on these Plans may be subject at any time to observation by the Municipal Engineer. Observation may be made at the site, or at the source of material supply, whether that is at a mill, plant, ship, etc. The Municipal Engineer shall be allowed access to all parts of the Work and shall be furnished with such information and assistance by the Applicant and Contractor as needed to perform these observations. The Contractor shall be held strictly to the true intent of the Plans in regard to quality of materials and workmanship.

The Municipal Engineer is not responsible for safety on the work site nor does the Municipal Engineer have any duty to review in any manner the adequacy of the Contractor's safety measures incident to the work portrayed on these Plans.

The Municipal Engineer is not responsible for any construction means, methods, techniques, sequences or procedures for the work portrayed on these Plans.

The Municipal Engineer has no charge of the construction and has no right, duty, or responsibility to stop work because of any Contractor's failure to follow proper safety precautions. The Municipal Engineer is not responsible for the acts, errors or omissions of any Applicant, Engineer or Contractor, or any of their agents or employees or any other person performing any of the Work portrayed on these Plans.

The Contractor shall, upon written notice from the Municipality, remove or uncover such portions of the finished Work, as it may direct, before the final acceptance of the same. After examination, the Contractor shall restore said portion of the Work to the standard required by these Plans. The expense of uncovering, removing and replacement shall be borne by the Applicant and/or the Contractor, and not the Municipality nor the Municipal Engineer.

Any reference to "supervision" by the Engineer in the Illinois Department of Transportation, Standard Specifications for Road and Bridge Construction, or any other referenced documents shall be changed to "observation".

RETAIL BUILDING

LOT 3 LARAWAY & WOLF ROAD

FRANKFORT, IL 60423

SITE IMPROVEMENT PLANS

KMA & ASSOCIATES, ARCHITECTS

CONTACT:

ERIC SMITH

2205 LAKESIDE DRIVE
BANNOCKBURN, IL 60015

PHONE: 847.945.6869

esmith@kmaarch.com

SURFACE WATER DRAINAGE CERTIFICATE

STATE OF ILLINOIS } SS
COUNTY OF WILL

To the best of our knowledge and belief the drainage of surface waters will not be changed by the construction of such subdivision or any part thereof, or, that if such surface water drainage will be changed, reasonable provisions have been made for the collection and discharge of surface waters into public or private areas and/or drains which the subdivider has the right to use, and that such surface waters will be planned for in accordance with generally accepted engineering practices so as to reduce the likelihood of substantive damage to adjoining property because of the construction of the subdivision.

Dated this 16 day of APRIL 2021

Engineer



Joseph A. Schudt & Associates



9455 ENTERPRISE DRIVE MOKENA, IL 60448
PHONE: 708-720-1000 FAX: 708-720-1065
e-mail: jas@jaseng.com http://www.jaseng.com

CIVIL ENGINEERING LAND SURVEYING ENVIRONMENTAL LAND PLANNING GPS SERVICES

ILLINOIS PROFESSIONAL DESIGN FIRM NO. 184-001172

Prepared at or under the direction of:

Illinois Professional Engineer No. 062-043406



SIGNED: 7-10-23

LIC. EXP: 11-30-23

CONTACT JULIE AT 811 OR 800-892-0123

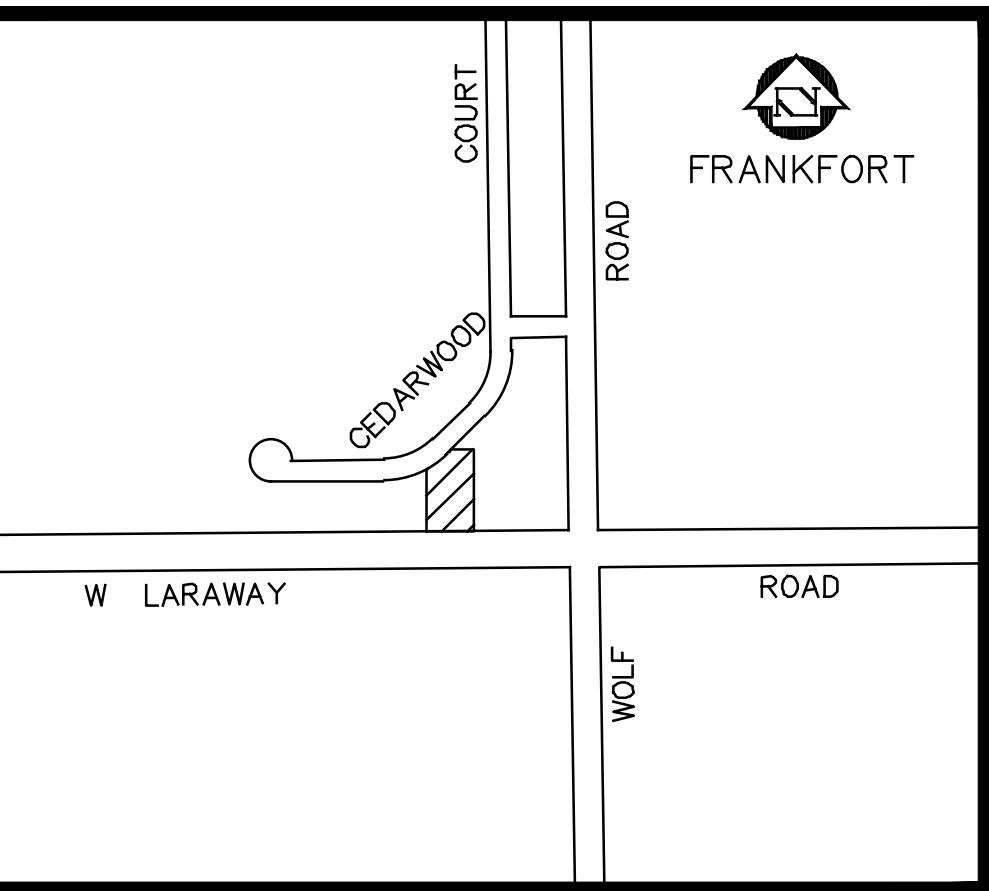
WITH THE FOLLOWING INFORMATION

COUNTY-NAME WILL

CITY / TOWNSHIP FRANKFORT

SEC & 1/4 SEC No. SW 1/4 SEC 30, TWN 35 N, R 12 E

48 HOURS (2 working days) BEFORE YOU DIG



VICINITY MAP

(NOT TO SCALE)



INDICATES SITE LOCATION

LEGEND

Ⓢ	EXISTING SANITARY MANHOLE
●	PROPOSED SANITARY MANHOLE
-SAN-	EXISTING SANITARY SEWER
-P-	PROPOSED SANITARY SEWER
⊗	EXISTING VALVE IN VAULT
⊕	PROPOSED VALVE IN VAULT
⊗	EXISTING VALVE
⊕	PROPOSED VALVE
△	EXISTING REDUCER
▲	PROPOSED REDUCER
☼	EXISTING HYDRANT
☼	PROPOSED HYDRANT
-W-	EXISTING WATERMAIN
-PW-	PROPOSED WATERMAIN
⊗	EXISTING STORM MANHOLE
⊕	PROPOSED STORM MANHOLE
⊗	EXISTING CATCH BASIN
●	PROPOSED CATCH BASIN
⊕	EXISTING INLET
⊕	PROPOSED CIRCULAR INLET
■	PROPOSED INLET
-ST-	EXISTING STORM SEWER
-P-	PROPOSED STORM SEWER
-ST-	EXISTING CULVERT
-P-	PROPOSED CULVERT
☆	EXISTING LIGHT

★	PROPOSED LIGHT
---	EXISTING CONTOUR LINE
---	PROPOSED CONTOUR LINE
==	EXISTING CURB
==	PROPOSED CURB
#####	EXISTING CURB TO BE REMOVED
---	PROPOSED HUNG CURB
☼	EXISTING POWER POLE
⊗	EXISTING TRANSFORMER
⊗	EXISTING ELECTRIC MANHOLE
-E-	EXISTING ELECTRIC CABLE
△	EXISTING TELEPHONE PEDESTAL
⊕	EXISTING TELEPHONE MANHOLE
-T-	EXISTING TELEPHONE CABLE
⊕	EXISTING TRAFFIC SIGNAL
⊕	EXISTING HAND HOLE
⊗	EXISTING GAS VALVE
-G-	EXISTING GAS MAIN
-C-	EXISTING CABLE T.V.
+	EXISTING BORING LOCATION
-	EXISTING SIGN
-x-x-	EXISTING FENCE LINE
☼	EXISTING DECIDUOUS TREE
☼	EXISTING EVERGREEN
☼	EXISTING BUSH/HEDGE
☼	EXISTING WETLAND

INDEX

Sheet Number	Sheet Title
1	COVER SHEET
2	EXISTING TOPOGRAPHY
3	SITE LAYOUT PLAN
4	SITE GRADING PLAN
5	SITE UTILITY PLAN
6	SITE EROSION CONTROL PLAN
7	STORM WATER POLLUTION PREVENTION PLAN
8	CONSTRUCTION SPECIFICATIONS
9	CONSTRUCTION DETAILS
10	CONSTRUCTION DETAILS

LEGAL DESCRIPTION

LOT 3 IN THE WOLF AND LARAWAY LLC SUBDIVISION, BEING A SUBDIVISION OF PART OF THE SOUTHWEST QUARTER OF SECTION 30, TOWNSHIP 35 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN WILL COUNTY, ILLINOIS.

P.I.N. 19-09-30-401-063-0000

PROPERTY CONTAINS: 35,764 SQ. FT. (0.821 ACRES), MORE OR LESS.

BENCH MARK:

TOP OF THE NORTHWEST FLANGE BOLT OF HYDRANT, LOCATED WEST OF WOLF ROAD, THE FIRST HYDRANT ON THE NORTH SIDE OF LARAWAY ROAD . ELEVATION: 739.38

FOR PERMIT

1	7-10-23	TMF	UTILITY PLAN UPDATE
1	8-29-23	TMF	REVISED OVERLAND DRAINAGE & UTILITIES
No.	Date	By	Description
REVISIONS			
Date:	5-15-23	Drawn:	TMF
Design:	KG	Approved:	DWO
SHEET 1 OF 10			Project No. 23-020

LOT 3 IN THE WOLF AND LARAWAY LLC SUBDIVISION, BEING A SUBDIVISION OF PART OF THE SOUTHWEST QUARTER OF SECTION 30, TOWNSHIP 35 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN WILL COUNTY, ILLINOIS.

(IN FEET)
1 inch = 10 ft

NOTES:

1. BASIS OF BEARINGS ARE BASE ON WOLF AND LARAWAY LLC SUBDIVISION PLAT RECORDED AUGUST 20, 2003.
2. PLAT REPRESENTS EXISTING CONDITIONS BASED ON FIELD WORK PERFORMED ON MARCH 6, 2023.
3. PROPERTY CORNER MONUMENTS NOT SET PER REQUEST OF CLIENT.

JOSEPH A. SCHUDT AND ASSOCIATES HEREBY CERTIFY THAT THEY HAVE SURVEYED THE PROPERTY DESCRIBED HEREON, AND THAT THE PLAT HEREON DRAWN IS A CORRECT REPRESENTATION OF SAID SURVEY. ALL DIMENSIONS IN FEET AND DECIMAL PARTS THEREOF.

A circular professional seal for a land surveyor. The outer ring contains the text "D. WARREN OPPERMAN" at the top and "MOKENA, IL" at the bottom. The inner circle contains the text "3152" at the top, "PROFESSIONAL LAND SURVEYOR" in the middle, and "STATE OF ILLINOIS" at the bottom.

~~LARAWAY~~

ROAD

THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY.
VERIFY ALL POINTS BEFORE BUILDING AND REPORT ANY DISCREPANCIES. CONSULT DEED OR TITLE REPORT FOR EASEMENTS AND RESTRICTIONS.

TOP OF THE NORTHWEST FLANGE BOLT OF HYDRANT. LOCATED WEST OF WOLF ROAD
THE FIRST HYDRANT ON THE NORTH SIDE OF LARAWAY ROAD . ELEVATION: 739.38

FOR PERMIT

(184-001172)

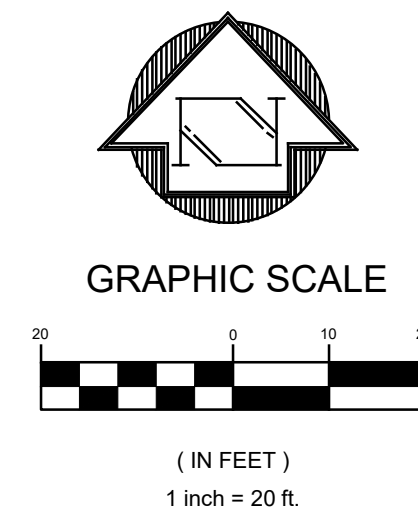
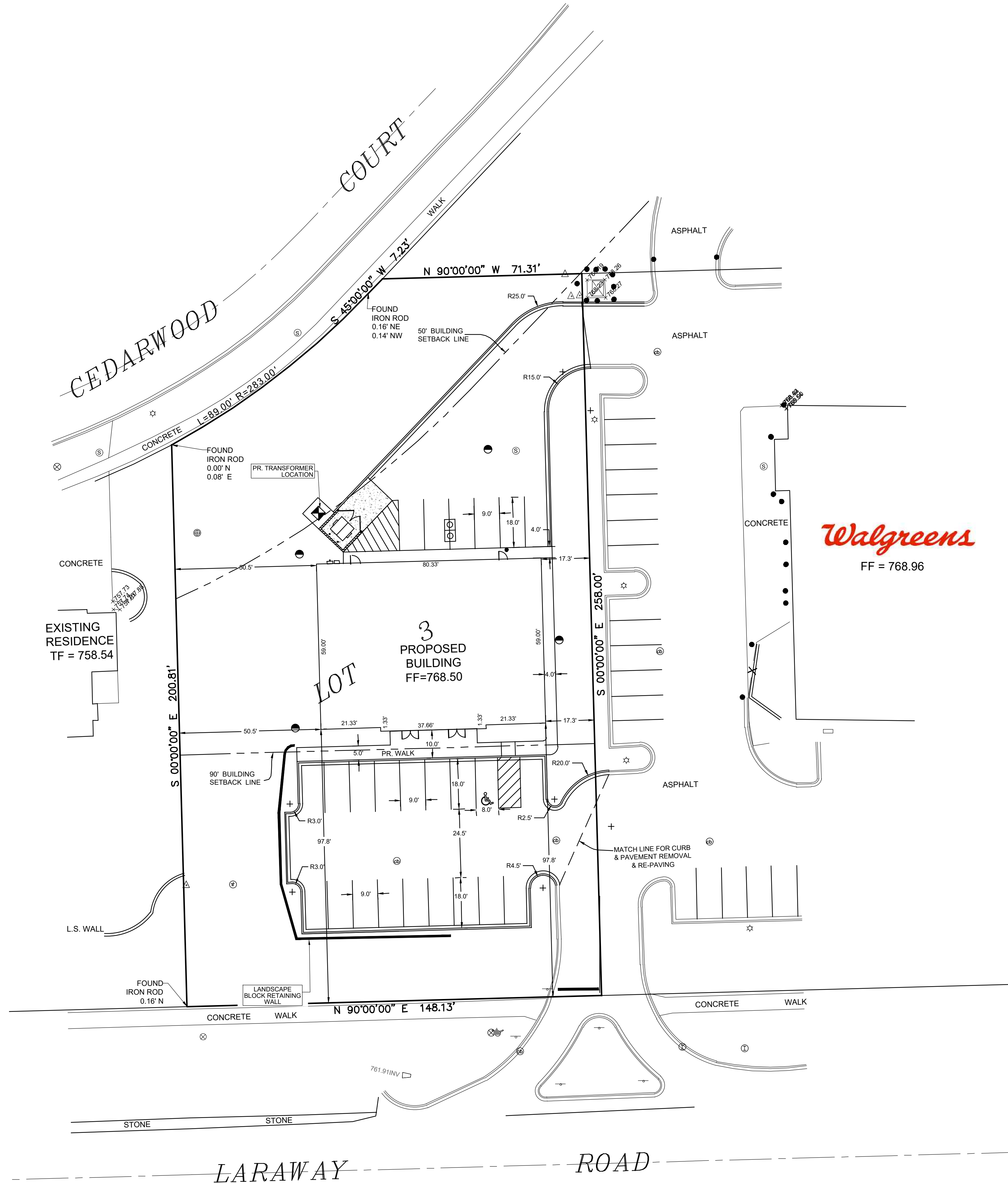
REVIEWS: 6-29-23
7-10-23

RETAIL BUILDING

FRANKFORT, IL

EXISTING TOPOGRAPHY SURVEY

Date: 5-15-23
Scale: 1"=20'
File Name: 23-20-ENG-6-29-23
Drawn: TMF
Checked: DWO
Sheet:
2 OF 10
Project No.:
23-020



FOR PERMIT

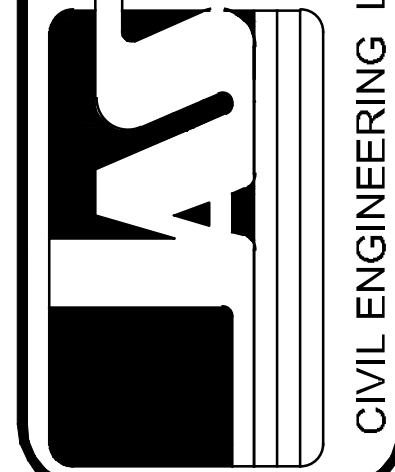
RETAIL BUILDING

FRANKFORT, IL

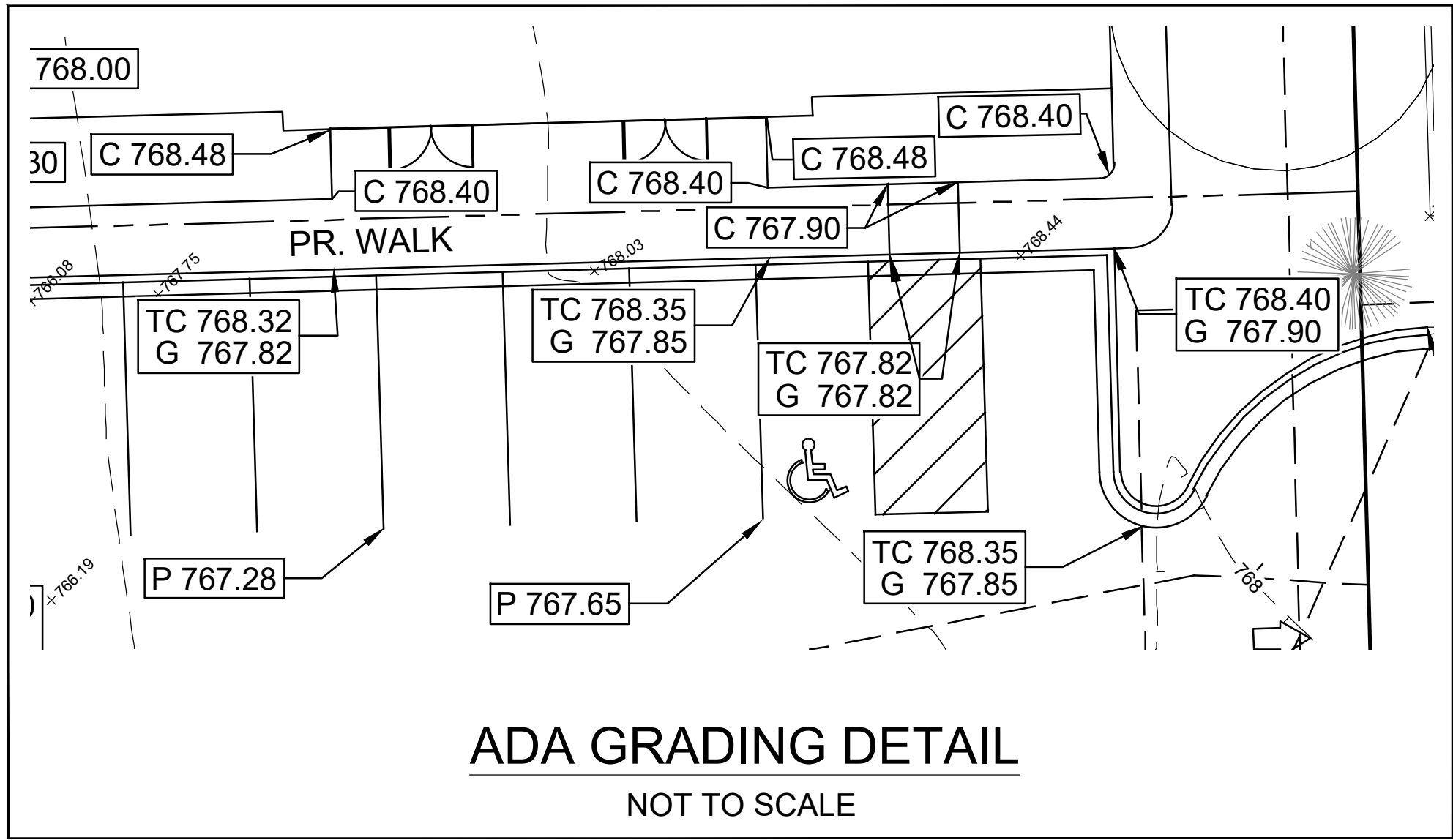
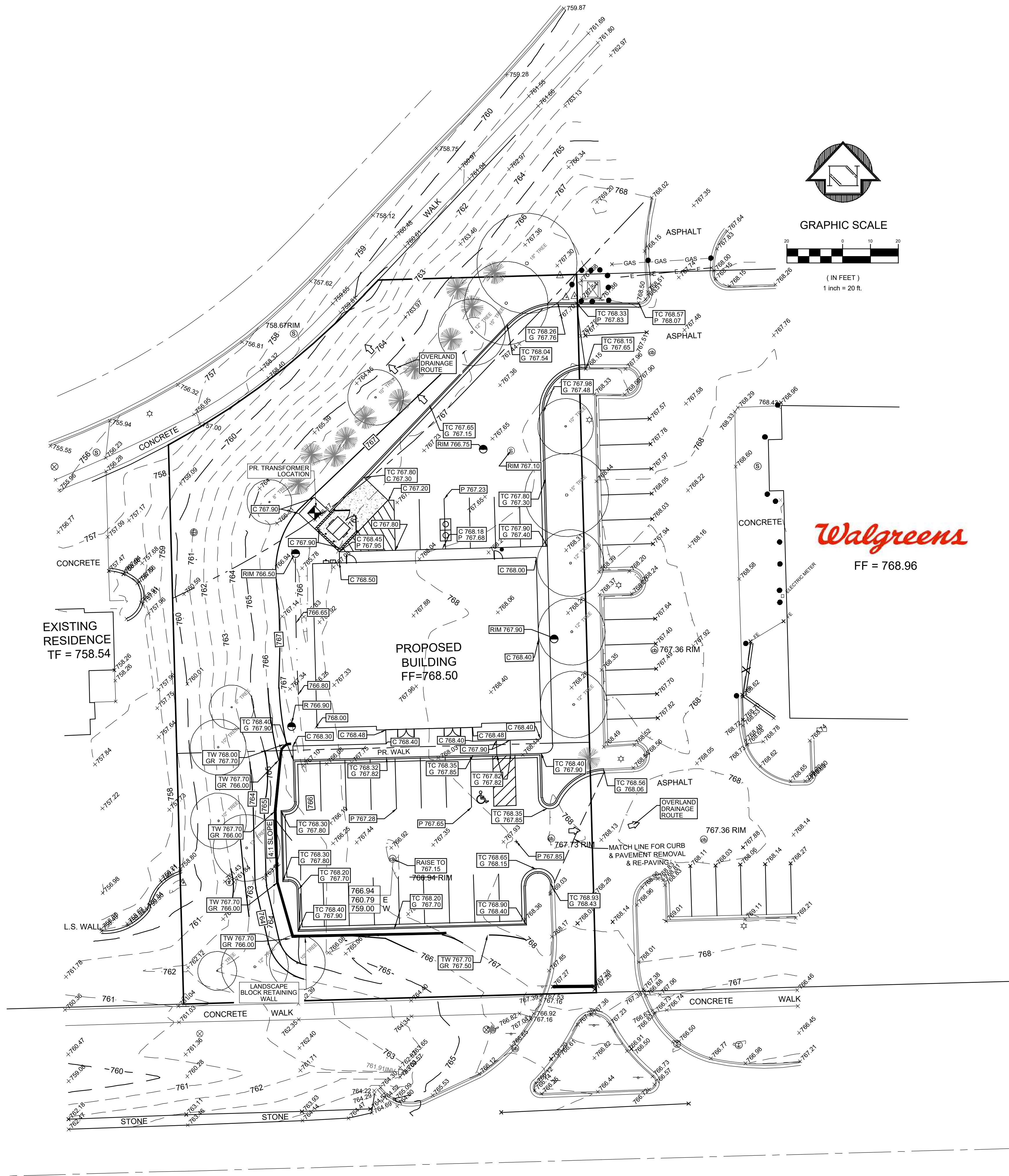
SITE PLAN

Date: 5-15-23
Scale: 1"=20'
File Name: 23-20-ENG-6-29-23
Drawn: TMF
Checked: DWO
Sheet:
3 OF 10
Project No.:
23-020

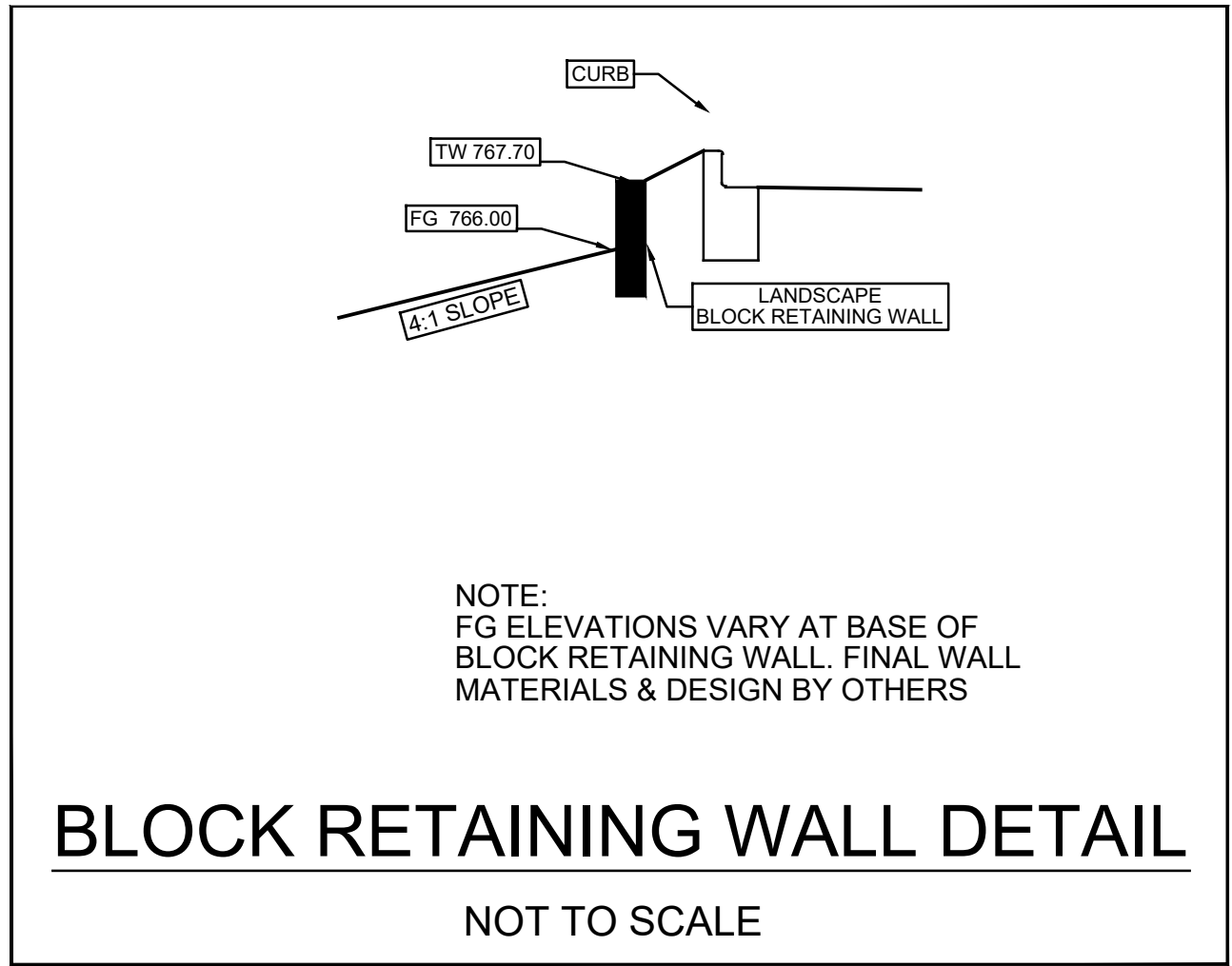
REVISIONS: 6-28-23
7-10-23
COPYRIGHT © 2023
JOSEPH A. SCHUDT & ASSOCIATES
ALL RIGHTS RESERVED
Any use or reproduction of this drawing without the written consent of Joseph A. Schudt & Associates is prohibited. The design of the attached drawings is the property of Joseph A. Schudt & Associates and shall remain confidential. Any use or reproduction of this drawing without the written consent of Joseph A. Schudt & Associates is prohibited.



Joseph A. Schudt & Associates
9455 ENTERPRISE DRIVE
MOKENA, IL 60448
PHONE: 708-720-1000
www.jaseng.com
FAX: 708-720-1065
CIVIL ENGINEERING LAND SURVEYING ENVIRONMENTAL LAND PLANNING GPS SERVICES



NOTE: CURB & GUTTER IN SOUTH PARKING LOT IS REVERSE PITCH TO MAINTAIN DRAINAGE PATTERNS

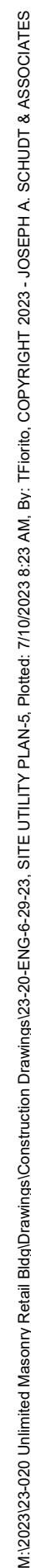


FOR PERMIT

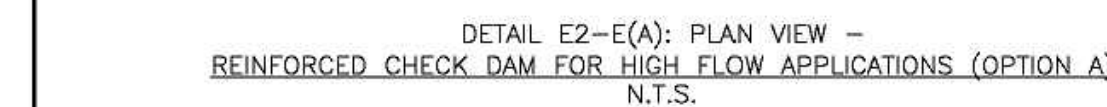
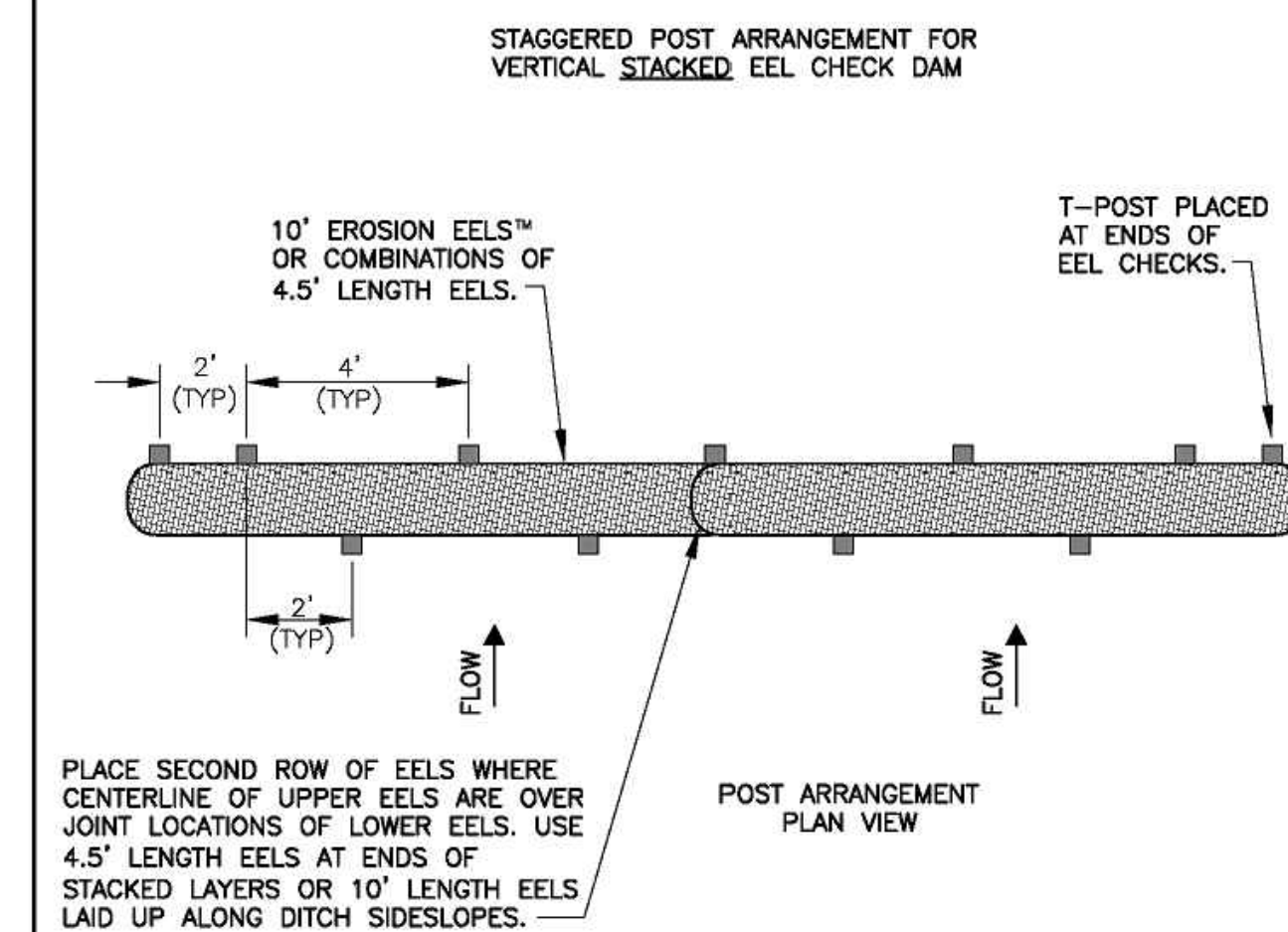
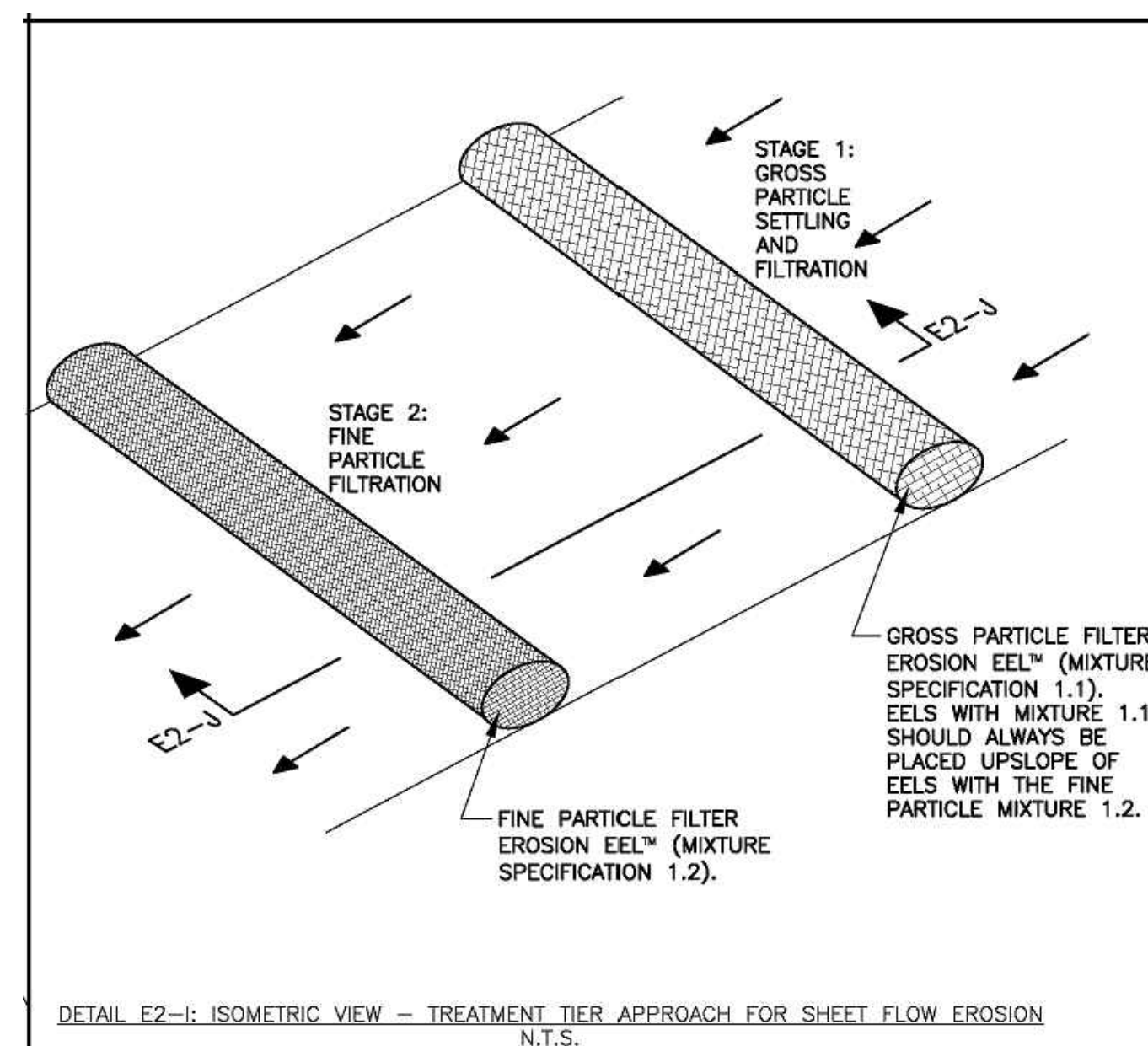
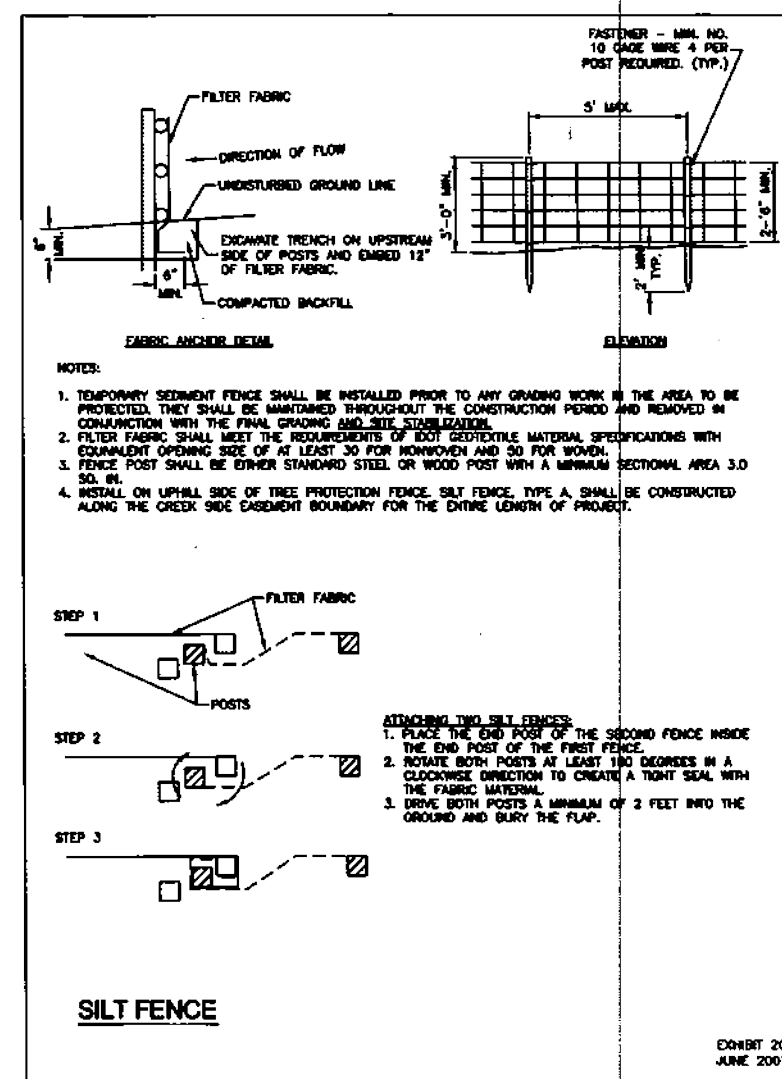
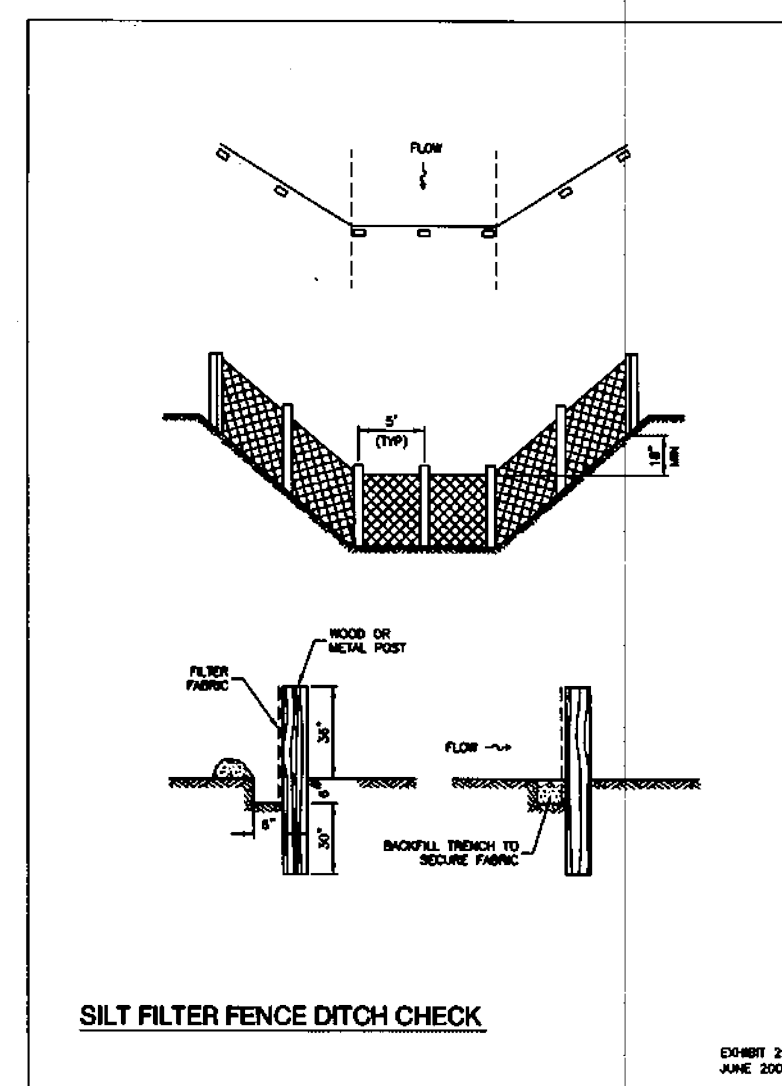
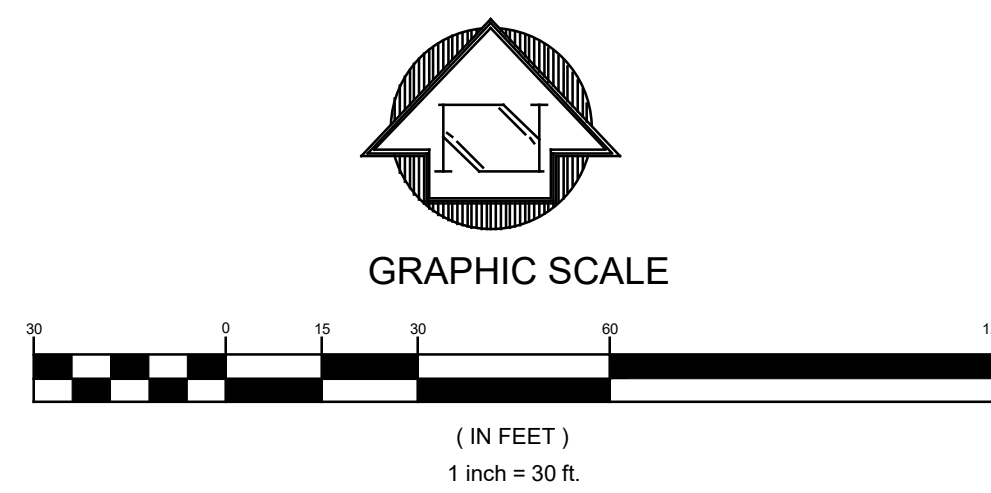
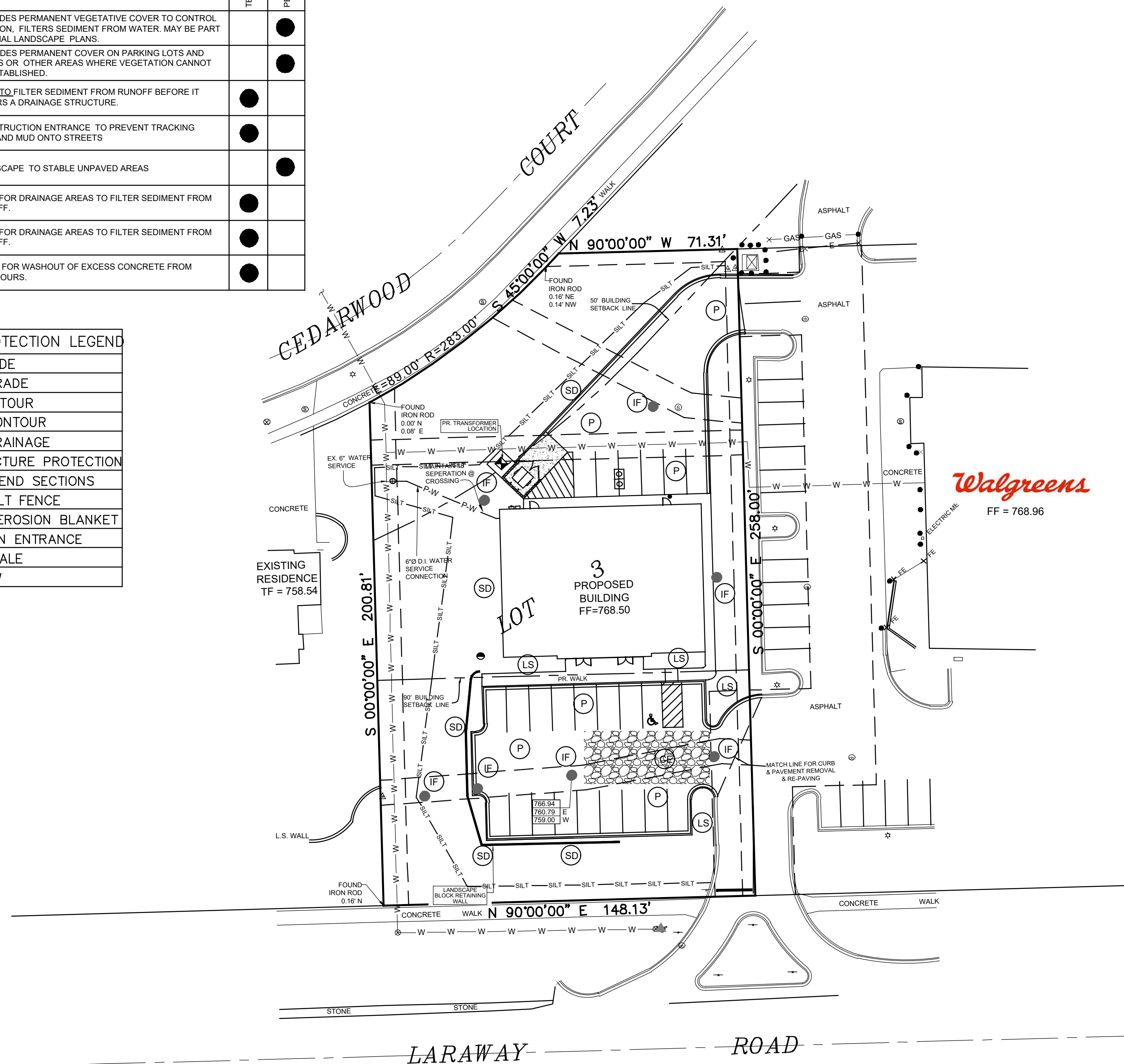
RETAIL BUILDING
FRANKFORD, IL
SITE GRADING PLAN

Date: 5-15-23
Scale: 1"=20'
File Name: 23-20-ENG-6-29-23
Drawn: TMF
Checked: DWO
Sheet:
4 OF 10
Project No.:
23-020

Joseph A. Schudt & Associates
9455 ENTERPRISE DRIVE MOKENA, IL 60448
PHONE: 708-720-1000 www.jaseng.com FAX: 708-720-1065
(184-001172)
CIVIL ENGINEERING LAND SURVEYING ENVIRONMENTAL LAND PLANNING GPS SERVICES



GRADING/EROSION PROTECTION LEGEND	
	EXISTING GRADE
	PROPOSED GRADE
	EXISTING CONTOUR
	PROPOSED CONTOUR
	PROPOSED DRAINAGE
	STORM STRUCTURE PROTECTION
	RIP-RAP AT END SECTIONS
	PROPOSED SILT FENCE
	SEEDING w/ EROSION BLANKET
	CONSTRUCTION ENTRANCE
	DRAINAGE SWALE
	BYPASS FLOW

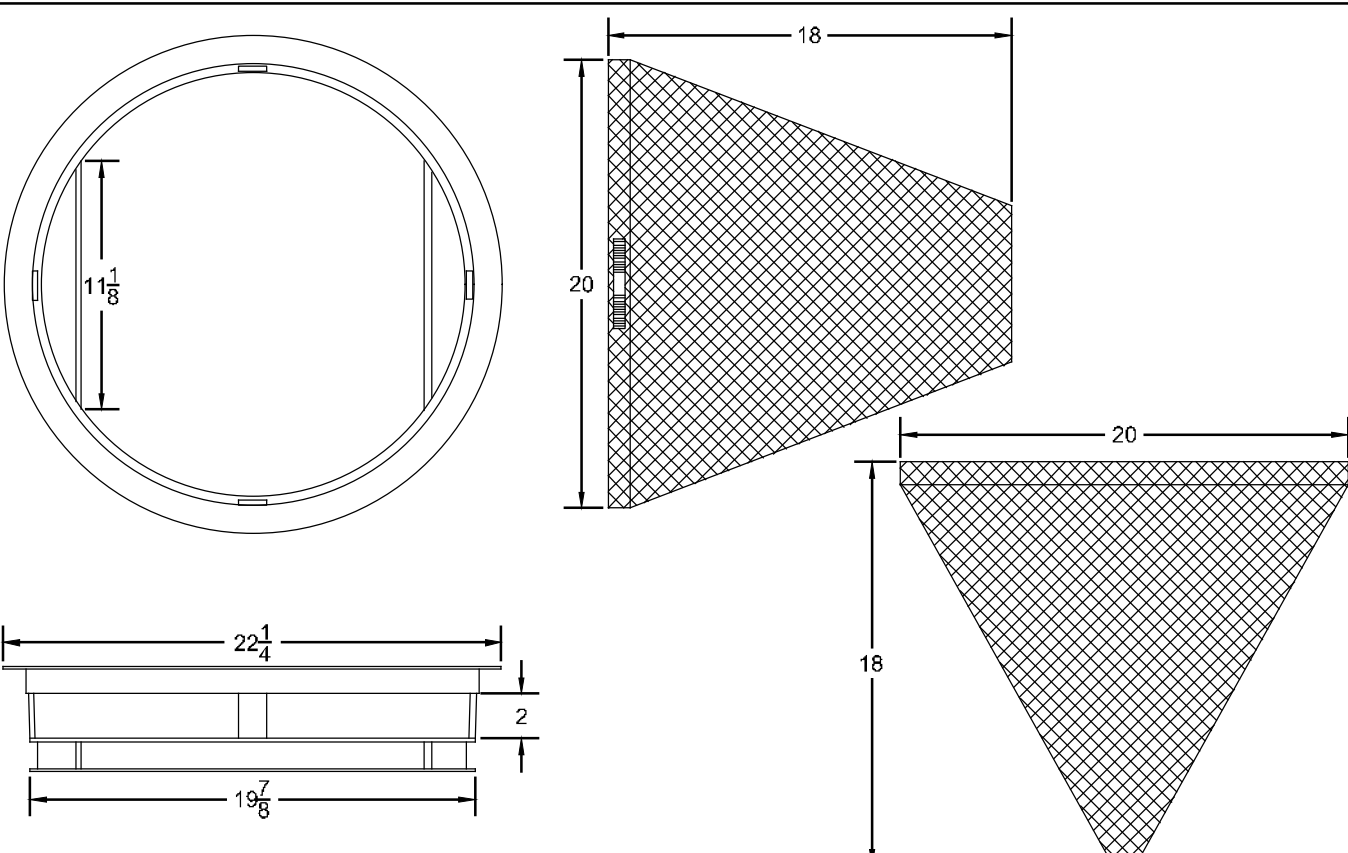
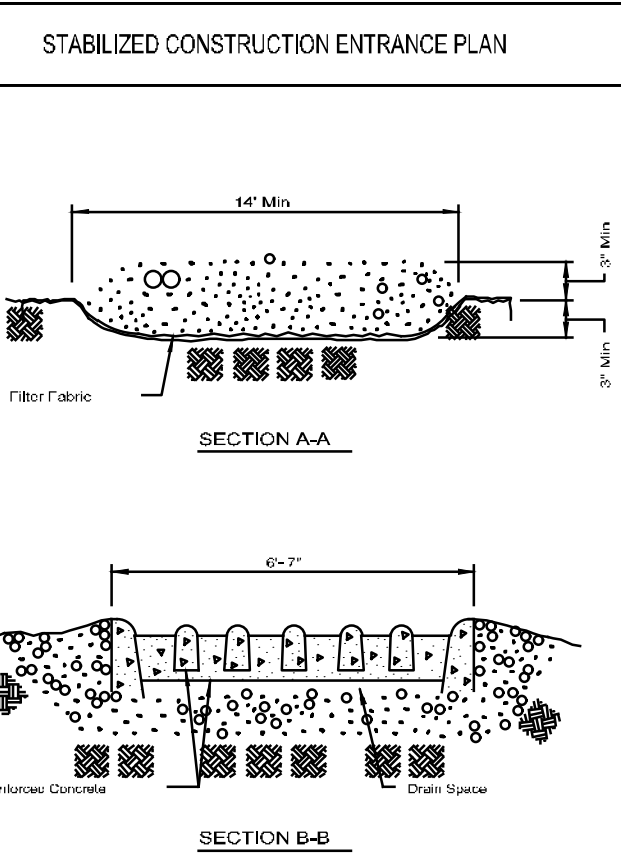
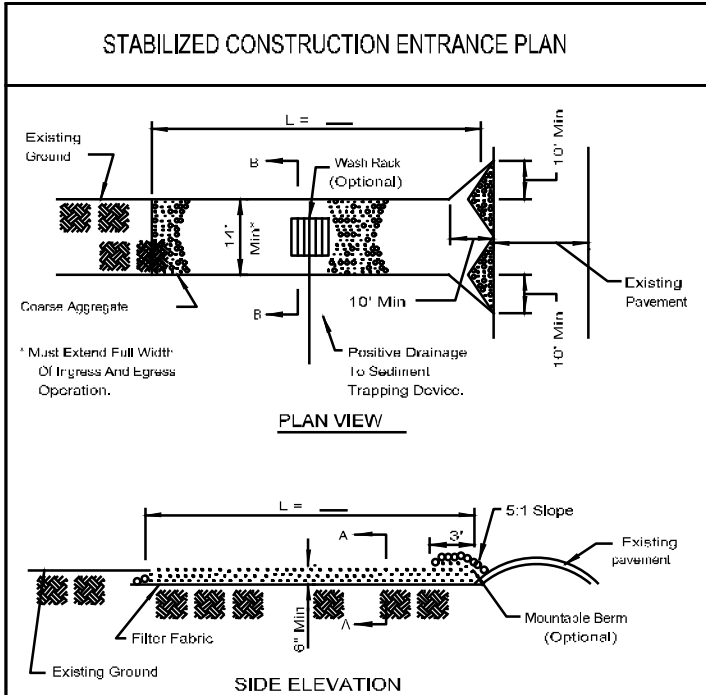


GENERAL NOTES

- [illegible]

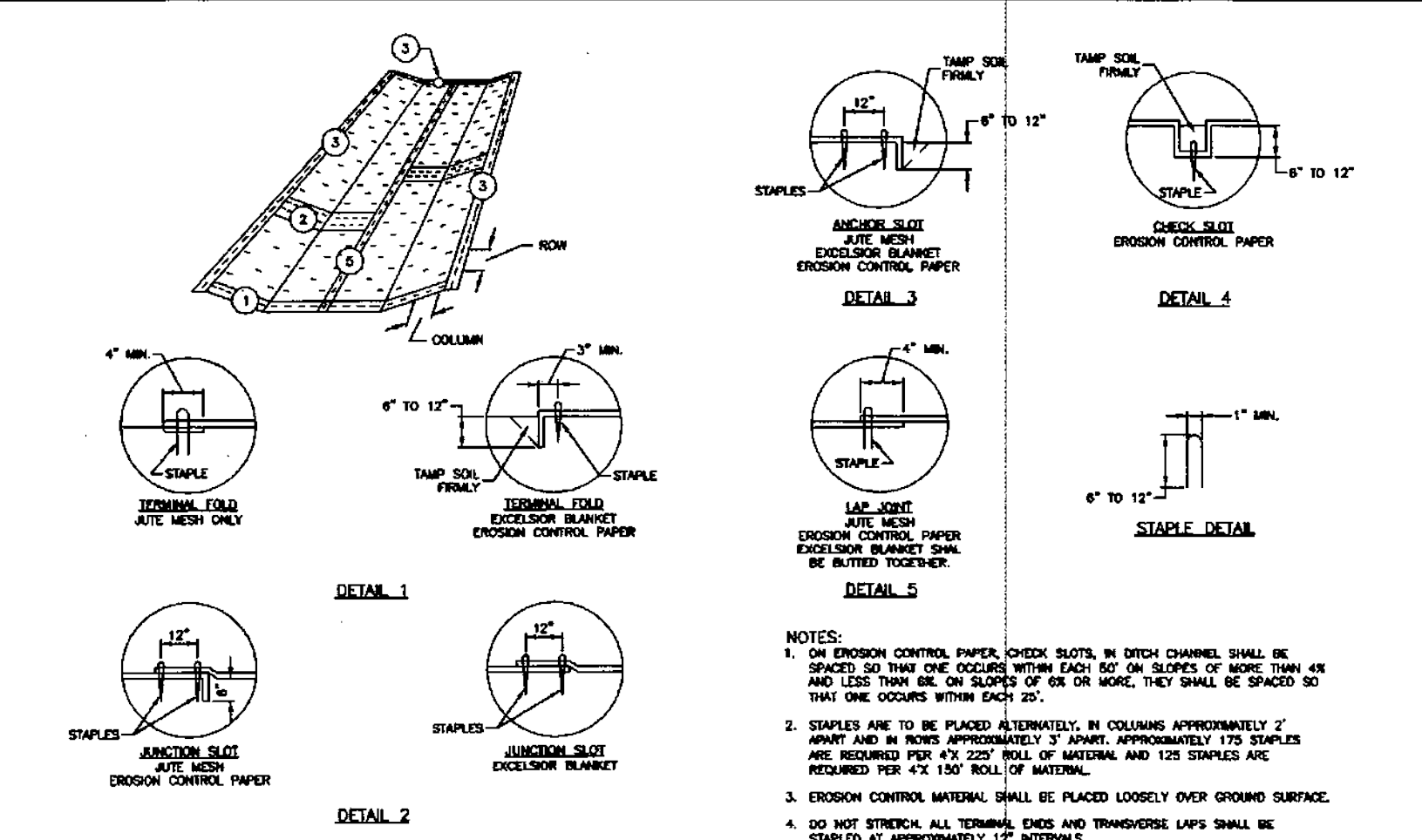
CK DAM DETAILS FOR THE

NOTE: DRAWINGS SUBJECT TO REVISIONS
AT DISCRETION OF MCM FACTORY



GENERAL NOTES:
FRAME: Top flange fabricated from 1½"x1½"x½" angle. Base rim fabricated from 1½"x½"x½" channel.
Handles and suspension brackets fabricated from 1½"x½" flat stock. All domestic steel conforming to ASTM-A36.
SEDIMENT BAG: Bag fabricated from 4 oz./sq.yd. non-woven polypropylene geotextile reinforced with polyester mesh. Bag secured to base rim with a stainless steel strap and lock.

Drainage Structure Inlet Filter	Type 5
---------------------------------	--------



NOTES:

1. EROSION CONTROL PAPER CHECKED SLOTS, IN DITCH CHANNEL SHALL BE SPACED SO THAT ONE OCCURS WITHIN EACH 60" ON SLOPES OF MORE THAN 4% AND MORE THAN ONE ON SLOPE OF 5% OR MORE. THEY SHALL BE SPACED SO THAT ONE OCCURS WITHIN EACH 45".
2. STAPLES ARE TO BE PLACED ALTERNATELY, IN COLUMNS APPROXIMATELY 2' APART AND IN ROWS APPROXIMATELY 3' APART. APPROXIMATELY 175 STAPLES ARE REQUIRED PER 47' 2 1/2" ROLL OF MATERIAL AND 125 STAPLES ARE REQUIRED PER 47' 1 1/2" ROLL OF MATERIAL.
3. EROSION CONTROL MATERIAL SHALL BE PLACED LOOSELY OVER GROUND SURFACES.
4. DO NOT STRETCH. ALL TERMINAL ENDS AND TRANSVERSE LAPS SHALL BE KEPT AT LEAST 4' APART.

EXHIBIT 2
JUNE 2001

RETAIL BUILDING

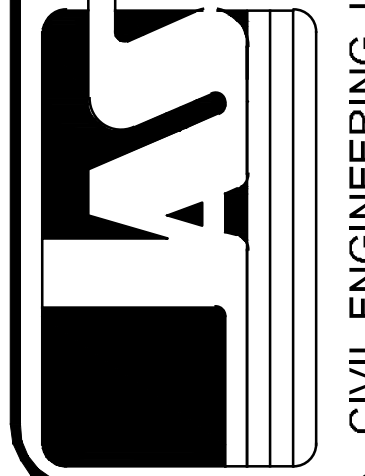
FRANKFURT, IL

SITE EROSION CONTROL PLAN

Date: 5-15-23
 Scale: 1"=30'
 File Name: 23-20-ENG-6-29-2
 Drawn: TMF
 Checked: DWO
 Sheet:
 6 OF 10
 Project No.:
 23-020

Joseph A. Schudt & Associates
3455 ENTERPRISE DRIVE MOKENA, IL 60448
PHONE: 708-720-1000 www.jaseng.com FAX: 708-720-1065
SURVEYING ENVIRONMENTAL LAND PLANNING GPS SERVICES

(184-001172)



CIVIL ENGINEERING I A

REVISIONS: 6-29-23
7-10-23

COPYRIGHT © 2023
 JOSEPH A. SCHUDT & ASSOCIATES
 ALL RIGHTS RESERVED
 Any use or reproduction of this document or the
 attached drawings, or the use of the design approach
 or Concepts described in this document and
 the attached drawings, in whole or in part by any
 means whatsoever, is strictly prohibited except with
 written consent of
 JOSEPH A. SCHUDT & ASSOCIATES

STORM WATER POLLUTION PREVENTION PLAN

The following plan is established and incorporated in the project to direct the contractor in the placement of temporary erosion control systems and to provide a storm sewer water pollution prevention plan for compliance under NPDES.

The purpose of this plan is to minimize erosion within the construction site and to limit sediments from leaving the construction site by utilizing proper temporary erosion control systems and providing ground cover within a reasonable amount of time.

Certain erosion control facilities shall be installed by the contractor at the beginning of construction. Other items shall be installed by the contractor as directed by the engineer on a case by case situation depending on the contractor's sequence of activities, time of year, and expected weather conditions.

The contractor shall install permanent erosion control systems and seeding within a time frame specified herein and as directed by the engineer, therefore minimizing the amount of area susceptible to erosion and reducing the amount of temporary seeding. The engineer will determine if any temporary erosion control systems shown in the plan can be deleted and if any additional temporary erosion control systems, which are not included in this plan, shall be added. The contractor shall perform all work as directed by the engineer and as shown in the plans.

Section 280. Temporary erosion control, of the standard specifications additionally supplements this plan.

Site Description
Description of Construction Activity:

- The project is located on Lot 3 in Wolf and Laraway LLC Subdivision, at Laraway and Wolf Rd in the Village of Frankfort, Will County, Illinois.
- Construction includes all earthwork, bituminous roadways with curb, full utilities and erosion control facilities associated with the construction of a Commercial site.

Description of Intended Sequence for Major Construction Activities Which Will Disturb Soils for Major Portion of the Construction Site:

- Erosion control silt fencing shall be in place prior to earthwork activities.
- Site shall be mass-graded, with all proposed building pads and pavement subgrade graded to roughly 1-foot below final elevation on plans.
- Concrete curb, bituminous roads and utilities shall be constructed.

Area of Construction Site:

The total area of the construction site is estimated to be 0.57 acres by which 0.57 acres will be disturbed by excavation, grading, and other activities.

Other Reports, Studies and Plans, Which Aid in the Development of the Storm Water Pollution Prevention Plan as Referenced Documents:

- Information of the soils and terrain within the site was obtained from topographic surveys and soil borings that were utilized for the development of the proposed temporary erosion control systems.
- Project plan documents, specifications and special provisions, and plan drawings indicating drainage patterns and approximate slopes anticipated after grading activities were utilized for the proposed placement of the temporary erosion control systems.

Drainage Tributaries and Sensitive Areas Receiving Runoff from this Construction Site:

- The site shall drain into the existing storm sewers onsite which drain to the existing detention basin within the Subdivision. The detention basin out falls to the west branch of Hickory Creek.

Controls, Erosion Controls and Sediment Control:

- The drawings, specifications and special provisions will ensure that existing vegetation is preserved where attainable and disturbed portions of the site will be stabilized. Stabilization practices include temporary seeding, permanent seeding, mulching, protection of trees, preservation of nature vegetation, and other appropriate measures as directed by the engineer. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 7 days after the construction activity in that portion of the site has temporarily or permanently ceased.

(a.) Areas of existing vegetation, wood and grasslands, outside the proposed construction limits shall be identified by the engineer for preserving and shall be protected from construction activities.

(b.) Dead, diseased, or unsuitable vegetation within the site shall be removed as directed by the engineer, along with required tree removal.

(c.) As soon as reasonable access is available to all locations where water drains away from the project, temporary perimeter erosion barrier shall be installed as called out in this plan and directed by the engineer.

(d.) Bare and sparsely vegetated ground in high erodible areas as determined by the engineer shall be temporarily seeded at the beginning of construction where no construction activities are expected within seven (7) days.

(e.) Immediately after tree removal is completed, areas which are highly erodible as determined by the engineer, shall be temporarily seeded when no construction activities are expected within seven (7) days.
- Establishment of these temporary erosion control measures will have additional benefits to the project. Desirable grass seed will become established in these areas and will spread seeds onto the construction site until permanent seeding/mowing and over seeding can be completed.
- The Owner holds the burden of submitting documents to the Village of Frankfort to assure that requirements are met. Owner is responsible for conducting site visits and verifying that the practices are working properly and determine if additional practices are needed for better soil erosion and sediment control. If additional practices are deemed necessary by the Village of Frankfort, the contractor will implement the practice in a timely manner.

Description of Stabilization Practices During Construction:

- During construction, areas outside the construction limits as outlined previously herein shall be protected. The contractor shall not use this area for staging, parking of vehicles of construction equipment, storage of materials or other construction related activities.
 - Within the construction limits, areas which may be susceptible to erosion as determined by the engineer shall remain undisturbed until full scale construction is underway to prevent unnecessary soil erosion.
 - As construction proceeds, the contractor shall institute the following as directed by the engineer.
 - Place temporary erosion control facilities at locations shown on the plans.
 - Temporarily seed erodible bare earth on a weekly basis to minimize the amount of erodible surface area within the contract limits.
 - Provide temporary erosion control systems.
 - Continue building up the embankment to the proposed grade while, at the same time, placing permanent erosion control final shaping to the slopes.
 - Excavated areas and embankment, including topsoil stockpile(s), shall be permanently seeded immediately after final grading. If not final graded, they shall be temporarily seeded if no construction activity in the area is planned for seven (7) days. Seeding shall be provided in accordance with the soil protection chart included on this page.
 - Construction equipment shall be stored and fueled only at designated locations. All necessary measures shall be taken to contain any fuel or other pollutant in accordance with EPA water quality regulations. Leaking equipment or supplies shall be immediately repaired or removed from the site.
 - The contractor shall inspect the project daily during construction activities. Inspection shall also be done weekly and after rains of 1/2-inch or greater or equivalent snowfall and during the winter shutdown period. The project shall additionally be inspected by the construction field engineer on a biweekly basis to determine that erosion control efforts are in place and effective and if other erosion control work is necessary.
 - Sediment collected during construction of the various temporary erosion control systems shall be disposed of on the site on a regular basis as directed by the engineer. The cost of this maintenance shall be included in the unit bid price for earth excavation for erosion control.
 - The temporary erosion control systems shall be removed, as directed by the engineer, after use is no longer needed or no longer functioning.
 - Runoff from upland areas shall be diverted past the disturbed site and protected from soil erosion in the same manner as disturbed site.

Description of Structural Practices after Final Grading:

- Temporary erosion control systems shall be left in place with proper maintenance until permanent erosion control is in place and working properly and all proposed turf areas sodded and established.
- Once permanent erosion control systems as proposed in the plans are functional and established, temporary items shall be removed, cleaned up, and disturbed turf reseeded.
- Upon completion of the commercial building, permanent landscaping features, including sod will be established.

Miscellaneous:

- Temporary erosion control seeding shall be applied at a rate of 100 lbs/acres, if directed.
- Straw bales, hay bales, perimeter erosion barrier and silt fences will not be permitted for temporary or permanent ditch checks. Ditch checks shall be composed of aggregate, silt panels, rolled excelsior, urethane form/geotextile silt wedges, and/or any other material approved by the erosion and sediment control coordinator.
- Sediment collected during construction by the various temporary erosion control systems shall be disposed of on the site on a regular basis, as directed by the engineer. The cost of this maintenance shall be paid for at the contract unit price per cubic yard for earth excavation.
- All erosion control products furnished shall be specifically recommended by the manufacturer for the use specified in the erosion control plan. Prior to the approval and use of the project, the contractor shall submit to the engineer a notarized certification by the producer stating the intended use of the product and that the physical properties required for this application are met or exceeded. The contractor shall provide manufacturer installation procedures to facilitate the engineer in construction inspection.

NPDES II NOTES:

The Village of Frankfort requires compliance with NPDES Phase II program. As such, all developments shall provide to the extent possible, construction site run-off control and illicit discharge prevention and elimination.

- The owner is responsible for submitting the Notice of Intent (NOI) to the IEPA after the Storm Water Pollution Prevention Plan (SWPPP) is complete. The contractor is responsible for insuring that the NOI is postmarked at least 30 days before commencement of any work on site.
- Prior to commencement of construction, the owner shall provide written notification to the IEPA of completion of the SWPPP and that said plan is available at the site.
- The contractor is responsible for having the SWPPP on site at all times.
- Inspection of controls will be completed by the owner at least once every 7 days and within 24 hours of a storm 0.5" or greater.
- An Incident of Non-Compliance (ION) must be completed and submitted by the owner to the IEPA and copied to the Village if, at any time, an erosion or sediment control device fails.
- A Notice of Termination (NOT) shall be completed by the owner in compliance with NPDES Phase II requirements when all permanent erosion control measures are in place with a 70% establishment rate of vegetation. The NOT shall be sent to the IEPA and the Village of Frankfort.
- The contractor shall take the necessary steps to control waste such as discarded building materials, concrete truck washout, chemicals, litter and sanitary waste at the construction site that may cause adverse impacts to water quality.

Storm Water Pollution Prevention Plan Certificates

- Contractor Certification Statement: "I certify under penalty of law that I understand the terms and conditions of the general National Pollutant Discharge Elimination System (NPDES) permit (ILR-10) that authorizes the storm water discharges associated with activity from the construction site identifies as part of this certification."

By: _____
Contractor
Name: _____
Phone #: _____
Address: _____

- Owner Certification Statement: "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

By: _____
Owner
Name: _____

Control Measures Notes:

- Erosion and sediment control measures shall be installed and maintained in accordance with the Illinois Urban Manual and the Village of Frankfort design standards.
- In addition to silt fence shown on the SWPPP, silt fence shall be provided for areas draining 200' and greater in accordance with NRCS code 920.
- Soil stockpiles must be stabilized or covered at the end of each workday.
- The entire site must be stabilized, using a heavy mulch layer or another method at the close of the construction season.
- Techniques shall be employed to prevent the blowing of dust or sediment from the site.
- Techniques that divert upland runoff past disturbed slopes shall be employed.
- The applicant and/or contractor shall contact the Village at least 2 working days before the start of construction, installation of sediment and erosion measures and completion of final landscaping.

FOR PERMIT

SOIL PROTECTION CHART

STABILIZATION TYPE	JAN.	FEB.	MAR.	APR.	MAY	JUN.	JUL.	AUG.	SEP.	OCT.	NOV.	DEC.
PERMANENT SEEDING			A			*	*		*			
DORMANT SEEDING	B									B		
TEMPORARY SEEDING			C				D					
SODDING			E**									
MULCHING	F											

- KENTUCKY BLUEGRASS 90 LBS./AC. MIXED WITH PERENNIAL RYEGRASS 30 LBS./AC.
- KENTUCKY BLUEGRASS 135 LBS./AC. MIXED WITH PERENNIAL RYEGRASS 45 LBS./AC. + 2 TONS STRAW MULCH PER ACRE.
- SPRING OATS 100 LBS./AC.
- WHEAT OR CEREAL RYE 150 LBS./AC.
- SOD.
- STRAW MULCH 2 TONS/AC.

- IRRIGATION NEEDED DURING JUNE, JULY AND SEPT.
- IRRIGATION NEEDED FOR 2-3 WEEKS AFTER SODDING.

Maintenance after Construction:

Construction is complete after acceptance by the owner and the Village of Frankfort. Maintenance up to this date will be by the contractor.

INSPECTION AND MAINTENANCE PLAN FOR STORMWATER MANAGEMENT STRUCTURES (BMPS)		
	INSPECTION SCHEDULE	CORRECTIVE ACTIONS
VEGETATED AREAS	Annually early spring and after heavy rains	Inspect all slopes and embankments and replant areas of bare soil or with sparse growth
		Armor fill erosion areas with riprap or divert the runoff to a stable area
		Inspect and repair down-slope of all spreaders and turn-outs for erosion
DITCHES, SWALES AND OPEN STORMWATER CHANNELS	Annually spring and late fall and after heavy rains	Mow vegetation as specified for the area
		Remove obstructions, sediments or debris from ditches, swales and other open channels
		Repair any erosion of the ditch lining
CULVERTS	Spring and late fall and after heavy rains	Mow vegetated ditches
		Remove woody vegetation growing through riprap
		Repair any slumping side slopes
CATCHBASINS	Annually in the spring	Repair riprap where underlying filter fabric or gravel is showing or if stones have dislodge
		Remove accumulated sediments and debris at the inlet, outlet, or within the conduit
		Remove any obstruction to flow
ROADWAYS AND PARKING AREAS	Annually in the spring or as needed	Repair any erosion damage at the culvert's inlet and outlet
		Clear and remove accumulated winter sand in parking lots and along roadways
		Sweep pavement to remove sediment
RESOURCE AND TREATMENT BUFFERS	Annually in the spring	Grade road shoulders and remove accumulated winter sand
		Grade gravel roads and gravel shoulders
		Clean-out the sediment within water bars or open-top culverts
WETPONDS AND DETENTION BASINS	Annually in fall and after heavy rains	Ensure that stormwater runoff is not impeded by false ditches of sediment in the shoulder
		Inspect buffers for evidence of erosion, concentrated flow, or encroachment by development
		Manage the buffer's vegetation with the requirements in any deed restrictions
FILTRATION AND INFILTRATION BASINS	Annually in the spring and late fall	Repair any sign of erosion within a buffer
		Inspect and repair down-slope of all spreaders and turn-outs for erosion
		Install more level spreaders, or ditch turn-outs if needed for a better distribution of flow
PROPRIETARY DEVICES	As specified by manufacturer	Clean-out any accumulation of sediment within the spreader bays or turnout pools
		Mow non-wooded buffers no shorter than six inches and less than three times per year
		Inspect the embankments for settlement, slope erosion, piping, and slumping
OTHER PRACTICES	As specified for devices	Mow the embankment to control woody vegetation
		Inspect the outlet structure for broken seals, obstructed orifices, and plugged trash racks
		Remove and dispose of sediments and debris within the control structure
		Repair any damage to trash racks or debris guards
		Replace any dislodged stone in riprap spillways
		Remove and dispose of accumulated sediments within the impoundment and forebay
		Clean the basin of debris, sediment and hydrocarbons
		Provide for the removal and disposal of accumulated sediments within the basin
		Renew the basin media if it fails to drain within 72 hours after a one inch rainfall event
		Till, seed and mulch the basin if vegetation is sparse
		Repair riprap where underlying filter fabric or gravel is showing or where stones have dislodged
		Contract with a third-party for inspection and maintenance
		Follow the manufacturer's plan for cleaning of devices
		Contact the department for appropriate inspection and maintenance requirements for other drainage control and runoff treatment measures.

THE CONTRACTOR WILL ASSUME RESPONSIBILITY FOR MAINTENANCE OF ALL SOIL EROSION CONTROL MEASURES DURING CONSTRUCTION AND THE OWNER WILL ASSUME RESPONSIBILITY OF ALL SOIL EROSION CONTROL MEASURES AFTER CONSTRUCTION.

INSPECTION SCHEDULE

- DIVERSION AND STRUCTURAL MEASURES - WILL BE INSPECTED AT WEEKLY INTERVALS OR AFTER EVERY RAIN STORM PRODUCING RUNOFF.
- SEDIMENT BASINS AND PONDS - WILL BE CHECKED AFTER EACH MAJOR PHASE OF THE DEVELOPMENT FOR SEDIMENT ACCUMULATION.
- VEGETATIVE PLANTINGS - SPRING PLANTINGS WILL BE CHECKED DURING SUMMER OR EARLY FALL.
- REPAIRS - ANY EROSION CONTROL MEASURES, STRUCTURAL MEASURES, OR OTHER RELATED ITEMS IN NEED OF REPAIR WILL BE MADE WITHIN 1-2 DAYS.
- MOWING - DRAINAGEWAYS, DITCHES AND OTHER AREAS THAT SUPPORT A DESIGNED FLOW OF WATER WILL BE MOWED REGULARLY TO MAINTAIN THAT FLOW.
- FERTILIZATION - SEEDED AREAS WHERE THE SEED HAS NOT PRODUCED A GOOD COVER, WILL BE INSPECTED AND FERTILIZED AS NECESSARY.

CONSTRUCTION SEQUENCE AND RESPONSIBLE CONTRACTOR

- INSTALL SEDIMENT CONTROL MEASURES:
 - VC VEGETATIVE CHANNEL
 - BF BARRIER FILTER
 - SE STABILIZED CONSTRUCTION ENTRANCE
- GRADE SITE/STOCKPILE TOPSOIL.
- PRESERVE AND PROTECT EXISTING VEGETATION.
- TEMPORARY VEGETATIVE STABILIZATION OF CONTROL MEASURES:
 - TS TEMPORARY SEEDING
 - VF VEGETATIVE FILTER
 - M MULCHING
- VEGETATIVE COVER ON ALL AREAS TO BE EXPOSED LONGER THAN 7 DAYS:
 - TS TEMPORARY SEEDING
- PERMANENT VEGETATIVE STABILIZATION OF ALL EXPOSED AREAS WITH 7 DAYS OF:
 - PS PERMANENT SEEDING
 - SO SODDING
- INSTALL PERMANENT LANDSCAPING & REMOVE TEMPORARY EROSION CONTROL.
- PERFORM CONTINUING MAINTENANCE.

UNDERGROUND CONTRACTOR LANDSCAPE CONTRACTOR

RETAIL BUILDING

FRANKFORT, IL

SITE EROSION CONTROL PLAN

Date: 5-15-23
Scale: NONE
File Name: 23-20-ENG-6-29-23
Drawn: TMF
Checked: DWO
Sheet:
7 OF 10
Project No.: 23-020

Joseph A. Schudt & Associates
9455 ENTERPRISE DRIVE MOKENA, IL 60448
PHONE: 708-720-1000 www.jaseng.com FAX: 708-720-1065

(184-001172)

REVISIONS: 6-29-23 7-10-23

COPYRIGHT © 2023
JOSEPH A. SCHUDT & ASSOCIATES
ALL RIGHTS RESERVED
Any use or reproduction of this drawing without the written consent of the engineer is prohibited. The engineer assumes no responsibility for any errors or omissions in this drawing.

GENERAL CONDITIONS

1. The Village of Frankfort, Department of Public Works, and Department of Engineering (Telephone 1-815-469-2177), and Joseph A. Schudt & Associates (Telephone 708-720-1000) must be notified (2) working days prior to commencement of work.
2. The Standard Specifications, construction plans and subsequent details are all to be considered as part of the contract. Incidental items or accessories necessary to complete this work may not be specifically noted but are to be considered a part of the contract.

3. Prior to commencement of construction, the contractor shall verify all dimensions and conditions at the job site. In addition, the contractor must verify the Engineer line and grade stakes. If there are any discrepancies from what is shown on the construction plans, he must immediately report same to the Engineer before doing any work, otherwise the contractor assumes full responsibility. In the event of disagreement between the construction plans, standard specifications and/or special details, the contractor shall secure written instructions from the Engineer prior to proceeding with any part of the work affected by omissions or discrepancies. Failing to secure such instructions, the contractor will be considered to have proceeded at his own risk and expense. In the event of any doubt or question rising with respect to the true meaning of the construction plans or specifications, the decision of the Engineer shall be final and conclusive.

4. All work performed under this contract shall be guaranteed by the contractor and his surety for a period of 12 months from the date of final acceptance of the work by the Municipality against all defects in materials and workmanship of whatever nature.

5. Before acceptance by the Owner and final payment, all work shall be inspected and approved by the Owner or his representative. Final payment will be made after all of the contractor's work has been approved and accepted.

6. Upon award of the contract and when required by the Municipality, the contractor shall furnish a labor, material and performance bond per Municipality requirements guaranteeing completion of the work. The underwriter shall be acceptable to the Municipality. Maintenance Bond after construction may also be required.

7. Easements for the existing utilities, both public and private, and utilities within public rights-of-way are shown on the plans according to available record. The contractor shall be responsible for determining the exact location in the field of these utility lines and their protection from damage due to construction operations. If existing utility lines of any nature are encountered which conflict in location with new construction, the contractor shall notify the Engineer so that the conflict may be resolved.

8. Removed pavement, sidewalk, curb and gutter, etc. shall be disposed of at off-site locations provided by the contractor at his own expense.

9. The contractor shall be responsible for the installation and maintenance of adequate signs, traffic control devices, and warning devices to inform and protect the public during all phases of construction. One lane in each direction shall be open to traffic at all times except between the hours of 9 A.M. to 3 P.M. During this period all work must be performed in accordance with standards 701201, 701206, and 701401.

10. Barricades and warning signs shall be provided in accordance with article 107.14 of the Standard Specifications. Adequate lighting shall be maintained from dusk to dawn at all locations where construction operations warrant or as designated by the Engineer. Traffic control standards which shall be included for use during construction are: 702001, 701201, 701206, 701301, 701401, 701501, 701606, and 701701. Stop signs must be installed as soon as access is available.

11. Commonwealth Edison (Com-Ed), A.T.&T. Telephone, and Ni-Cor Gas have underground and/or overhead service facilities in the vicinity of the proposed work, the contractor shall be responsible for having the utility companies locate their facilities in the field prior to construction and shall also be responsible for the maintenance and preservation of these facilities. The contractor shall call J.U.L.I.E. at "811" or (800) 892-0123 for utility locations.

12. Whenever the performance of work is indicated on the plans, and no item is included in the contract for payment, the work shall be considered incidental to the contract, and no additional compensation will be allowed.

13. All existing traffic signs, street signs, etc., which interfere with construction operations and not noted for removal or disposal shall be removed and reset by the contractor at locations as designated by the Engineer. This shall be considered incidental to the contract and no additional compensation shall be allowed. Damage to these items shall be repaired by the contractor at his own expense. All signs not required to be reset shall be delivered to the Municipality or County as appropriate.

14. All permanent type pavements or permanent improvements which about the proposed improvement and must be removed, shall be saw-cut prior to removal. All items so removed shall be replaced with similar construction materials to their original condition or better. Payment for sawing shall be included in the cost for removal of each item and replacement will be paid under the respective items in the contract, unless otherwise indicated.

15. Where overhanging branches interfere with operations of construction, said branches shall be trimmed and sealed in accordance with section 645.09 of the Standard Specifications, and the cost of same shall be incidental to the contract. If trees or shrubs must be removed, they will be paid for in accordance with the specifications.

16. The contractor shall submit in writing a "Schedule of Operations" showing approximate dates for commencing and completing various phases of construction under this contract. The schedule shall have the approval of the Engineer and the date for starting shall be mutually agreed upon between the contractor and the Engineer.

17. Special attention is drawn to the fact that article 105.06 of the Standard Specifications require the contractor to have a competent superintendent on the project site at all times irrespective of the amount of work sublet. The superintendent shall be capable of reading and understanding the plans and specifications, shall have full authority to execute orders to expedite the project, and shall be responsible for scheduling and have control of all work as the agent of the general contractor. Failure to comply with the provision will result in a suspension of work as provided in Article 108.07.

18. Water Valve boxes and Buffalo boxes that are uncovered during construction shall be adjusted to grade prior to restoring the pavement, sidewalk or parkway. The cost of same shall be considered as incidental to the contract.

19. It shall be the responsibility of the contractor to remove from the site any and all materials and debris which result from his construction operation at no additional expense to the Owner.

20. The Municipality and/or the Governing Agency shall be notified 48 hours prior to the start of any construction.

EARTHWORK

1. Work under this section shall include but not be limited to the following:

- A. Clearing and removing from the site, all undesirable trees and other vegetative growth within the construction area. Tree removal shall be kept to a minimum.

- B. Stripping of topsoil from all excavation, pavement and structural clay fill areas.

- C. Stockpiling of topsoil at locations as directed by the Owner or Engineer. Topsoil stockpiled for future use shall be relatively free from large roots, sticks, weeds, brush, stones larger than one (1) inch diameter or other litter and waste products including other extraneous materials not conducive to plant growth. Topsoil shall be stockpiled in sequence to eliminate any rehandling or double movements by the contractor.

- D. Clay cut and Clay fill with compaction within roadway and all other structural fill areas.

- E. Clay Cut and Excavation of all lakes and waterways per plan including all treatments.

- F. Placement and compaction of clay to standards as required on the construction plans to the design subgrade elevations. The contractor will note that the elevations shown on the construction plans are finished grade elevations and that pavement thickness must be subtracted to determine subgrade elevations. The contractor may obtain required clay fill from on-site excavation and on-site borrow excavation as directed by the Engineer, or Owner.

- G. Backfilling and compaction behind new curbs and gutters.

- H. Movement and compaction of soil material from the construction of underground utilities.

- I. Topsoil Placement to design finished grade elevations (6" minimum or as otherwise noted).

- J. If required, removal from site of all excess earth material including excess utility trench spoil after final grading.

2. The quantities given in the Engineer's Bid Proposal for earthwork is intended as a guide for the contractor in determining the scope of the completed project. It is the contractor's responsibility to determine all material quantities and appraise himself of all site conditions. The contract price submitted by the contractor shall be considered as lump sum for the complete project. No claims for extra work will be recognized unless ordered in writing by the Engineer, and/or Owner.

3. Proposed pavement areas and when applicable, building pads, driveways and sidewalks shall be excavated or filled to plus or minus 0.1 foot of design subgrade elevations by the contractor.

4. The subgrade shall be free of unsuitable material and shall be compacted to a minimum of ninety-five (95) percent of modified proctor density. Testing for compaction shall be the responsibility of the contractor.

5. Upon completion of the surface improvements, the excavator shall respread a 6" layer of topsoil on all disturbed parkway, berm, and detention pond areas.

6. During construction operations, the contractor shall insure positive site drainage at the conclusion of each day. Site drainage may be achieved by ditching, pumping or any other method acceptable to the Engineer. The contractor's failure to provide the above will preclude any possible added compensation requested due to delays or unsuitable materials created as a result thereof.

7. Whenever, during construction operations, any loose material is deposited in the flow line of gutter, drainage structures, ditches, etc., such that the natural flow line of water is obstructed, this loose material shall be removed at the close of each working day. At the conclusion of construction operations, all drainage structures and flow lines shall be free from dirt and debris. This work shall be considered incidental to the contract.

8. All disturbed areas within the right-of-way, parkways and detention areas shall be seeded with I.D.O.T. CL-1 mixture in accordance with the "Standard Specifications" unless otherwise noted on landscape plans and protected with Excelsior Erosion Blanket or equal.

9. Soil erosion control specifications shall be considered as part of this section.

10. All earthwork and utility spoils to be hauled offsite shall be tested by the contractor for disposal requirements.

UNDERGROUND

1. Work under this section shall include trenching, installation of pipe, castings, structures, backfilling of trenches and compaction.

2. All manholes and valve vaults shall be equipped with steps. Manholes will contain plastic coated steps per Precast Concrete Manhole Detail at 16 inch centers.

3. All sewer and water main trenches beneath proposed or existing utilities, proposed or existing pavement, driveways, sidewalks and for a distance of two feet on either side of same, and/or wherever else shown on the construction plan shall be backfilled with course aggregate backfill (CA-6) and thoroughly compacted in accordance with the State Specifications.

- A 5 foot patch on both sides of the trench. Full depth Class D patch within the trench area. The 5 foot areas on both sides of the trench are required to be patched with 2-1/2" binder and 1-1/2" of surface. Public Works inspections are required during the restoration process.

4. All structure sections, adjusting rings and frames shall be securely sealed to each other or to the cone section or top barrel section of the manhole using resilient, flexible, non-hardening, preformed, bituminous mastic (RAM-NEK, or Approved Equal). This mastic shall be applied in such a manner that no surface water or ground water inflow can enter the manhole through gaps between barrel sections or cone sections and adjusting rings (ASTM C-478 STRUCTURES).

5. The underground contractor shall stock pile all utility spoil in an area designated by the Engineer or Owner. This work shall be considered incidental to the contract. If authorized to do so, the underground contractor shall level out and disburse all utility spoil or remove it from the site. If no Earthwork Contract is awarded for this project, the underground contractor shall be responsible for removal of all excess Utility Spoil from the site. This work shall be considered incidental to the contract.

6. The construction will be observed by the Owners Engineer. All work shall conform to the requirements of the Municipality as well as the Standard Specifications.

7. The contractor shall provide the Engineer and the Municipality, and/or the Governing Agency, with prints and/or legible Mylar Record Drawings of all field tiles, cleanouts, wyes, service stubs, B-Boxes, and underdrains as required.

8. Separation between water mains and sewers must be maintained in accordance with Section 41-2.01B, C, & D of the "Standard Specifications". For storm sewer pipes that cross water mains, the storm sewer must be constructed of low head pressure pipe meeting ASTM C-443. The flexible "O" ring utilized in the type of joint must be properly sealed to insure water-tightness.

9. All new watermain shall be C900 PVC pipe. All watermain fittings, valves, and hydrants shall have stainless steel bolts and shall be secured using Meg-A-Lug restrained joints. Thrust blocking shall also be provided, with precast blocking permitted. Watermain shall be pressure tested at 150psi for two hours. A leakage test will be performed in accordance with "Standard Specifications for Water and Sewer Construction in Illinois", current edition. A disinfection test shall be completed using an initial chlorine concentration of 50 mg/l and a minimum residual concentration of 25 mg/l after 24 hours. All work shall comply with Village of Frankfort standards.

10. Valves shall be Mueller, Clow, or approved equal, mechanical joint, resilient wedge seat, cast iron, bronze mounted, o-ring seal, bronze non-rising stem, gate valve. All valves shall be rated for 300 PSI test pressure and 150 PSI working pressure.

11. All watermain shall be bedded with compacted, granular CA-7 materials, minimum thickness equal to 1/4 the diameter of the pipe, but not less than 6".

12. All bends in the watermain of 10 degrees or greater shall be installed with Meg-a-Lug Mechanical Joint Restraint and thrust blocking.

13. Valve boxes shall be good quality cast iron and made in sections, diameter as specified on the plans, with appropriate lids (see construction standards sheet). Lids shall be imprinted "Water".

14. Valve basins shall be of precast concrete per ASTM C-478 with bituminous mastic joints, 48 inch inside diameter with Type 1 frame and closed lid marked "Water" and "Village of Frankfort".

15. All watermain shall be subjected to a pressure test upon completion and prior to acceptance. Installation of watermain shall conform to AWWA Section C-600-77. Hydrostatic pressure test and leakage test shall be based on the Municipality's requirements. The procedure for watermain disinfection shall conform to AWWA Section C-851-86.

16. All system valves shall be opened fully once the water mains have been tested completely. This system will be checked by the Municipality's Fire Department for adequate fire flows as soon as possible after the water mains are completed.

17. All hydrants shall be of the compression or gate type, as manufactured by East Jordan Iron Works, 5BR-250.

18. All floor drains shall be connected to the sanitary sewer and all downspouts and footing drains shall discharge into storm sewer or onto the ground.

19. Curb inlets are to be EJIW 7010 Type M-3 HD, or as indicated on the plans.

20. Rigid Sanitary Sewers and Storm Sewers shall be installed on Class B bedding, 1/4" to 1" in size, with a minimum thickness equal to that identified on the appropriate sewer section indicated on the detail sheet. Blocking of any kind for grade is not permitted. Bedding material shall conform to the requirements of ASTM C-33 for soundness and CA-7 for gradation. Cost for bedding shall be merged with unit price bid for the sewer.

21. Where flexible pipe is used, the pipe shall be installed on Class I Bedding and additional backfill extending to 12" over the pipe. Backfilling shall be in accordance with ASTM 2321. A deflection test shall be required by using a Rigid Ball or Mandrel as required in accordance with ASTM D-3034. A 95% Mandrel is required and will not be used prior to 45 days after backfilling.

22. 'Band-Seal' or similar flexible type couplings shall be used when connecting sewer pipes of dissimilar materials. When connecting to an existing sanitary sewer by means other than an existing wye or manhole, contractor shall use a 'sewer-tap' and hub-wye or hub-tee saddle.

23. All Sewer Main connections to an existing sanitary sewer main shall be with a manhole.

24. Sanitary sewers shall be PVC SDR 26 (ASTM 3034) with rubber gasketed joints (ASTM D-3212), unless noted otherwise, and shall be installed according to the requirements of Uni-B-79. Only Class I bedding material shall be allowed according to the requirements of ASTM D-2321. Where sanitary service crosses below watermain with less than 18 inches of separation, or where indicated elsewhere on plans, sanitary sewer pipe shall be PVC watermain quality pipe (ASTM D-2241) with gasket joints (ASTM D-2672 or ASTM D-3139). Connection to the existing sanitary manhole shall be completed by removing a portion of the existing main and connecting the manhole utilizing PVC SDR 26 pipe and a mission coupling. A "doghouse-style" manhole is not allowed. The manhole shall be provided with flexible manhole sleeves for the PVC pipe connection. Sanitary sewers, where indicated as ductile iron, shall be AWWA C151, Class 52 with cement lining (AWWA C104) and rubber push on joints (AWWA C110).

25. All sanitary sewer manholes shall have eccentric cones; cone openings shall be centered over the outlet pipe. All precast structures to be as per ASTM C-478.

26. Sanitary sewer manholes shall be 4'-0" diameter precast structures. Manholes shall also include the appropriate frame and sealed lids.

PAVING, CURB & WALKS

1. Work under this section shall include final subgrade shaping and preparation, forming, placement of roadway base course materials and subsequent binder and/or surface courses, finishing and curing of concrete, final clean-up and all related work.

2. The proposed pavement shall consist of the subgrade course (as specified) base course, Bituminous Concrete Binder course, and Bituminous Concrete Surface course, Class 1, or the thickness and materials as specified on the construction plans. Prime coat material shall be bituminous M.C. - 30. Unless shown as a bid item, prime coat shall be considered as incidental to the cost of the contract. All pavement shall be constructed in accordance with the I.D.O.T. "Standard Specifications for Road and Bridge Construction", current edition.

3. Sidewalks and curb shall be of the type as detailed in the construction plans shall consist of Portland Cement Concrete with air entrainment of not less than five percent (5%) or more than eight percent (8%). Concrete shall be a minimum six (6) bag mix and shall develop a minimum of 3,500 PSI compressive strength at fourteen (14) days. All concrete shall be broom finished.

4. Curing and protection shall be in accordance with article 606 of the "Standard Specifications", current edition.

5. All damaged areas in the binder, base or curb shall be repaired to the satisfaction of the Engineer and Municipality prior to laying the surface course. The paving contractor shall provide whatever equipment and manpower necessary including the use of power brooms if required by the Engineer to prepare the pavement for application of the surface course. Equipment and manpower for cleaning shall be considered as incidental to the cost of the contract. Prime coat for the binder course shall also be considered as incidental to the cost of the contract and shall be applied to the binder at a rate of 0.05 gallons per square yard.

6. 3/4" thick Premolded Fibre Expansion Joints with 3/4" x 13" plain round, steel dowel bars shall be installed at fifty (50) foot intervals and at all P.C.'S, P.T.'S, and curb returns. Alternated ends of the dowel bars shall be greased and fitted with metal expansion tubes. Contraction joints shall be provided at twenty-five (25) foot intervals in the curb. The cost of these joints shall be considered as incidental to the cost of the contract. Expansion joints shall be placed near all curb inlets.

7. Backfilling of curbs or pavement shall be the responsibility of the earthwork contractor.

8. Curbs shall be depressed at locations where public walks/pedestrian paths intersect curb line at street intersections and other locations as directed, in accordance with Americans with Disabilities Act (ADA) requirements.

9. Membrane Curing Compound, Type I, II, or III, in conformance with section 1022 of the Standard Specifications shall be applied to exposed concrete surfaces, cost of which shall be incidental to the cost of the contract.

10. It shall be the responsibility of the contractor to remove from the site any and all materials and debris which result from his construction operations at no additional expense to the Owner.

11. The paving contractor shall be responsible for providing all coring, testing, and pavement evaluation as required by the Municipality for acceptance at his own expense. The contractor shall include this as a separate bid item or else it will be assumed that this cost has been figured into the unit prices for the paving items. All testing results shall be made available to the Municipality for review.

12. Concrete sidewalks shall have three - 1/4 inch diameter, 10 foot long reinforcing rods centered over all utility crossings. Expansion joints shall be provided in the concrete sidewalks at 50 foot intervals.

SEDIMENTATION & EROSION CONTROL

1. All storm water runoff is to be directed to catch basins with proper sumps. Drainage Structure Inlet Filter Devices shall be placed in the catch basins, inlets, or manholes, so as to filter and contain any and all soil and debris.

2. When storm water is to be routed through existing or proposed detention basins, they are to be constructed immediately upon commencement of the project. Basins will be properly over excavated so as to provide sufficient volume for debris and settlement. If the drainage is in an existing basin, the upstream project will be properly protected so as to prevent siltation of the downstream basin.

3. All catch basins, sumps and/or retention basins are to be cleaned at the end of the project prior to final acceptance. Cleaning may also be required during the course of the construction of the project if it is determined that the silt and debris traps are not properly functioning and their performance is impaired.

4. Unless soil erosion control items are specifically referred to as bid items (such as topsoil respread, seeding, etc.), they are to be considered as incidental to the cost of the contract.

5. Soil erosion control measures in accordance with the "Procedures and Standards for Urban Soil Erosion and Sedimentation Control in Illinois", current edition, shall be followed at the discretion of the Municipality.

6. Any soil erosion control measures in addition to those outlined in these plans and which are deemed necessary by the Engineer, shall be implemented immediately by the contractor.

7. Seeding shall conform to section 250 of the "Standard Specifications".

Village of Frankfort Standard Specifications shall govern all utility matters and shall supercede general conditions and specifications when and where in conflict.

Construction Specification --Pollution Control & Soil Erosion & Sediment Control

1. **Scope**
The work consists of installing measures or performing work to control erosion and minimize the production of sediment and other pollutants to water and air from construction activities.

2. **Material**
All material furnished shall meet the requirements of the material specifications listed in this specification.

3. **Erosion and sediment control measures and works**
The measures and works shall include, but are not limited to, the following:
Staging of earthwork activities—The excavation and moving of soil materials shall be scheduled to minimize the size of areas disturbed and unprotected from erosion for the shortest reasonable time. **Seeding**—Seeding to protect disturbed areas shall occur as soon as reasonably possible following completion of that earthwork activity.

- Mulching**—Mulching to provide temporary protection of the soil surface from erosion.
Diversions—Diversions to divert water from work areas and to collect water from work areas for treatment and safe disposition. These works are temporary and shall be removed and the area restored to its near original condition when the diversions are no longer required or when permanent measures are installed.
Stream crossings—Culverts or bridges where equipment must cross streams. They are temporary and shall be removed and the area restored to its original condition when the crossings are no longer required or when permanent measures are installed.

- Sediment basins**—Sediment basins collect, settle, and eliminate sediment from eroding areas from impacting properties and streams below the construction site(s). These basins are temporary and shall be removed and the area restored to its original condition when they are no longer required or when permanent measures are installed.

- Sediment filters**—Straw bale filters or geotextile sediment fences trap sediment from areas of limited runoff. Sediment filters shall be properly anchored to prevent erosion under or around them. These filters are temporary and shall be removed and the area restored to its original condition when they are no longer required or when permanent measures are installed.
Waterways—Waterways for the safe disposal of runoff from fields, diversions, and other structures or measures. These works are temporary and shall be removed and the area restored to its original condition when they are no longer required or when permanent measures are installed.
Other—Additional protection measures as specified in section 8 of this specification or required by Federal, State, or local government.

4. **Chemical pollution**
The contractor shall provide watertight tanks or barrels or construct a sump sealed with plastic sheets to dispose of chemical pollutants, such as drained lubricating or transmission fluids, grease, soaps, concrete mixer washwater, or asphalt, produced as a by-product of the construction activities. At the completion of the construction work, sumps shall be removed and the area restored to its original condition as specified in section 8 of this specification. Sump removal shall be conducted without causing pollution. Sanitary facilities, such as chemical toilets, or septic tanks shall not be located next to live streams, wells, or springs. They shall be located at a distance sufficient to prevent contamination of any water source. At the completion of construction activities, facilities shall be disposed of without causing pollution as specified in this specification.

5. **Air pollution**
The burning of brush or slash and the disposal of other materials shall adhere to state and local regulations. Fire prevention measures shall be taken to prevent the start or spreading of wildfires that may result from project activities. Firebreaks or guards shall be constructed and maintained at locations shown on the drawings. All public access or haul roads used by the contractor during construction of the project shall be sprinkled or otherwise treated to fully suppress dust. All dust control methods shall ensure safe construction operations at all times. If chemical dust suppressants are applied, the material shall be a commercially available product specifically designed for dust suppression and the application shall follow manufacturer's requirements and recommendations. A copy of the product data sheet and manufacturer's recommended application procedures shall be provided to the engineer 5 working days before the first application.

6. **Maintenance, removal, and restoration**
All pollution control measures and temporary works shall be adequately maintained in a functional condition for the duration of the construction period. All temporary measures shall be removed and the site restored to near original condition.

7. **Standards and Specifications**
Standards and specifications for Soil Erosion and Sediment Control and other Pollution Controls shall be in accordance with the Illinois Urban Manual Standards as indicated below.

Illinois Urban Manual	
Construction Specification Name	Code
Clearing	1
Clearing and Grubbing	2
Contractor Quality Control	94
Corrugated Polyethylene Tubing	44
Digging, Transporting, Planting and Establishment of Trees, Shrubs and Vines	707
Drainfill	24
Ductile-Iron Pipe	53
Earthfill	23
Excavation	21
Field Fence	92
Field Office	96
Geotextile	95
Identification Markers or Plaques	93
Mobilization and De-mobilization	8
Plastic Pipe	45
Pollution Control	5
Reinforced Concrete Pressure Pipe Conduits	41
Seeding, Sprigging and Mulching	6
Sodding	204
Stripping, Stockpiling, Site Preparation and Spreading Topsoil	752
Topsoiling	26
Traffic Control	

Illinois Urban Manual Practice Standard	Code	Date
Bioretention Facility	800	11/2013
Construction Road Stabilization	806	1/1999
Dust Control	825	2/1994
Erosion Control Blanket	830	6/2009
Filter Strip	835	1/1999
Infiltration Trench	847	1/1999
Inlet Protection - Fabric Drop	860	2/1994
Inlet Protection - Paved Areas	861	5/2011
Inlet Protection - Sod Filter	862	11/1999
Land Grading	865	2/1994
Mulching for Seeding and Soil Stabilization	875	6/2010
Permanent Vegetation	880	10/2001
Permanent Vegetation	880a	10/2001
Table A - Grass, Forb and Sedge Species for Low Maintenance Areas		
Permanent Vegetation	880b	10/2001
Silt Fence	920	4/2012
Sodding	925	12/1994
Stabilized Construction Entrance	930	8/1994
Temporary Concrete Washout Facility	954	6/2009
Temporary Sediment Trap	960	10/2001
Temporary Seeding	965	12/1994
Topsoiling	981	2/1994
Tree Protection	990	4/2000

PRELIMINARY

Joseph A. Schudt & Associates
9455 ENTERPRISE DRIVE MOKENA, IL 60448
PHONE: 708-720-1000 www.jaseng.com FAX: 708-720-1065

(184-001172)

CIVIL ENGINEERING LAND SURVEYING ENVIRONMENTAL LAND PLANNING GPS SERVICES

REVISIONS: 6-29-23
7-10-23

COPYRIGHT © 2023
JOSEPH A. SCHUDT & ASSOCIATES
ALL RIGHTS RESERVED
Any use or reproduction of this drawing or the attached drawings in whole or in part by any means without the written consent of Joseph A. Schudt & Associates is strictly prohibited.

RETAIL BUILDING

FRANKFORT, IL

CONSTRUCTION SPECIFICATIONS

Date: 5-15-23
Scale: NONE
File Name: 23-20-ENG-6-29-23
Drawn: TMF
Checked: DWO
Sheet:
8 OF 10
Project No.:
23-020

VAULTS AND BOXES SHALL NOT BE ALLOWED UNDER STREETS, SIDEWALKS OR DRIVEWAYS.

ALL CASTINGS SHALL BE MADE IN THE U.S.A. WITH U.S.A. MATERIALS.

OUTSIDE IRON PIPE SHALL COMPLY WITH ANSI A21.51, CLASS 52, WITH JOINTS COMPLYING WITH ANSI A21.11.

• DUCTILE IRON FITTINGS SHALL BE USED WITH MECHANICAL JOINT RETAINER GLANDS COMPLYING WITH ANSI A21.11 OR A21.43.

• EXTERNAL COATING SHALL BE STANDARD, AS SPECIFIED FOR GENERAL USE IN ANSI A21.51 OR EPICRATIC COATING PER ANSI C-151.

• INTERNAL COATING SHALL COMPLY WITH ANSI A21.4 OR ANNA C205, STANDARD THICKNESS.

• WATER MAIN SHALL BE COATED IN 6-MILLIMETER POLYURETHANE.

POLYURETHANE COATING SHALL COMPLY WITH ANNA C-200 FOR CLASS 150 PRESSURE PIPE (SDR 18).

• PVC PIPE SHALL BE INSTALLED WITH MECHANICAL JOINTS AND WAVING TYPE "X" ABOVE PIPE.

• TRENCH BEARING MATERIAL SHALL EXTEND 12" BELOW THE TOP OF THE PIPE FOR ALL PVC PIPE.

• 14"-18" DIAMETER: USE 235 PSI PRESSURE RATED PIPE AND SOF 18.

• 20"-24" DIAMETER: USE 185 PSI PRESSURE RATED PIPE AND SOF 20.

THE DEPTH BETWEEN FINISHED GRADE AND TOP OF THE WATER MAIN BE BETWEEN 3' AND 7'.

ALL BENDS OF 22-1/2 DEGREES OR GREATER, AND ALL TEES AND ELBOWS SHALL BE THROST PROTECTED TO PREVENT MOVEMENT OF THE LINE UNDER PRESSURE. THROST PROTECTION MAY ALSO BE ATTAINED BY THE USE OF A COMBINATION OF RETAINING CLAMPS AND THROSTED BLOCKS.

CONNECTIONS TO VILLAGE WATER SYSTEM SHALL BE MADE UNDER FULL WATER SERVICE PRESSURE.

• TAPPING SLAVES SHALL INCLUDE TWO-PIECE BOLTED SLEEVE TYPE WITH MECHANICAL JOINTS. MAXIMUM = 1815 LBS. OR EQUAL, WITH JOINT ACCESSORIES.

• TAPPING VALVES SHALL INCLUDE FLY PORTED GATE VALVES COMPLYING WITH ANNA C200 AND MECHANICAL JOINTS, MAXIMUM 1815 LBS. OR EQUAL. TAPPING VALVES SHALL BE PLACED IN PRECISE CONCRETE VAULTS.

HORIZONTAL AND VERTICAL SEPARATION SHALL MEET REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS. LOCATIONS REQUIRING ALTERNATIVE MATERIALS ARE NOTED ON THE PLANS.

WATERMAIN SHALL BE PRESSURE TESTED AND DISINFECTED IN ACCORDANCE WITH REQUIREMENTS OF THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY AND THE STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS.

• THE CONTRACTOR SHALL PROVIDE 48 HOURS ADVANCED NOTICE TO THE VILLAGE UTILITY OR ENGINEERING DEPARTMENT FOR ALL TESTING.

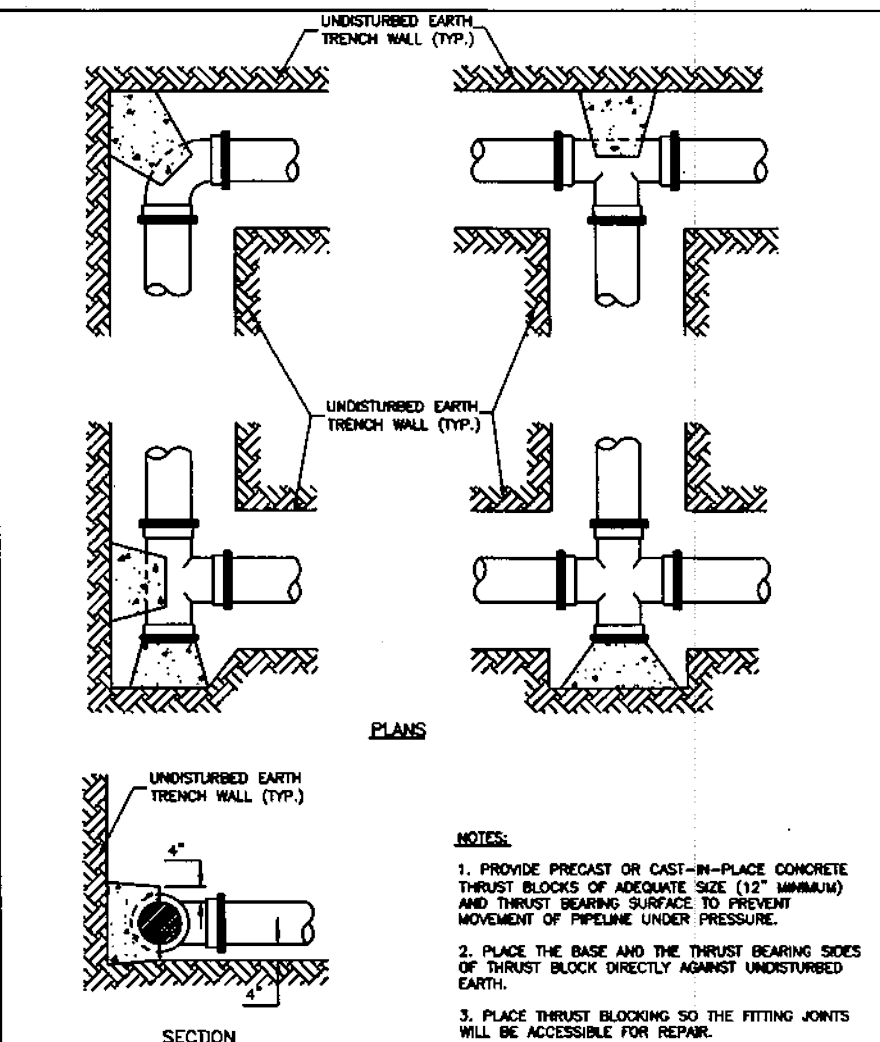
• REQUESTS FOR VALVE OPERATIONS ARE TO BE MADE THROUGH THE UTILITY DEPARTMENT AT LEAST 24 HOURS PRIOR TO ANY SCHEDULED OPERATIONS OR TESTS.

THE CONTRACTOR SHALL PRESSURE TEST ALL NEW WATER MAIN BEFORE WATER SERVICES HAVE BEEN INSTALLED. THE CONTRACTOR SHALL PERFORM A PRELIMINARY TEST TO INSURE THAT ALL SEGMENTS OF THE SYSTEM MEET THE LEAKAGE RATES AS SET FORTH HEREIN.

AFTER ALL MAINS HAVE BEEN PRESSURE TESTED, THE CONTRACTOR SHALL DISINFECT THE MAINS IN ACCORDANCE WITH ANNA STANDARD C-851. THE CONTRACTOR SHALL SAMPLE THE CHLORINATED DISINFECTING SOLUTION, AFTER FINAL FLUSHING, AND AS WITNESSED BY THE VILLAGE UTILITY DEPARTMENT. THE CONTRACTOR SHALL SUBMIT TWO SAMPLES FROM THE MAIN FOR BACTERIOLOGICAL TESTING. A SECOND SERIES OF SAMPLES SHALL BE COLLECTED NO LESS THAN 24 HOURS AFTER THE FIRST SET OF SAMPLES HAVE BEEN RECEIVED. THE CONTRACTOR AND THE VILLAGE WILL BE FURNISHED WITH COPIES OF THE BACTERIOLOGICAL REPORT FOR THEIR RECORDS.

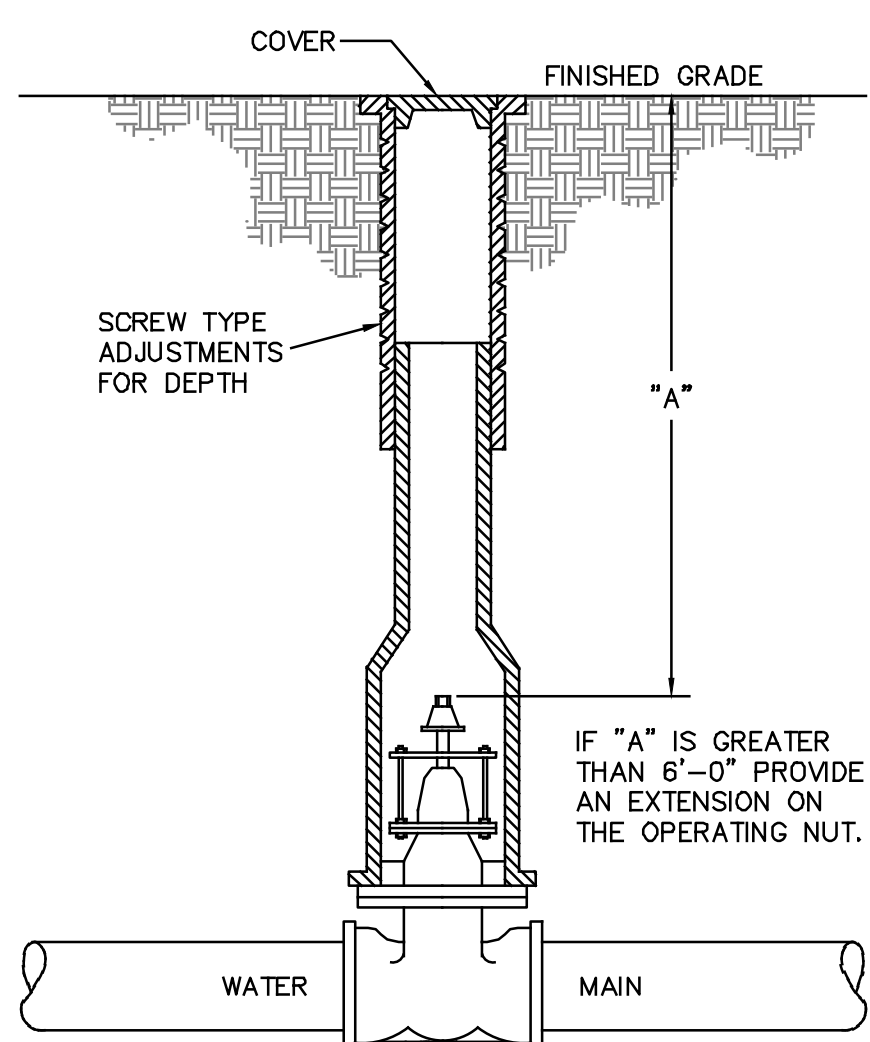
WATER MAIN SPECIFICATIONS

EXHIBIT 5A
JUNE 2007

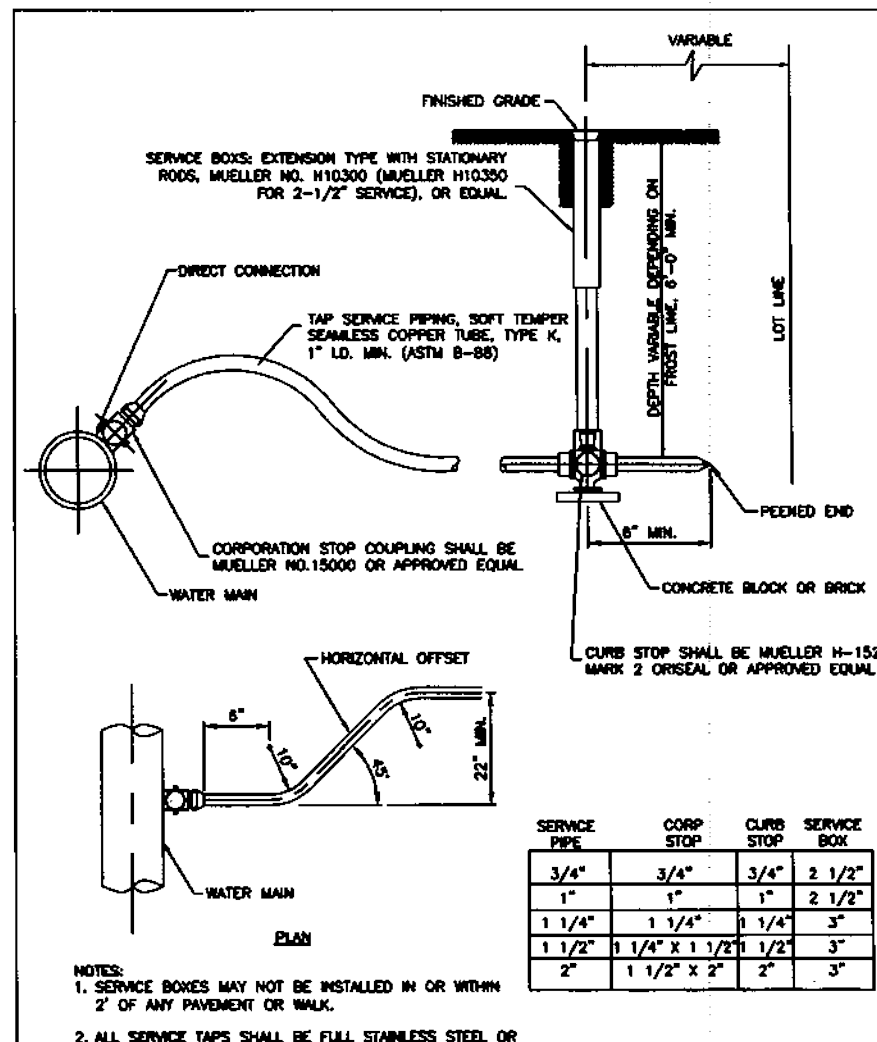


TYPICAL THRUST BLOCK INSTALLATIONS

EXHIBIT 5C
JUNE 2007

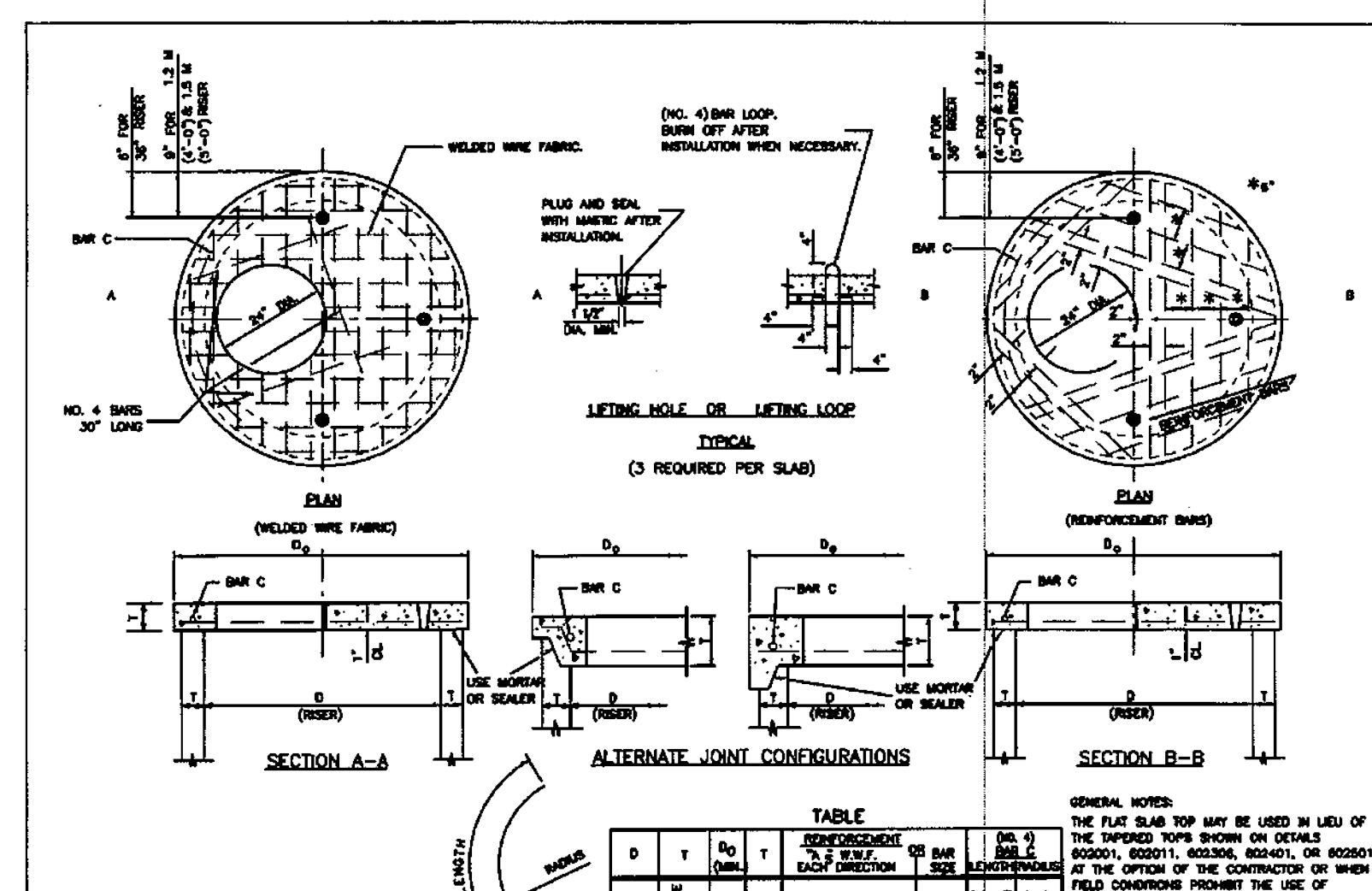


TYPICAL VALVE BOX INSTALLATION



TYPICAL WATER SERVICE INSTALLATION

EXHIBIT 5D
JUNE 2007



PRECAST REINFORCED CONCRETE FLAT SLAB TOP

EXHIBIT 5E
JUNE 2007

STORM SEWERS SHALL BE REINFORCED CONCRETE PIPE CONFORMING TO ASTM C77 MINIMUM CLASS B WITH C-900 JOINTS CONFORMING TO ASTM C443.

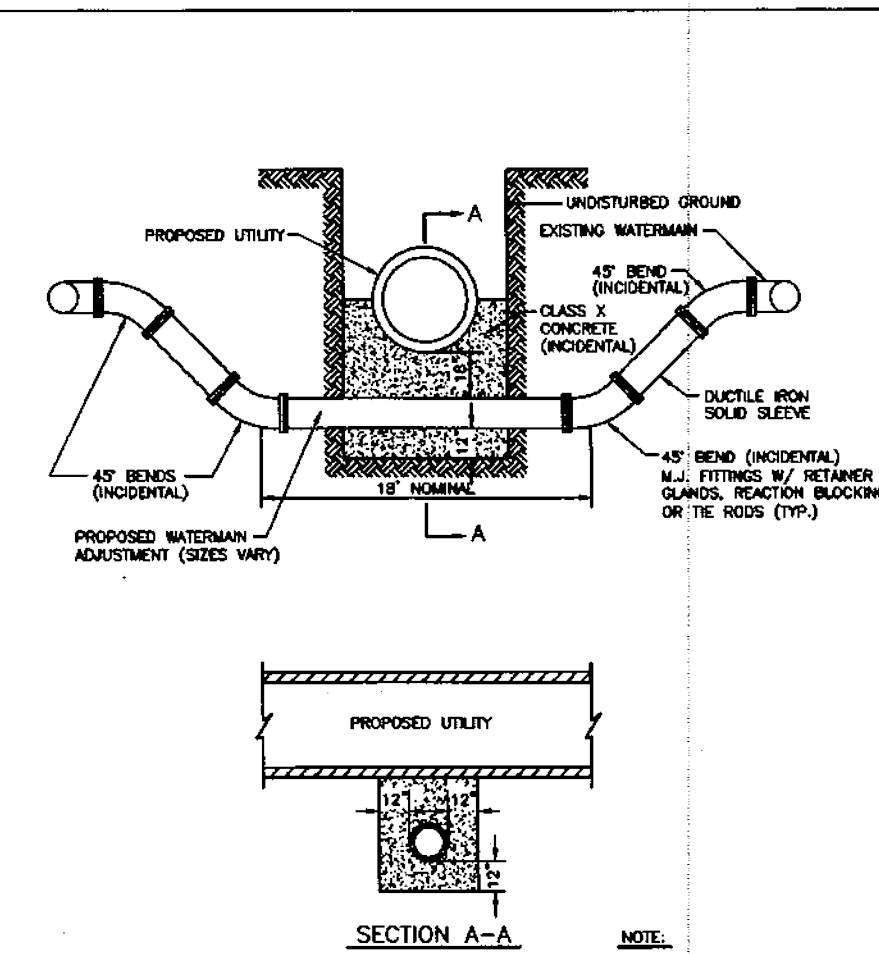
ALL STRUCTURE CONNECTIONS SHALL BE CONCRETE SEWER PIPE, ASTM C14 FOR EXTRA STRENGTH PIPE.

SUMP PUMP SERVICE CONNECTIONS SHALL BE 4\"/>

STRUCTURE LOCATION	STRUCTURE LABEL	MANUFACTURER NUMBER	MANHOLE OPEN AREA
MANHOLE CURB			
MANHOLE CURB			
PAVED AREAS			
GRAVEL AREAS			

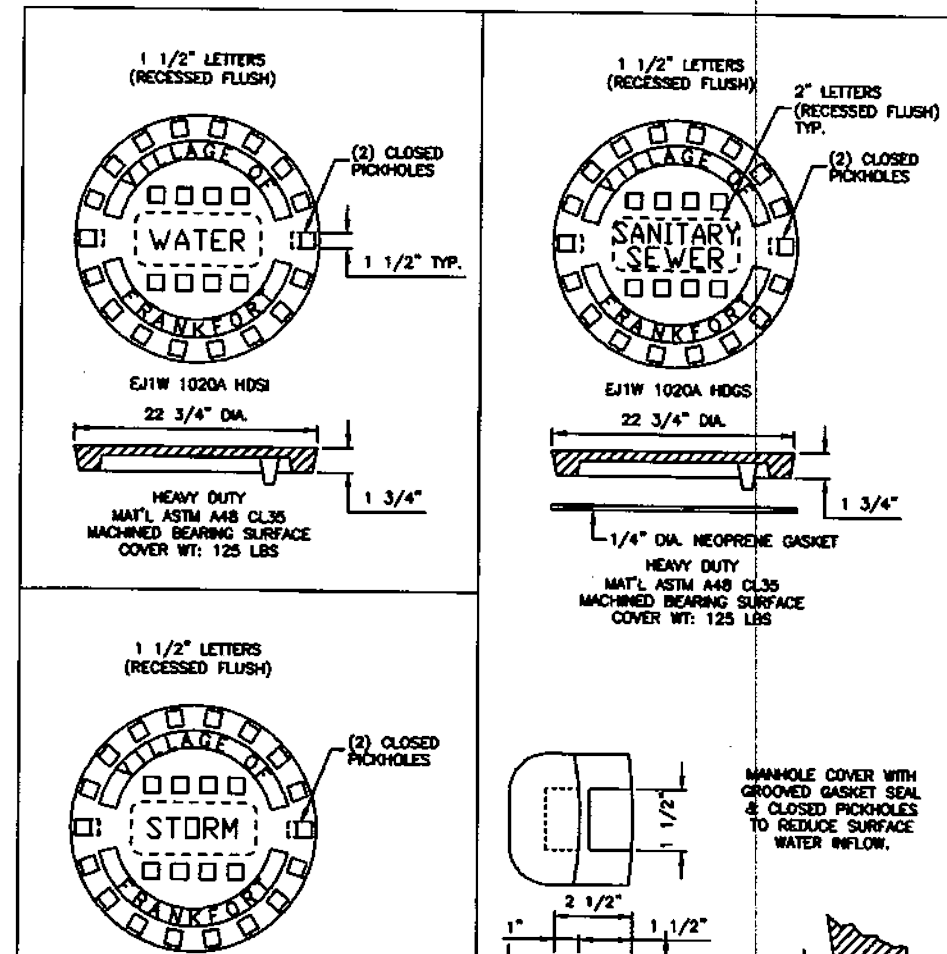
STORM SEWER SPECIFICATIONS

EXHIBIT 4A
JUNE 2007



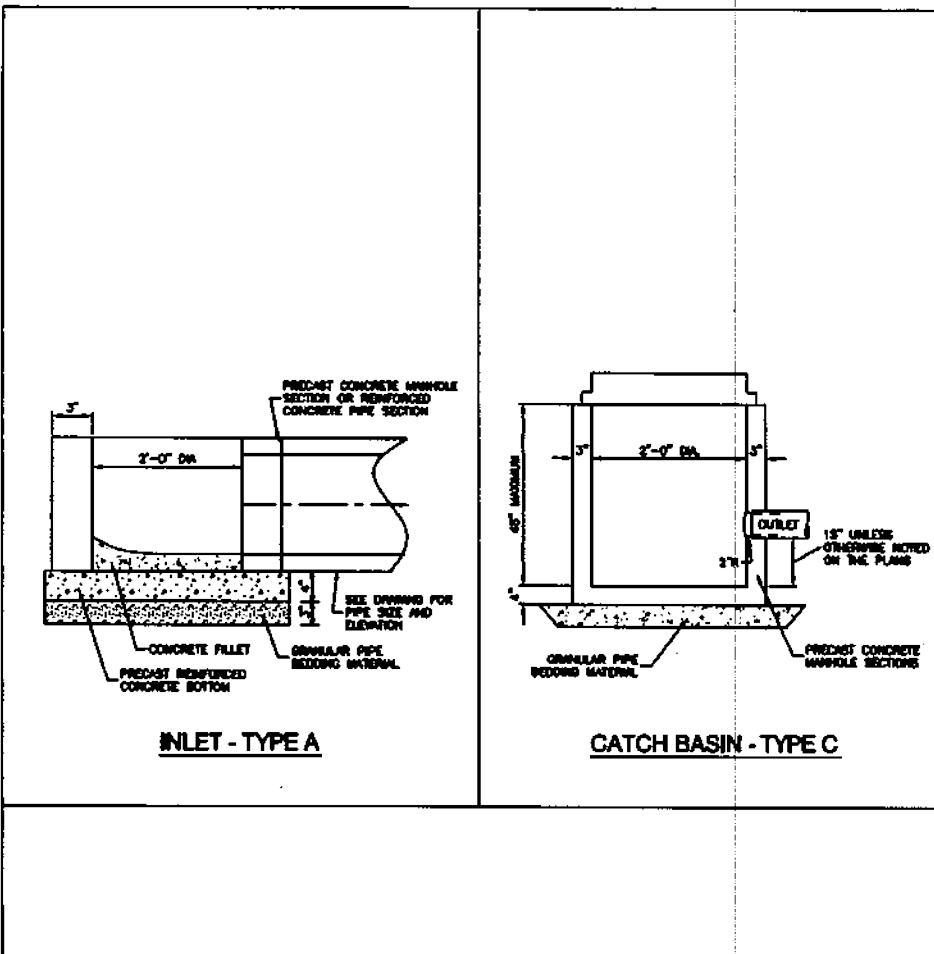
WATERMAIN ADJUSTMENT

EXHIBIT 5B
JUNE 2007



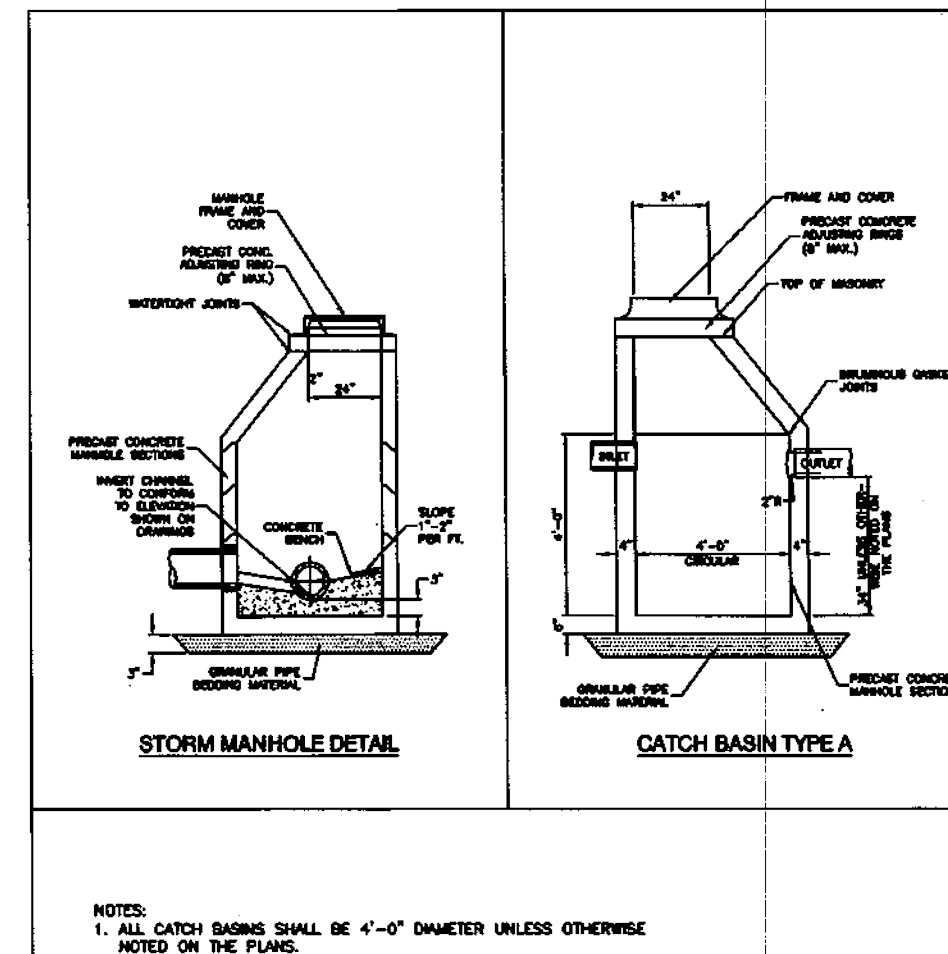
SPECIAL LETTERED MANHOLE COVER

EXHIBIT 2B
JUNE 2007



STORM INLETS

EXHIBIT 4C
JUNE 2007



STORM MANHOLE & CATCH BASIN

EXHIBIT 4B
JUNE 2007

PRIOR TO PIPE LAYING AND JOINTING, THE TRENCH SHALL BE SUFFICIENTLY DEWATERED TO MAINTAIN THE WATER LEVEL IN THE TRENCH AT OR BELOW THE BASE OF THE BEDDING, STATE/FEDERAL PERMITS, LICENSE AGREEMENTS, OR OTHER REQUIRED APPROVALS SHALL BE OBTAINED PRIOR TO DEWATERING.

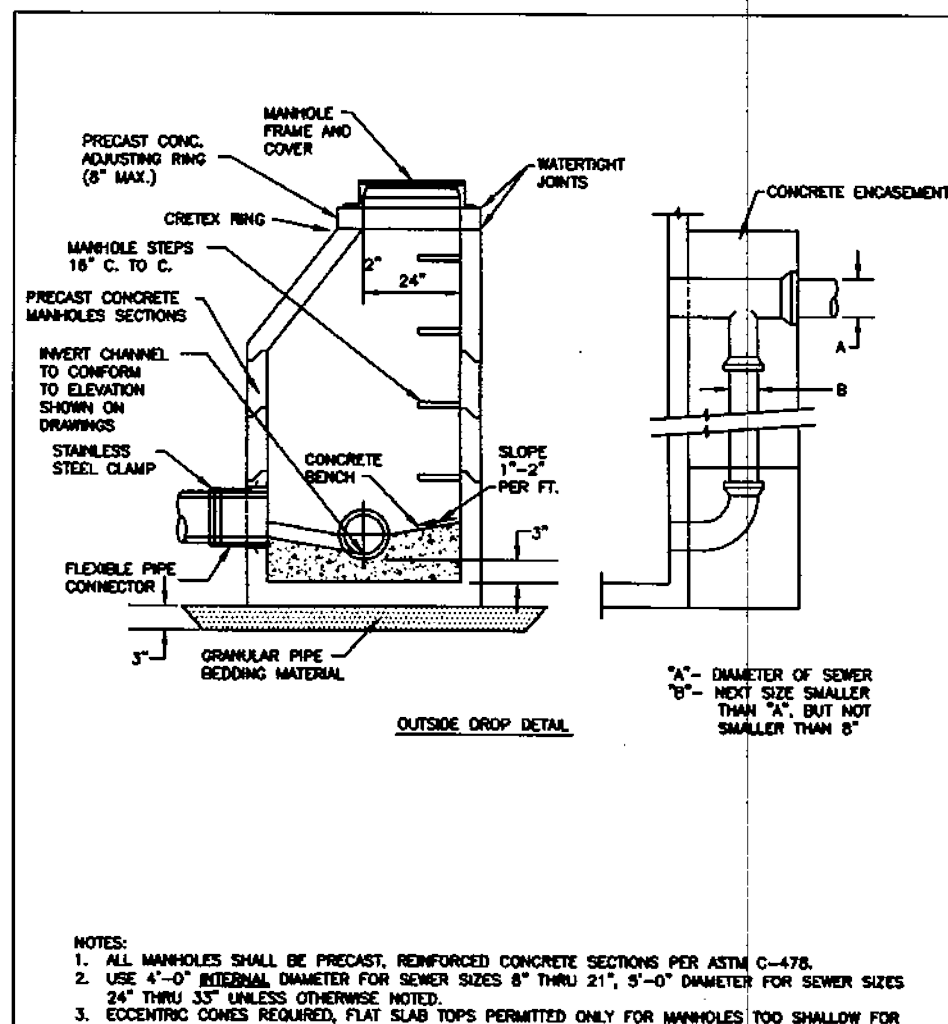
SANITARY SEWER PIPE, SERVICE LINES AND THE JOINT SPECIFICATION SHALL BE AS FOLLOWS:

OUTSIDE IRON PIPE: PIPE: MAXIMUM 1815 LBS. OR EQUAL, WITH JOINT ACCESSORIES. JOINT: MAXIMUM 1815 LBS. OR EQUAL, WITH JOINT ACCESSORIES.

PVC PIPE (14\"/>

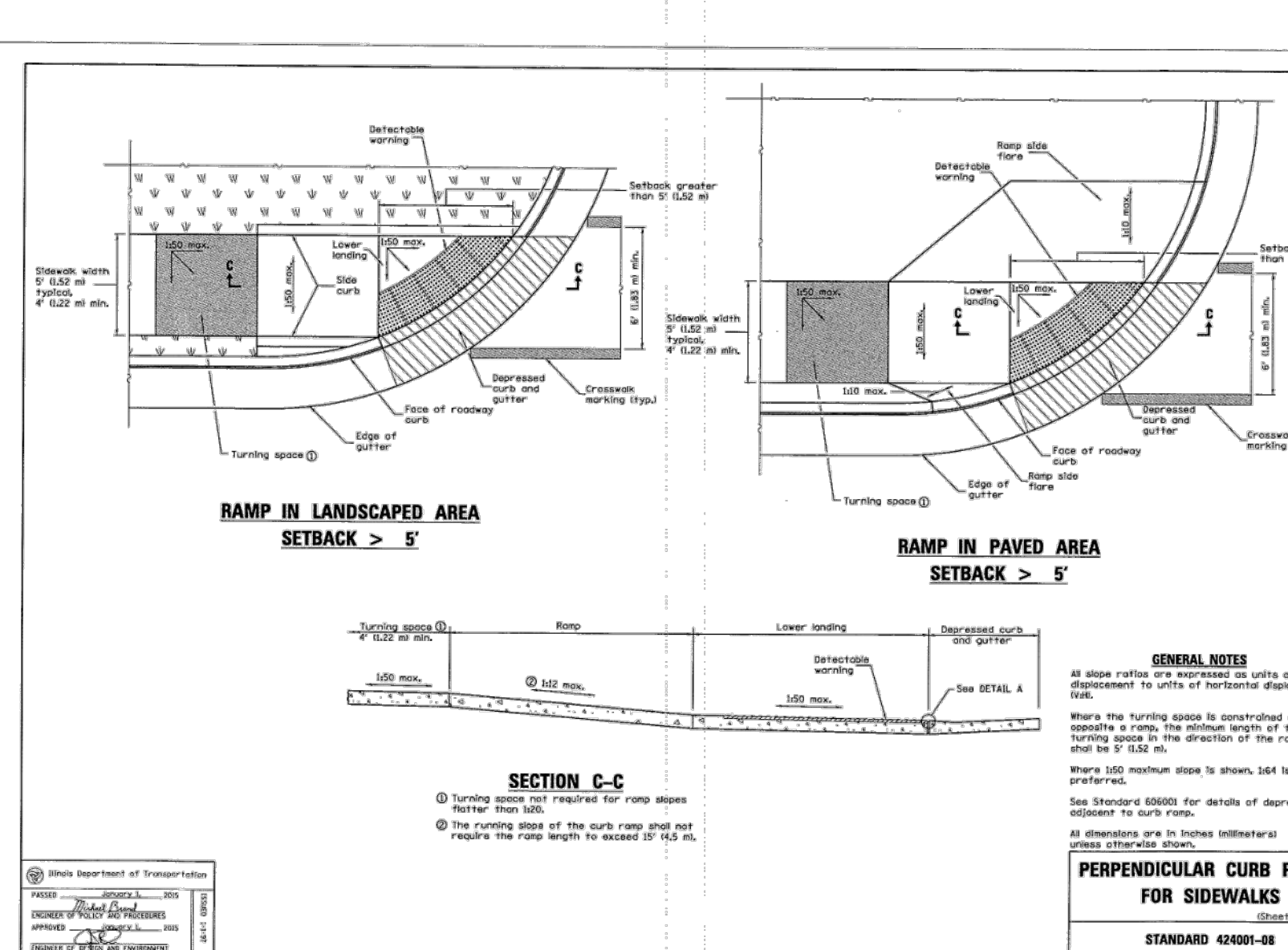
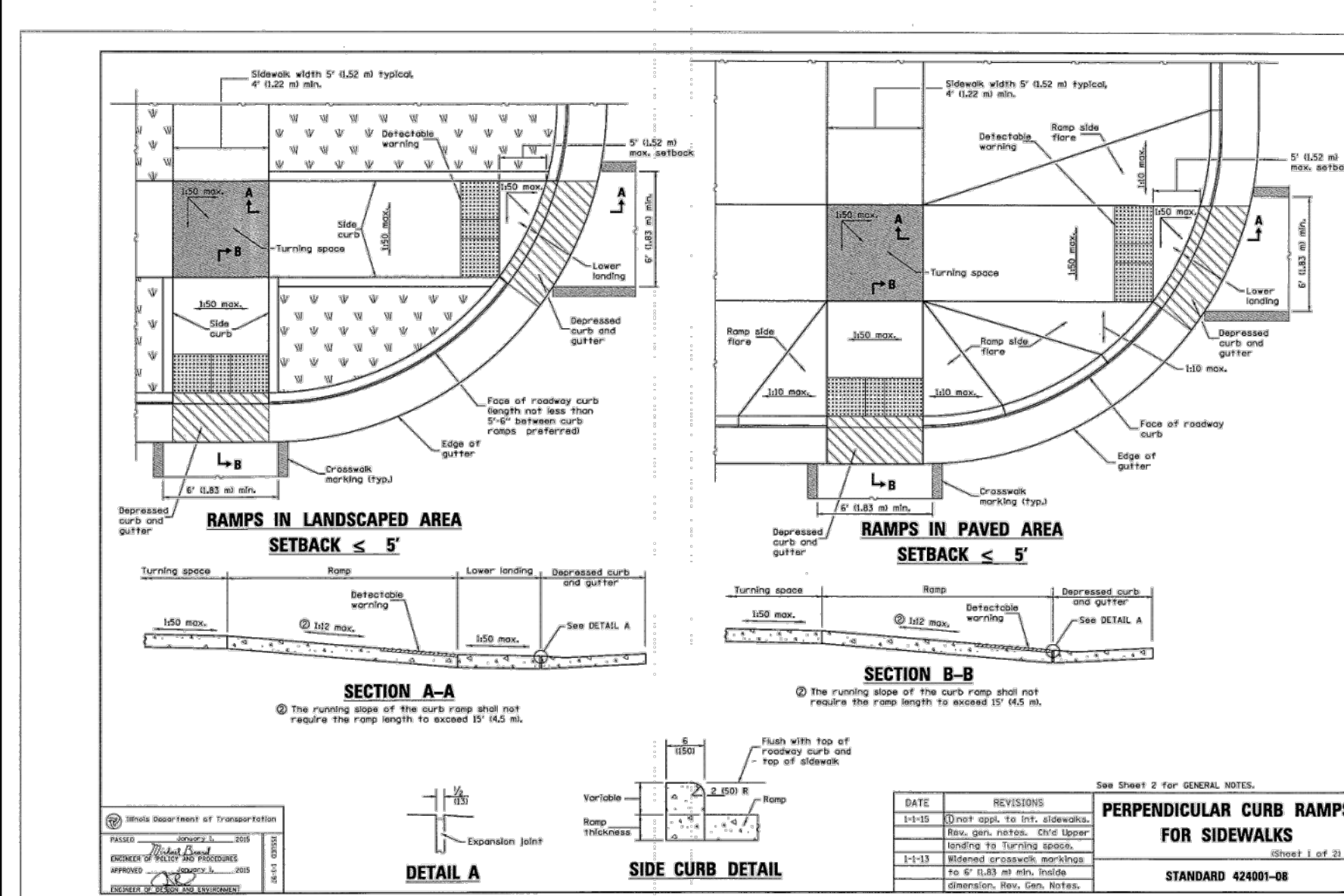
SANITARY SEWER SPECIFICATIONS

EXHIBIT 3A
JUNE 2007



SANITARY MANHOLE DETAIL

EXHIBIT 3B
JUNE 2007



FOR PERMIT

RETAIL BUILDING
FRANKFORT, IL
DETAILS

Date: 5-15-23
Scale: NONE
File Name: 23-20-ENG-6-29-23
Drawn: TMF
Checked: DWO
Sheet:
10 of 10
Project No.:
23-020

Joseph A. Schudt & Associates
9455 ENTERPRISE DRIVE
MOKENA, IL 60448
PHONE: 708-720-1000 www.jaseng.com FAX: 708-720-1065
CIVIL ENGINEERING LAND SURVEYING ENVIRONMENTAL LAND PLANNING GPS SERVICES



REVISIONS: 6-28-23
7-10-23
COPYRIGHT © 2023
JOSEPH A. SCHUDT & ASSOCIATES
ALL RIGHTS RESERVED
This drawing is the property of Joseph A. Schudt & Associates and is not to be reproduced or used in any manner without the written consent of Joseph A. Schudt & Associates. The user of this drawing warrants that it is being used for the purpose intended and that it is not being used for any other purpose. The user of this drawing warrants that it is being used for the purpose intended and that it is not being used for any other purpose.