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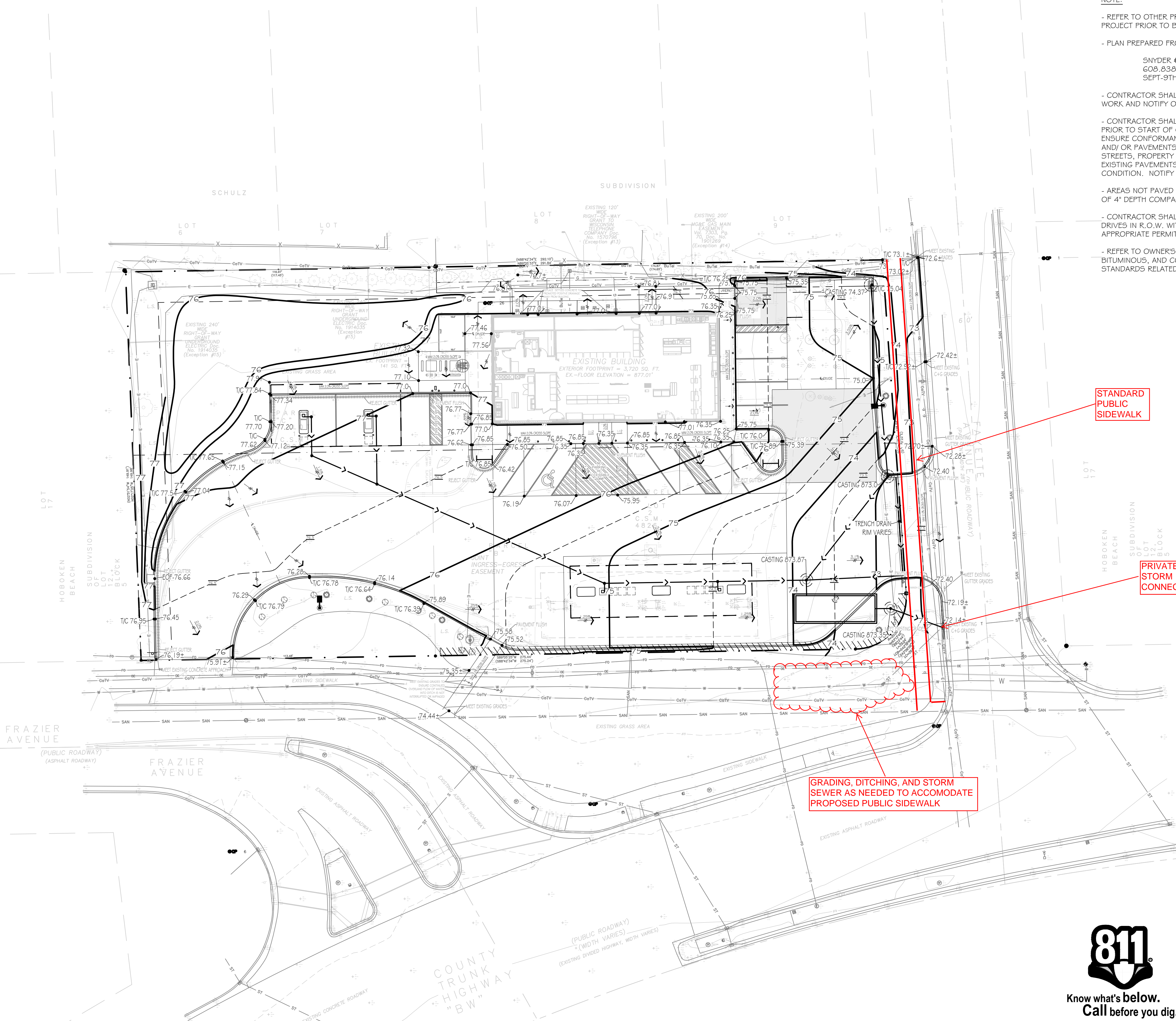
**Session:** C:\GTViewer\_Sessions\Deming & Fourier SW.gts

**City of Madison, WI - GIS/Mapping data**

Printed By: entnt

Disclaimer: The City makes no representation about the accuracy of these records and shall not be liable for any damages





**CONSTRUCTION NOTE:**

BIO ROLL TO BE INSTALLED AROUND ENTIRE RE-GRADING AREA.  
NOTE:

- REFER TO OTHER PROJECT PLANS AND INFORMATION RELATED TO THIS PROJECT PRIOR TO BEGINNING ANY GRADING WORK.

- PLAN PREPARED FROM ALTA/JCSM LAND TITLE SURVEY BY:

SNYDER & ASSOCIATES  
608.838.0444  
SEPT-9TH-2017

- CONTRACTOR SHALL LOCATE ALL UTILITIES WHICH MAY AFFECT THIS WORK AND NOTIFY OWNER OF ANY CONFLICTS.

- CONTRACTOR SHALL VERIFY ALL EXISTING AND PROPOSED ELEVATIONS PRIOR TO START OF CONSTRUCTION. VERIFY CRITICAL ELEVATIONS TO ENSURE CONFORMANCE WITH GRADING PLAN, PARTICULARLY WITH WALK AND/OR PAVEMENTS TO REMAIN. MEET EXISTING GRADES ALONG STREETS, PROPERTY LINES AND DRIVEWAY ENTRANCES. RESTORE ALL EXISTING PAVEMENTS THAT REMAIN TO THEIR ORIGINAL, IF NOT BETTER CONDITION. NOTIFY OWNER OF ANY CONFLICTS.

- AREAS NOT PAVED AND TO BE LANDSCAPED SHALL RECEIVE MINIMUM OF 4" DEPTH COMPACTED TOPSOIL.

- CONTRACTOR SHALL COORDINATE GRADING AND INSTALLATION OF DRIVES IN R.O.W. WITH APPROPRIATE GOVERNMENT AGENCIES. OBTAIN APPROPRIATE PERMITS FOR GRADING AND DRAINAGE IN ALL R.O.W.

- REFER TO OWNER'S SPECIFICATIONS FOR CURB, APPROACH, BITUMINOUS, AND CONCRETE PROFILES, AS WELL AS ADDITIONAL SITE STANDARDS RELATED TO THIS PROJECT.

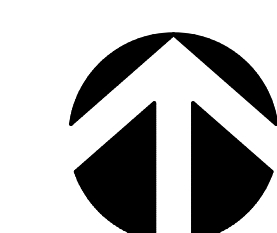
STANDARD PUBLIC SIDEWALK

PRIVATE STORM CONNECT

GRADING, DITCHING, AND STORM SEWER AS NEEDED TO ACCOMMODATE PROPOSED PUBLIC SIDEWALK



Know what's below.  
Call before you dig.



NORTH  
SCALE: 1" = 20'



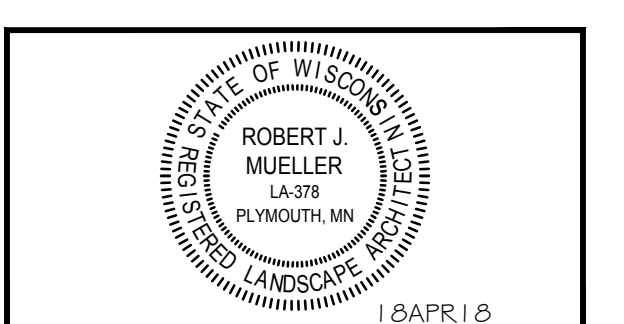
PLOTTING NOTE: PLANS PLOTTED TO 11x17 SHEET SIZE ARE 1/2 SCALE. 1"=40'.

**Kwik TRIP**

**Kwik STAR**

**KWIK TRIP, Inc.**  
P.O. BOX 2107  
1626 OAK STREET  
LACROSSE, WI 54602-2107  
PH. (608) 781-8988  
FAX (608) 781-8960

**INSITES**  
SITE PLANNING LANDSCAPE ARCHITECTURE  
3030 Harbor Lane North, STE 131  
Plymouth Minnesota 55447  
763.383.8400  
fax 763.381.8400



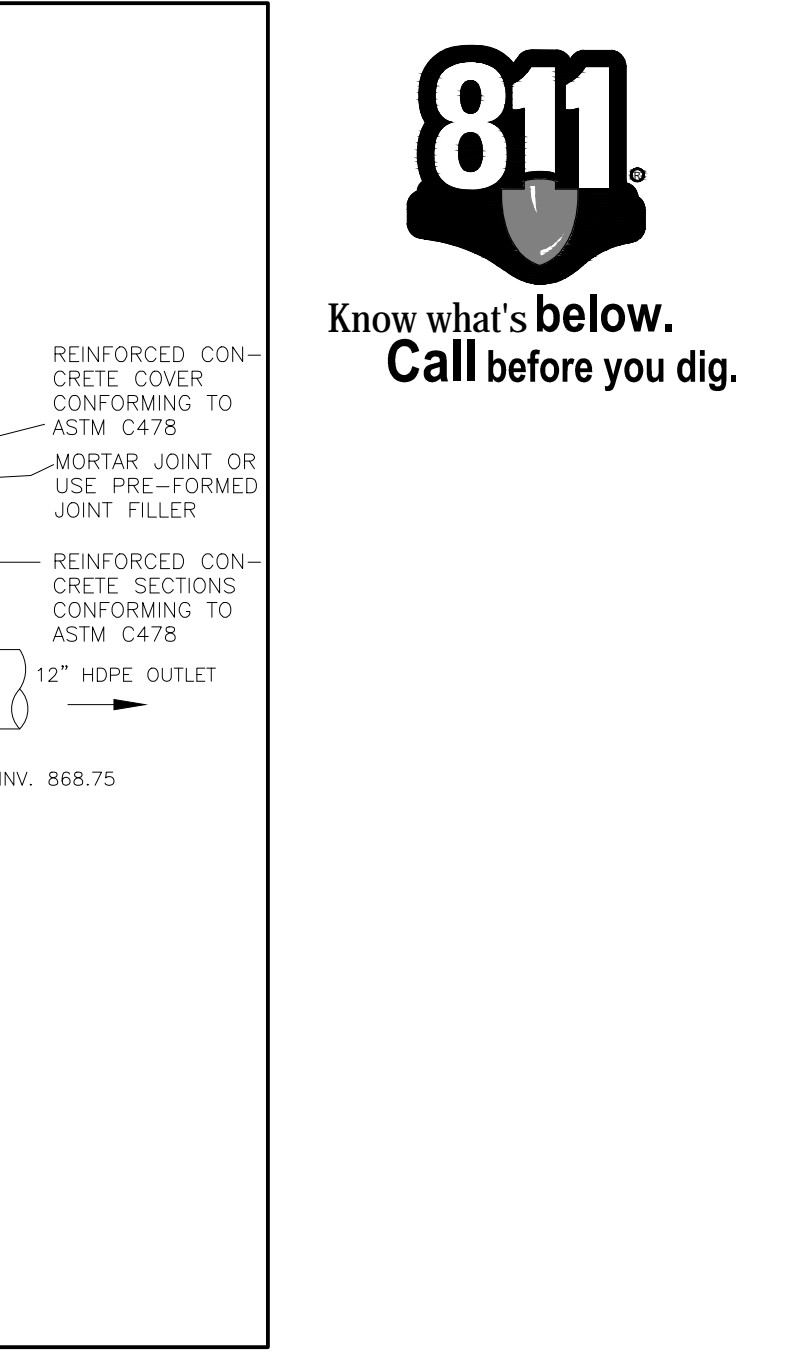
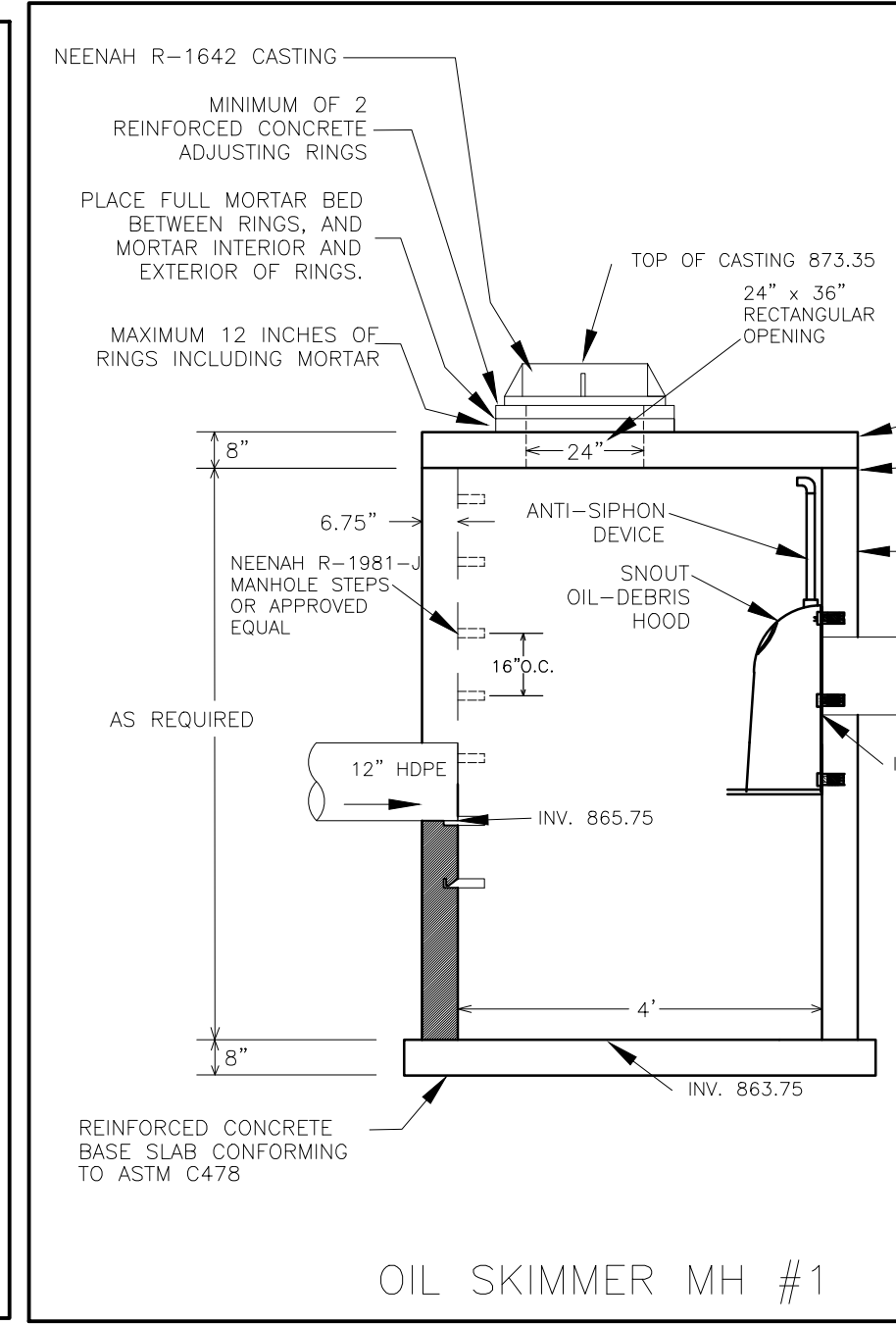
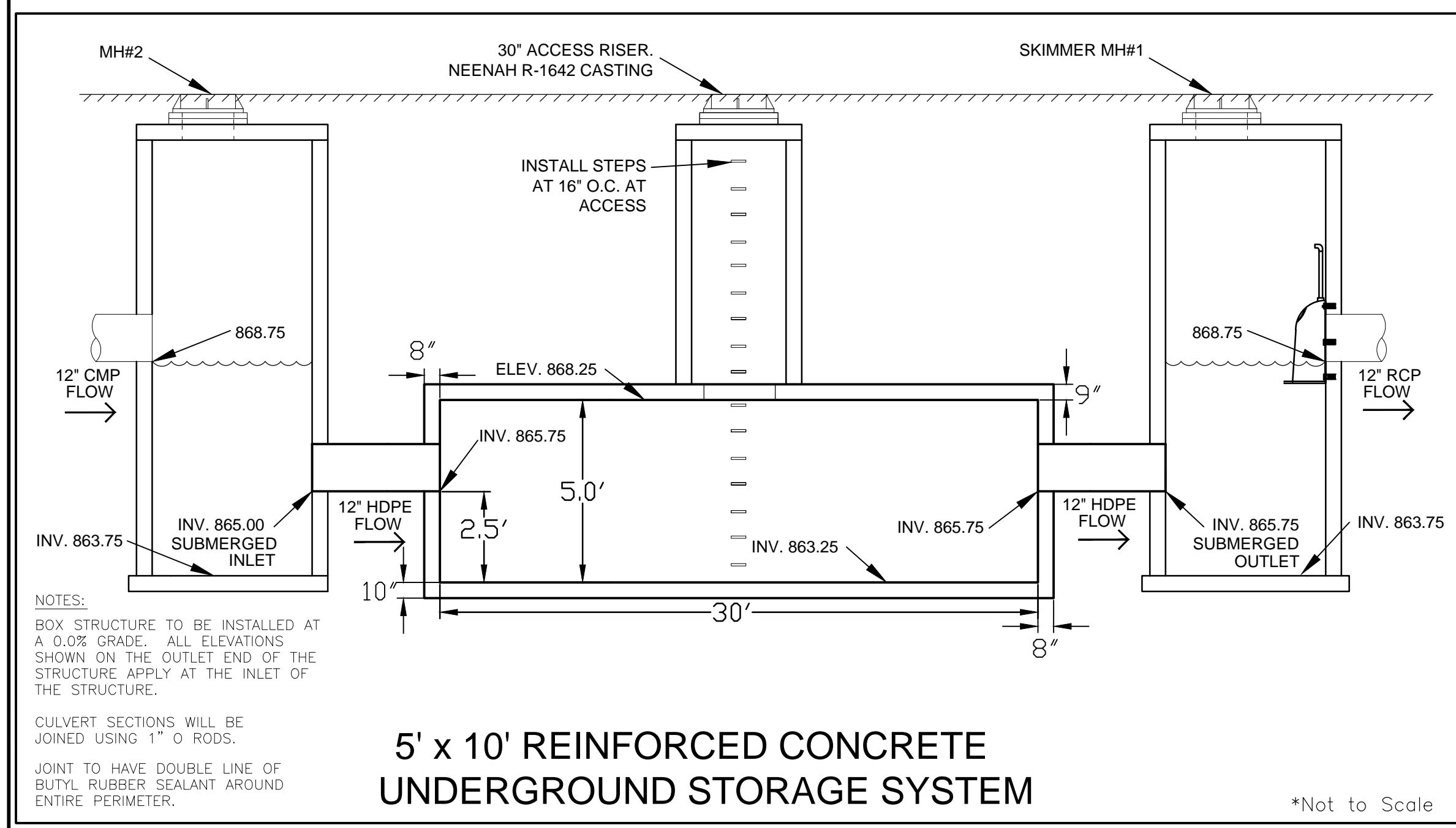
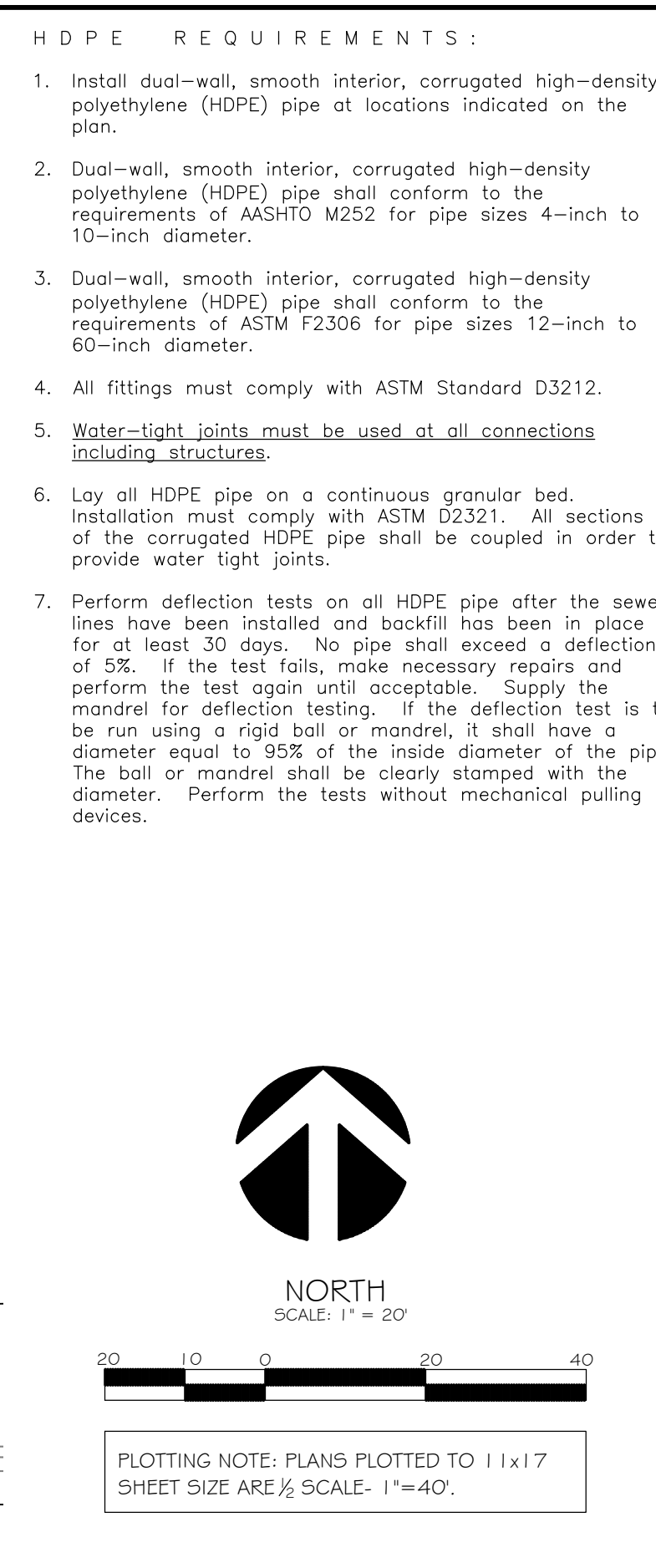
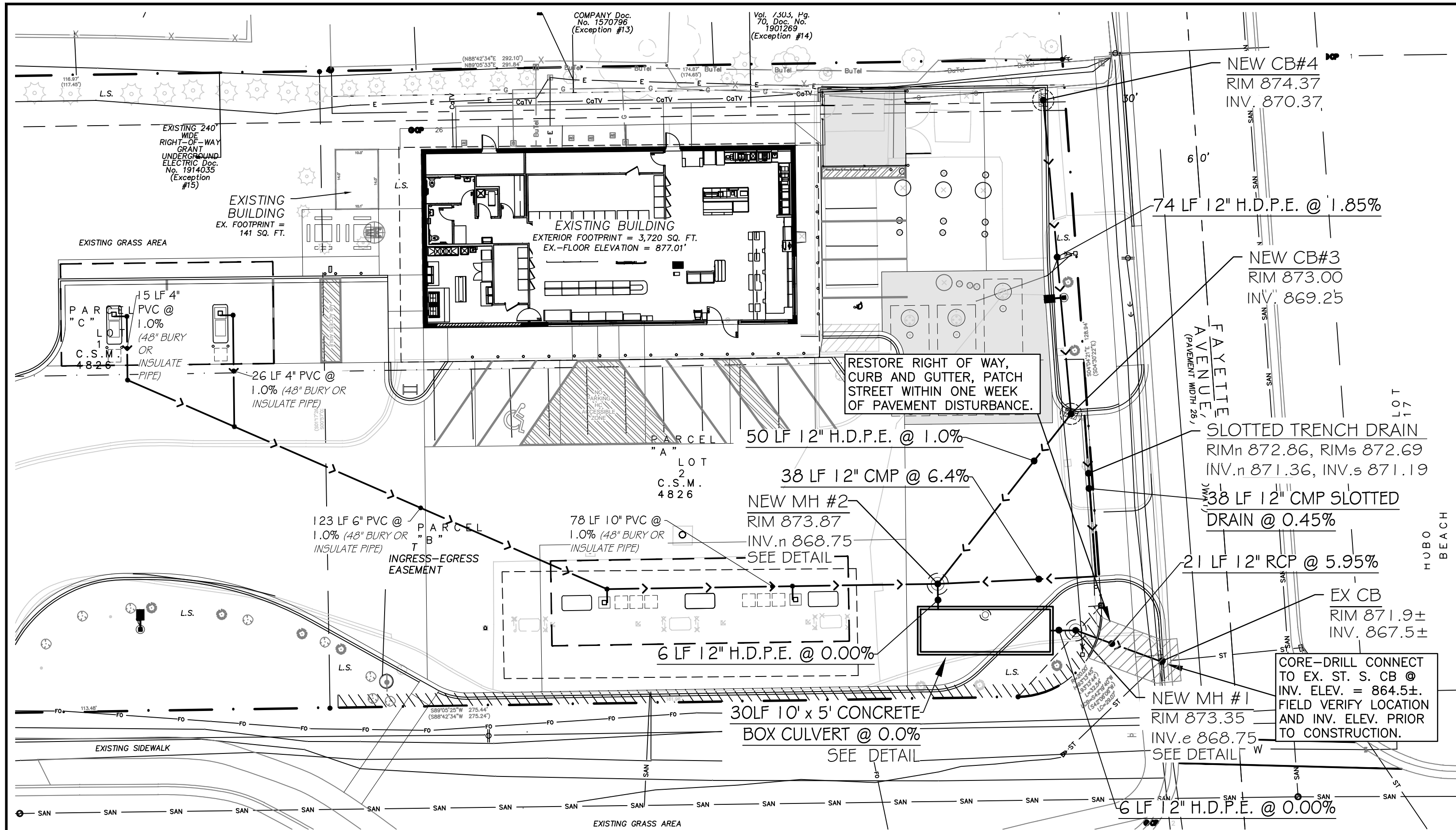
**GRADE PLAN**  
**CONVENIENCE STORE 965**  
**2402 W BROADWAY**  
**MADISON, WISCONSIN**

NO.	DATE	DESCRIPTION
-	08JUN18	SUBMITTAL
-	17JULY18	SUBMITTAL
-	25JULY18	ADD CANOPY
-	03OCT18	COMMISSION COMMENTS
-	31DEC18	PLANNING COMMENTS

DRAWN BY: \_\_\_\_\_  
SCALE: GRAPHIC  
PROJ. NO.: 17965  
DATE: 18APR2018  
SHEET: **SP2**

17:050 PM B.S.





- HDPE REQUIREMENTS:**
1. Install dual-wall, smooth interior, corrugated high-density polyethylene (HDPE) pipe at locations indicated on the plan.
  2. Dual-wall, smooth interior, corrugated high-density polyethylene (HDPE) pipe shall conform to the requirements of AASHTO M252 for pipe sizes 4-inch to 10-inch diameter.
  3. Dual-wall, smooth interior, corrugated high-density polyethylene (HDPE) pipe shall conform to the requirements of ASTM F2306 for pipe sizes 12-inch to 60-inch diameter.
  4. All fittings must comply with ASTM Standard D3212.
  5. Water-tight joints must be used at all connections including structures.
  6. Lay all HDPE pipe on a continuous granular bed. Installation must comply with ASTM D2321. All sections of the corrugated HDPE pipe shall be coupled in order to provide water tight joints.
  7. Perform deflection tests on all HDPE pipe after the sewer lines have been installed and backfill has been in place for at least 30 days. No pipe shall exceed a deflection of 5%. If the test fails, make necessary repairs and perform the test again until acceptable. Supply the mandrel for deflection testing. If the deflection test is to be run using a rigid ball or mandrel, it shall have a diameter equal to 95% of the inside diameter of the pipe. The ball or mandrel shall be clearly stamped with the diameter. Perform the tests without mechanical pulling devices.
- GENERAL:**
1. Existing boundary, location, topographic, and utility information shown on this plan is from a field survey by Snyder and Associates, Inc. dated 09/9/17. The Engineer is not responsible for inaccuracies related to the survey information.
  2. Perform all construction work in accordance with State and Local requirements.
  3. Comply with all applicable local, state, and federal safety regulations. Comply with the work safety practices specified by the Occupational Safety and Health Administration (OSHA). OSHA prohibits entry into "confined spaces," such as manholes and inlets (see 29 CFR Section 1910.146), without undertaking certain specific practices and procedures. Perform excavations in accordance with the requirements of O.S.H.A. 29 CFR, Part 1926, Subpart P, Excavations. Sloping or benching for excavations greater than 20 feet deep must be approved by a registered professional engineer (www.osha.gov).
  4. Safety is solely the responsibility of the Contractor, who is also solely responsible for the construction means, methods, techniques, sequences or procedures, and for safety precautions and programs in connection with the Work.
  5. The Engineer shall not have control over, charge of, or responsibility for the construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Work. The Engineer's review shall not constitute approval of safety precautions or of any construction means, methods, techniques, sequences, or procedures.
  6. Examine all local conditions at the site, and assume responsibility as to the grades, contours, and the character of the earth, existing conditions, and other items that may be encountered during excavation work above or below the existing grades. Review the drawings, specifications, and geotechnical report covering this work and become familiar with the anticipated site conditions.
  7. Refer to the architectural plans for building and stoop dimensions, site layout and dimensions, pavement sections and details, striping, and other site features.
  8. A licensed surveyor shall perform construction staking. The Contractor shall provide and be responsible for the staking. Verify all plan and detail dimensions prior to construction staking. Stake the limits of walkways and curbing prior to valvebox, maintenance hole, and catchbasin installation. Adjust valvebox and maintenance hole locations in order to avoid conflicts with curb and gutter. Adjust catchbasin locations in order to align properly with curb and gutter.
  9. Provide temporary fences, barricades, coverings, and other protections in order to preserve existing items to remain, and to prevent injury or damage to person or property.
  10. Provide all traffic control required in order to construct the proposed improvements. Traffic control design and associated governing authority are the responsibility of the Contractor. Meet all City standards and specifications for the latest version of the Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD), and the Wisconsin Manual on Uniform Traffic Control Devices Supplement to the MUTCD.
  11. Connect to existing sanitary sewer MH's by core drilling. Connect to existing storm sewer MH's by either sawcutting or coring. Use saws or corers that provide water to the blade. Meet all City standards and specifications for the connection. Reconstruct inverts after installation. Use water stop gaskets in order to provide watertight seals when penetrating a structure wall with a pipe. Take measurements before beginning construction to ensure that service connections do not cut into maintenance access structure joints or pipe barrel joints.
  12. All other existing existing sewer and watermain pipes that are to be abandoned shall either be removed, or completely filled with sand or lean mix grout.
  13. The subsurface utility information shown on this plan is utility Quality Level D. This quality level was determined according to the guidelines of CI/ASCE 38-02, entitled "Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data."
  14. The locations of existing utilities shown on this plan are from record information. The Engineer does not guarantee that all existing utilities are shown or, if shown, exist in the locations indicated on the plan. It is the Contractor's responsibility to ascertain the final vertical and horizontal location of all existing utilities (including water and sewer lines and appurtenances). Notify the Engineer of any discrepancies.
  15. The Contractor is solely responsible for all utility locates. Contact utility companies for locations of all public and private utilities within the work area prior to beginning construction. Contact Digger's Hotline at (414) 259-1181 in the Milwaukee Metro Area, or 1-800-242-8511 elsewhere in Wisconsin for exact locations of existing utilities at least 72 hours (not including weekends and holidays) before beginning any construction. Obtain ticket number and meet with representatives of the various utilities at the site. Provide the Owner with the ticket number information. Digger's Hotline is a free service that locates municipal and utility company lines, but does not locate private utility lines. Use an independent locator service or other means in order to obtain locations of private utility lines including, but not limited to, underground electric cables, telephone, TV, and lawn sprinkler lines.
  16. Pothole to verify the positions of existing underground facilities at a sufficient number of locations in order to assure that no conflict with the proposed work exists and that sufficient clearance is available.
  17. Where existing gas, electric, cable, or telephone utilities conflict with the Work, coordinate the abandonment, relocation, offset, or support of the existing utilities with the appropriate local utility companies. Coordinate new gas meter and gas line installation, electric meter and electric service installation, cable service, and telephone service installation with the local utility companies.
  18. Arrange for and secure suitable disposal areas off-site. Dispose of all excess soil, waste material, debris, and all materials not designated for disposal. Waste material and debris includes trees, stumps, pipe, concrete, asphaltic concrete, cans, or other waste material from the construction operations. Obtain the rights to any waste area for disposal of unsuitable or surplus material either shown or not shown on the plans. All work in disposing of such material shall be considered incidental to the work. All disposal must conform to applicable solid waste disposal permit regulations. Obtain all necessary permits at no cost to the OWNER.
  19. Straight line saw-cut existing bituminous or concrete surfacing at the perimeter of pavement removal areas. Use saws that provide water to the blade. Do not allow the slurry produced by this process to be tracked outside of the immediate work area or discharged into the sewer system. Tack and match all connections to existing bituminous pavement.
  20. Relocate overhead power, telephone, and cable lines as required. Seal and report any existing unused on-site wells and septic systems.
  21. All materials required for this work shall be new material conforming to the requirements for class, kind, grade, size, quality, and other details specified herein or as shown on the Plans. Do not use recycled or salvaged aggregate, asphaltic pavement, crushed concrete, or scrap shingles. Unless otherwise indicated, the Contractor shall furnish all required materials.
  22. Reconstruct driveways and patch street to match existing pavement section and grade. Sod right-of-way. The work area shown is general and may need to be adjusted in the field.
  23. Restore the public right-of-way at temporary construction entrance locations. Replace any concrete curb and gutter, utility pavement, sidewalk, or vegetative cover damaged by the construction activity. Restore damaged turf with sod within the public right-of-way. The work area shown is general and may need to be adjusted in the field.
  24. Protect sub grades from damage by surface water runoff.
  25. When sawing or drilling concrete or masonry, use saws that provide water to the blade. Do not allow the slurry produced by this process to be tracked outside of the immediate work area or discharged into the sewer system.
  26. Adjust all curb stops, valve boxes, maintenance hole castings, catchbasin castings, cleanout covers, and similar items to finished grade.
  27. Install all pipe with the ASTM identification numbers on the top for inspection. Commence pipe laying at the lowest point in the proposed sewer line. Lay the pipe with the bell end or receiving groove end of the pipe pointing upgrade. When connecting to an existing pipe, uncover the existing pipe in order to allow any adjustments in the proposed line and grade before laying any pipe. Do not lay pipes in water or when the trench conditions are unsuitable for such work.
  28. Obtain and pay for all permits, tests, inspections, etc. required by agencies that have jurisdiction over the project including the NPDES permit from the State. The Contractor is responsible for all bonds, letters of credit, or cash sureties related to the work. Execute and inspect work in accordance with all local and state codes, rules, ordinances, or regulations pertaining to the particular type of work involved.
  29. Obtain permits from the City for work in the public right-of-way.
  30. The minimum depth of cover for building and canopy roof drain leaders without insulation is 5 feet. Insulate roof drain leaders at locations where the depth of cover is less than 5 feet. Provide a minimum insulation thickness of 2 inches. The insulation must be at least 4 feet wide and centered on the pipe. Install the insulation boards 6 inches above the tops of the pipes on mechanically compacted and leveled pipe bedding material. Use high density, closed cell, rigid board material equivalent to DOW Styrofoam HI-40 plastic foam insulation.
  31. Install all pipe with the ASTM identification numbers on the top for inspection. Commence pipe laying at the lowest point in the proposed sewer line. Lay the pipe with the bell end or receiving groove end of the pipe pointing upgrade. When connecting to an existing pipe, uncover the existing pipe in order to allow any adjustments in the proposed line and grade before laying any pipe. Do not lay pipes in water or when the trench conditions are unsuitable for such work.
  32. Construct sanitary sewer, watermain, and storm sewer utilities in accordance with the Standard Specifications for Sewer and Water Construction in Wisconsin, Sixth Edition, or the latest revised edition.
  33. Tracer Wire: Locating requirements - a means to locate buried underground exterior non metallic sewers/maines must be provided with tracer wire or other methods in order to be located in accord with the provisions of these code sections as per 182.0715(2r) of the statutes. Install detectable underground marking tape directly above all pvc, polyethylene, and other nonconductive underground utilities at a depth of 457 mm (18 inches) below finished grade, unless otherwise indicated. Bring the tape to the surface at various locations in order to provide connection points for locating underground utilities. Install green Rhino TriView Flex Test Stations, or approved equal, with black caps at each surface location.
  34. See architectural for building waterproofing and foundation drainage.
  35. Secure and deliver to the Owner as-built information showing locations, top, and invert elevations of maintenance holes, catchbasins, cleanouts, inlet and outlet pipes, valves, hydrants, and related structures. Location ties shall be to permanent landmarks or buildings.
  36. Place #3 rebar at 3' on center in all 6" thick concrete pavement locations. Place #4 rebar at 3' on center in all 8" thick concrete pavement locations.
  37. Place #4 x 2'-0" tie bar at 3' on center in all concrete curb and gutter.

- STORM DRAINAGE:**
1. Unless otherwise indicated, use reinforced, precast, concrete maintenance holes and catchbasins conforming to ASTM C478, furnished with water stop rubber gaskets and precast bases. Joints for all precast maintenance hole sections shall have confined, rubber "O"-ring gaskets in accordance with ASTM C443. These joints are normally used in sewers to hold infiltration and exfiltration to a practical minimum and are adequate for hydrostatic heads up to 30'. The inside barrel diameter shall not be less than 48 inches.
  2. Install catchbasin castings with specified top elevation at the front rim.
  3. All joints and connections to catchbasins or manholes shall be watertight. Joints between concrete structures and piping shall be made with mechanical joints (resilient rubber seal/boot and clamp) in conformance with ASTM C923, ASTM C654, or as otherwise permitted by the local authority. Cement mortar joints are not allowed unless otherwise permitted by the administrative authority.
  4. The building sewer starts 2 feet outside of the building. See Uniform Plumbing Code (UPC) part 715.1. Material installed within 2 feet of the building must be of materials approved for use inside of or within the building.
  5. PVC Pipe (Outside of the Building): Use solid-core, SDR-35, ASTM D3034 Polyvinyl Chloride (PVC) Pipe for designated PVC storm sewer services 4 to

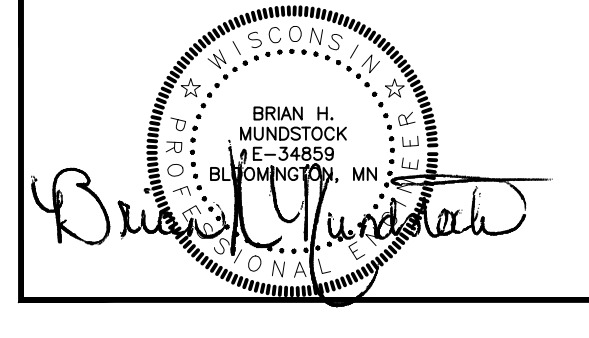
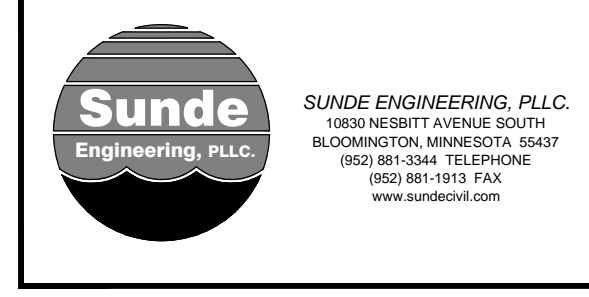
- 15-inches in diameter outside of the building. Use solid-core, SDR-35, ASTM F679 Polyvinyl Chloride (PVC) pipe for designated PVC storm sewer services 18 to 27-inches in diameter outside of the building. Joints for all storm sewer shall have push-on joints with elastomeric gaskets. Use of solvent cement joints is allowed for building services. Solvent cement joints in PVC pipe must include use of a primer which is of contrasting color to the pipe and cement in accordance with Uniform Plumbing Code (UPC), part 605.13.2. Pipe with solvent cement joints shall be joined with PVC cement conforming to ASTM D2564. Lay all PVC pipe on a continuous granular bed. Installation must comply with ASTM D2321.
6. Cleanouts: Install cleanouts on all roof drains in accordance with S.P.S 382.35 (3)(C)(1.). The distance between cleanouts in horizontal piping shall not exceed 100 feet for pipes 10-inches and under in size. Cleanouts shall be of the same nominal size as the pipes they serve. Install a meter box frame and solid lid (Neenah R-1914-A, or approved equal) over all cleanouts.
7. RCP: Reinforced concrete pipe (RCP) and fittings shall conform to ASTM C76, Design C, with circular reinforcing for the class of pipe specified. Use Class IV RCP for pipes 21" and larger. Use Class V RCP for pipes 18" and smaller. Joints shall be made up of concrete surfaces with a groove on the spigot for an O-ring rubber gasket (also referred to as a confined O-ring type joint) in accordance with ASTM C361. These joints are normally used in gravity sewers where exceptional tightness is required. This type of joint provides excellent inherent water tightness in both the straight and deflected position and meets all the joint requirements of ASTM C443.

8. Testing: Test all portions of storm sewer that are within 10 feet of buildings, within 10 feet of buried water, lines, within 50 feet of water wells, or that pass through soil or water identified as being contaminated in accordance with UPC part 1109.0. Test all flexible storm sewer lines for deflection after the sewer line has been installed and backfill has been in place for at least 30 days. No pipe shall exceed a deflection of 5%. If the test fails, make necessary repairs and retest.
9. Drainage: Perforated under-drains shall be slotted single wall corrugated HDPE. Install drainline with high permeability circular knit polymeric filament filter sock per ASTM D6707-01.
10. Use Neenah R-3067-DR/DL casting with curb box, or approved equal, on CB #3 and CB#4. Casting shall include the "NO DUMPING. DRAINS TO RIVER," environmental notice.
11. Use Neenah Foundry Co. R-1642 casting with self-sealing, solid, type B lid, or approved equal, on all storm sewer maintenance holes. Covers shall bear the "Storm Sewer" label.
12. Tracer Wire: Locating requirements - a means to locate buried underground exterior non metallic sewers/maines must be provided with tracer wire or other methods in order to be located in accord with the provisions of these code sections as per 182.0715(2r) of the statutes. Install detectable underground marking tape directly above all pvc, polyethylene, and other nonconductive underground utilities at a depth of 457 mm (18 inches) below finished grade, unless otherwise indicated. Bring the tape to the surface at various locations in order to provide connection points for locating underground utilities. Install green Rhino TriView Flex Test Stations,

- or approved equal, with black caps at each surface location.
13. The minimum depth of cover for building and canopy roof drain leaders without insulation is 5 feet. Insulate roof drain leaders at locations where the depth of cover is less than 5 feet. Provide a minimum insulation thickness of 2 inches. The insulation must be at least 4 feet wide and centered on the pipe. Install the insulation boards 6 inches above the tops of the pipes on mechanically compacted and leveled pipe bedding material. Use high density, closed cell, rigid board material equivalent to DOW Styrofoam HI-40 plastic foam insulation.
14. Install all pipe with the ASTM identification numbers on the top for inspection. Commence pipe laying at the lowest point in the proposed sewer line. Lay the pipe with the bell end or receiving groove end of the pipe pointing upgrade. When connecting to an existing pipe, uncover the existing pipe in order to allow any adjustments in the proposed line and grade before laying any pipe. Do not lay pipes in water or when the trench conditions are unsuitable for such work.
15. Clean sediment and debris from sewers, sumps and stormwater basins prior to final owner acceptance.
16. Televis all existing lines prior to connection.



**KWIK TRIP, Inc.**  
**P.O. BOX 2107**  
**1626 OAK STREET**  
**LACROSSE, WI 54602-2107**  
**PH. (608) 781-8988**  
**FAX (608) 781-8960**



**STORM SEWER PLAN**

**CONVENIENCE STORE 965**

**2402 W BROADWAY**  
**MADISON, WISCONSIN**

NO.	DATE	DESCRIPTION
-	8JUNE18	SUBMITTAL
-	17JULY18	SUBMITTAL
-	25JULY18	ADD CANOPY
-	03OCT18	COMMISSION COMMENTS
-	31DEC19	PLANNING COMMENTS

DRAWN BY	
SCALE	GRAPHIC
PROJ. NO.	17965
DATE	18APR2018
SHEET	<b>SP3</b>