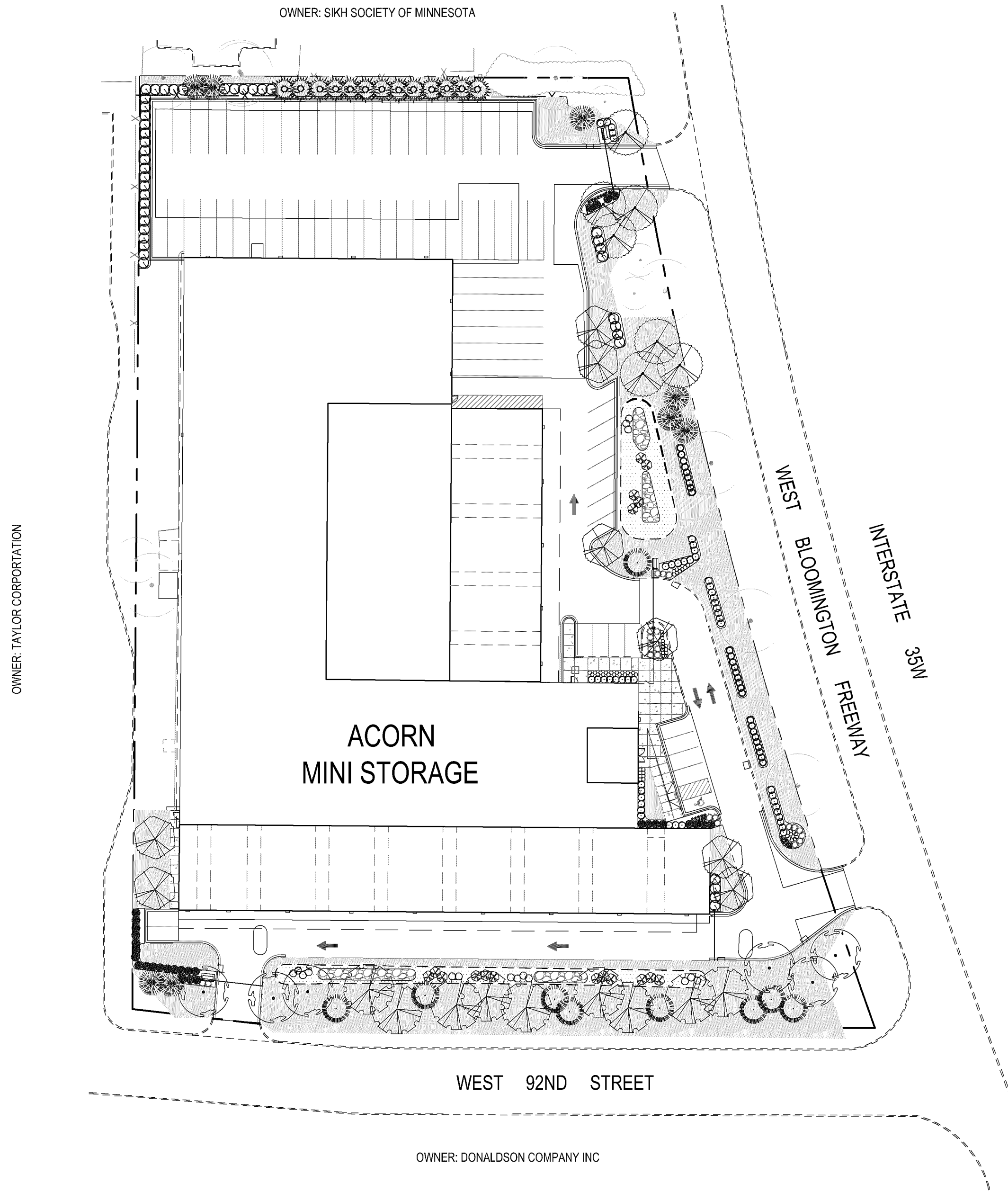




ACORN MINI STORAGE BLOOMINGTON, MN

DEVELOPMENT APPLICATION FEBRUARY 28, 2018

LOCATION MAP



PROJECT CONTACTS

OWNER	OAK MANAGEMENT & DEVELOPMENT COMPANY 3410 WINNETKA AVENUE N SUITE C NEW HOPE, MN 55427	CHRIS KIRWAN T (763) 231-2372
OWNERS REPRESENTATIVE	CEANN COMPANY 10700 OLD COUNTY ROAD 15, PLYMOUTH, MN 55441	DAVID HUNT PE, LEED, AP T (952) 484-4451
ARCHITECT	ARCHITECTURAL CONSORTIUM L.L.C. 901 N 3rd STREET SUITE 220 MINNEAPOLIS, MN 55401	KATHY ANDERSON ELLIOT STENDEL T (612) 436-4030
CIVIL ENGINEER	ELAN DESIGN LAB, INC. 901 N 3rd STREET SUITE 120 MINNEAPOLIS, MN 55401	STEVE JOHNSTON, PE T (612) 260-7982 F (612) 260-7990
LANDSCAPE ARCHITECT	ELAN DESIGN LAB, INC. 901 N 3rd STREET SUITE 120 MINNEAPOLIS, MN 55401	PILAR SARANTHONG, RLA T (612) 260-7980 F (612) 260-7990
LAND SURVEYOR	SUNDE LAND SURVEYING 9001 EAST BLOOMINGTON FREEWAY, SUITE 118 BLOOMINGTON, MN 55420	FEONARD CARLSON, LS T (952) 881-2455
ECONOMIC DEVELOPMENT DEPARTMENT	CITY OF BLOOMINGTON 1800 WEST OLD SHAKOPEE ROAD BLOOMINGTON, MN 55431	NICK M. JOHNSON T (952) 563-8925 F (952) 563-8949
CITY ENGINEERING	CITY OF BLOOMINGTON 1800 WEST OLD SHAKOPEE ROAD BLOOMINGTON, MN 55431	JEN DESRUDE T (952) 563-4862 F (952) 563-8984

SHEET INDEX

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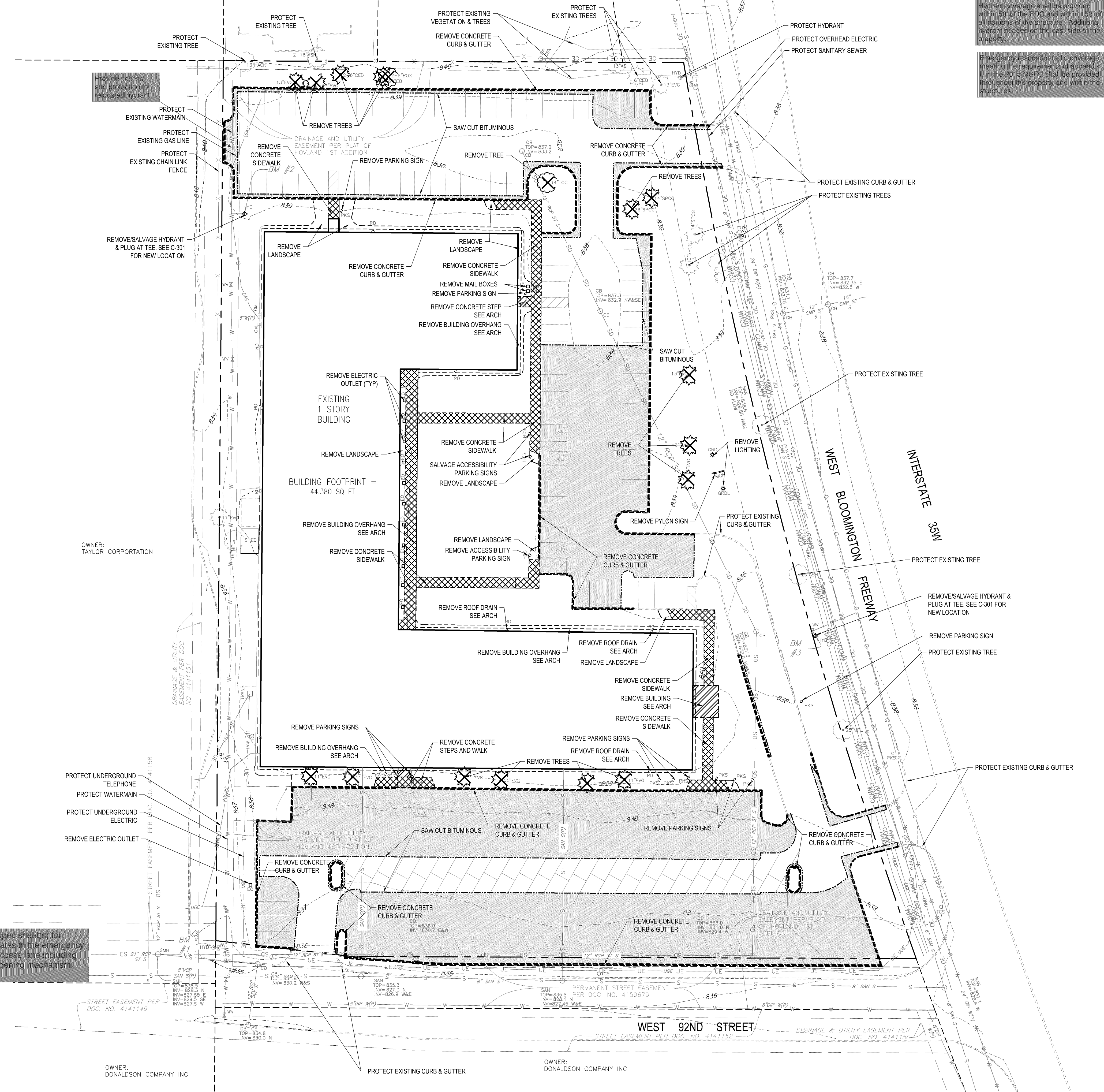
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Insure access and turning radius dimensions for BFD Ladder 1 are met for all required emergency vehicle access lanes.

Hydrant coverage shall be provided within 50' of the FDC and within 150' of all portions of the structure. Additional hydrant needed on the east side of the property.

Emergency responder radio coverage meeting the requirements of appendix L in the 2015 MSFC shall be provided throughout the property and within the structures.

DEMOLITION NOTES

- 1. BACKGROUND INFORMATION AND TOPOGRAPHIC SURVEY TAKEN FROM SURVEY PERFORMED BY SUNDE LAND SURVEYING INC., MINNESOTA ON DECEMBER 14, 2017 EXPRESSLY FOR THIS PROJECT. ELAN DESIGN LAB CANNOT GUARANTY THE ACCURACY OR COMPLETENESS OF THIS INFORMATION. VERIFY ALL FIELD CONDITIONS AND UTILITY LOCATIONS PRIOR TO EXCAVATION/CONSTRUCTION. IF ANY DISCREPANCIES OR UNKNOWN UTILITIES ARE FOUND THAT IMPACT DESIGN OR IMPAIR CONSTRUCTION, THE ENGINEER AND OWNER SHOULD BE IMMEDIATELY NOTIFIED.
- 2. CONTRACTOR SHALL BRING ANY CHANGED OR UNFORESEEN CONDITIONS THAT COULD RESULT IN ADDITIONAL COST TO THE ATTENTION OF THE OWNER AND ENGINEER AS SOON AS THEY ARE DISCOVERED SO THAT THEY CAN BE PROPERLY DOCUMENTED. FAILURE TO NOTIFY OR COVERING UN-WITNESSED WORK SHALL RESULT IN REJECTION OF CLAIMS FOR ADDITIONAL COMPENSATION.
- 3. PROTECT ALL STRUCTURES AND LANDSCAPE NOT LABELED FOR DEMOLITION FROM DAMAGE DURING CONSTRUCTION. ANY ON-SITE OR OFF-SITE AREAS DISTURBED DIRECTLY OR INDIRECTLY DUE TO CONSTRUCTION SHALL BE RETURNED TO A CONDITION EQUAL TO OR BETTER THAN THE EXISTING CONDITION. CONTRACTOR IS SOLELY RESPONSIBLE FOR ANY CIVIL PENALTIES RESULTING FROM THEIR WORK UNDER THIS CONTRACT.
- 4. NO DEMOLITION MATERIALS SHALL BE DISPOSED OF ON-SITE. ALL DEBRIS SHALL BE HAULED OFF-SITE TO A DISPOSAL AREA APPROVED BY APPROPRIATE GOVERNMENTAL AUTHORITIES FOR THE HANDLING OF DEMOLITION DEBRIS. WORK SITE SHALL BE LEFT IN A CONDITION THAT MINIMIZES EROSION POTENTIAL ON A NIGHTLY BASE.
- 5. LIMIT CONSTRUCTION ACTIVITIES TO THE CONSTRUCTION LIMITS SHOWN ON THE PLAN. IF WORK NEEDS TO EXTEND TO PUBLIC STREETS IT IS THE CONTRACTOR'S RESPONSIBILITY TO APPLY FOR ALL PERMITS, PREPARE ALL DRAWING AND PAY ALL FEES AND COST. ALL CONSTRUCTION ACTIVITIES SHALL COMPLY WITH LOCAL ORDINANCES.
- 6. PERIMETER SECURITY FENCE, CONSTRUCTION ENTRANCE AND FIBER LOGS SHALL BE IN PLACE PRIOR TO COMMENCEMENT OF DEMOLITION OPERATIONS. SEE SHEET C201 FOR ALL EROSION CONTROL MEASURES AND APPROPRIATE STAGING.
- 7. PROVIDE NECESSARY BARRICADES, SUFFICIENT LIGHTS, SIGNS AND OTHER TRAFFIC CONTROL METHODS AS MAY BE NECESSARY FOR THE PROTECTION AND SAFETY OF THE PUBLIC AND MAINTAIN THROUGHOUT THE LIFE OF THE PROJECT.
- 8. EXISTING MATERIALS SHALL BE REMOVED FROM THE SITE IN ACCORDANCE WITH ALL LOCAL, COUNTY, STATE AND FEDERAL REQUIREMENTS. ABATEMENT OF ANY MATERIALS DETERMINED BY THE ENVIRONMENTAL ENGINEER TO BE HAZARDOUS SHALL BE REMOVED IN ACCORDANCE WITH APPROPRIATE REQUIREMENTS.
- 9. REMOVE ALL EXISTING PAVING AND BASE MATERIAL THAT CONFLICTS WITH PROPOSED PAVING, GRADING, STRUCTURES, ETC.
- 10. REMOVE ALL EXISTING SURFACE SITE FEATURES INCLUDING, BUT NOT LIMITED TO, CONCRETE AND BITUMINOUS PAVING, CONCRETE AND BITUMINOUS CURBING, WALKWAYS, FENCING, RETAINING WALLS, SCREEN WALLS, CONCRETE APRONS, SITE LIGHTING AND RELATED FOUNDATIONS, SITE SPECIFIC SIGNAGE AND RELATED FOUNDATIONS, BOLLARDS, LANDSCAPING, AND STAIRWAYS WITHIN THE CONSTRUCTION LIMITS UNLESS NOTED OTHERWISE.
- 11. COORDINATE WITH ALL PRIVATE UTILITY OWNERS FOR THE TERMINATION OF EXISTING ELECTRIC, TELEPHONE, CATV, ETC. SERVICES TO THE SITE. RE-USE OF ANY EXISTING SERVICES TO BE AT THE DISCRETION OF THE UTILITY OWNER.
- 12. RELOCATION OF UTILITIES SHALL BE COORDINATED WITH THE LOCAL UTILITY COMPANIES. ELECTRIC HANDHOLES, PULLBOXES, POWERPOLES, GUYLINES, AND STRUCTURES DISTURBED BY CONSTRUCTION ACTIVITIES TO BE RESTORED IN ACCORDANCE WITH SPECIFIC OWNER REQUIREMENTS AT CONTRACTORS EXPENSE.
- 13. CONTRACTOR TO PERFORM PRE-CONSTRUCTION STRUCTURAL INSPECTION OF ADJACENT BUILDINGS AND PROVIDE VIBRATION MONITORING DURING CONSTRUCTION ACTIVITIES. CONTRACTOR IS SOLELY RESPONSIBLE FOR DAMAGE TO ADJACENT BUILDINGS.

14. Add note detailing that erosion control is required per the SWPPP prior to demolition.

LEGEND

- REMOVE BITUMINOUS
- SAW CUT BITUMINOUS
- REMOVE CONCRETE
- REMOVE BUILDING SEE ARCH
- REMOVE CURB & GUTTER
- REMOVE TREE

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PROJECT
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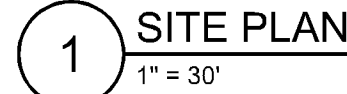
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A3-01 BUILDING ELEVATIONS
A3-01 BUILDING ELEVATIONS - COLORED
E-101 SITE PHOTOMETRICS

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CERTIFICATION
I hereby certify that this plan was prepared by me, or under my direct supervision, and that I am a duly Licensed Professional Engineer in the State of Minnesota.
NO CONSTRUCTION
Signature: Stephen A. Gordini
REGISTRATION NO. 46858
DATE 02/28/18
SHEET C010ARC08.DWG

DEMOLITION PLAN
C-010
PROJECT NO. ARC17008



1. DIMENSIONS SHOWN ON THIS PLAN ARE TO BACK OF CURB AND EXTERIOR FACE OF BUILDING UNLESS NOTED OTHERWISE.
2. MEET AND MATCH EXISTING CONDITIONS. PROVIDE TRANSITION AS NECESSARY.
3. ON-SITE CURB TO BE B612 CONCRETE CURB & GUTTER.
4. ALL CURBS TO HAVE 3/4" EXPANSION JOINTS AT A MAXIMUM OF 100'-0" AND CONTROL JOINTS AT A MAXIMUM OF 10'-0".
5. ALL PARKING STALLS TO BE PAINTED WITH A 4" WIDE WHITE STRIPING. ACCESSIBLE SYMBOLS REQUIRED IN WHITE. ALL ACCESSIBLE ACCESS ISSUES TO BE PAINTED WITH A 4" WIDE WHITE PAINTED STRIP 18 INCHES ON CENTER AND AT 45 DEGREE ANGLE TO STALL. WITH NO PARKING/ MARKED REFLECTORIZED PAINT SHALL COMPLY WITH MNDOT 3592.
6. OPAQUE PRECAST SCREEN WALL TO MATCH BUILDING AND SHALL BE BROKEN WITH A 10' LONG AND 1' DEEP OFFSET AS REQUIRED BY CITY CODE.
7. ALL EXISTING PAVEMENT TO REMAIN SHALL BE MILLED AND OVERLAD TO A MINIMUM DEPTH OF 1.5". ADDITIONAL ASPHALT SHALL BE PLACED WHERE PROPOSED PAVEMENT ELEVATIONS ARE HIGHER THAN EXISTING. SEE GRADING PLAN FOR INFORMATION.

AREA SUMMARY

EXISTING SITE AREA	184,846 SF (4.24 AC.)	
92ND RIGHT-OF-WAY SITE AREA	12,785 SF (0.29 AC.)	
	172,061 SF (3.95 AC.)	

LAND USE	EXISTING AREA	PROPOSED AREA
BUILDING	44,380 SF (26%)	44,380 SF (26%)
BUILDING ADDITION		31,534 SF (18%)
PAVEMENT (WALK/ DRIVE/ PARKING)	72,899 SF (42%)	52,977 SF (31%)
DISTURBED AND NEW EXISTING		21,827 SF 31,150 SF
TOTAL IMPERVIOUS	117,279 SF (68%)	126,891 SF (75%)
PERVIOUS	54,782 SF (32%)	43,170 SF (25%)

BUILDING SF SUMMARY

EXISTING:	44,380 SF
BUILDING B:	10,310 SF
BUILDING C:	7,500 SF (6,000 SF LEASABLE)
BUILDING D:	13,724 SF (10,810 SF. LEASABLE)
TOTAL:	75,914 SF

STORAGE FOR RV'S BOATS & VEHICLES

REQUIRED AREA = USABLE LAND AREA (172,061 SF) x 10% = 17,206 SF
AREA PROVIDED = 17,310 SF

PARKING SUMMARY

18 STALLS + 1 ACCESSIBLE STALLS
10' WIDE LOADING AREA IN FRONT OF STORAGE UNITS

LEGEND

	CONCRETE PAVEMENT
	NEW BITUMINOUS PAVEMENT
	PERVIOUS AREA
	STORAGE AREA FOR RV'S, BOATS AND VEHICLES

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CERTIFICATION

I hereby certify that this plan was prepared by me, or under my direct supervision, and that I am a duly Licensed Professional Engineer under the laws of the state of MINNESOTA.

Stephen M. Johnston
REGISTRATION NO. 18914

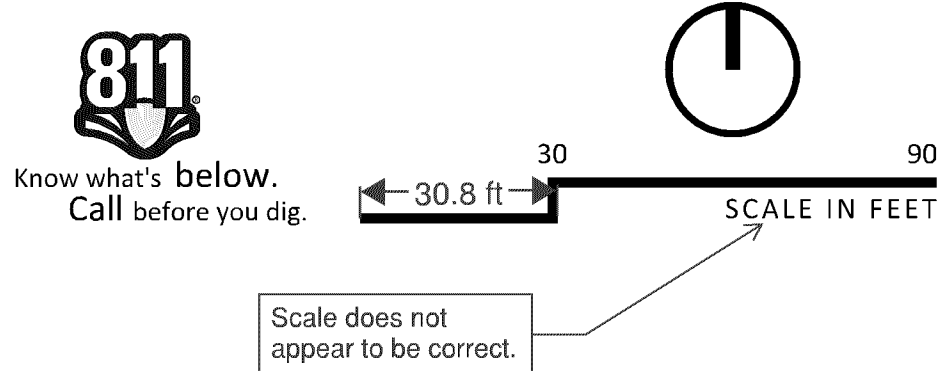
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SHEET C101ARC08.DWG

SITE PLAN

C-101

PROJECT NO.
ARC17008



Site plan for the West 92nd Street project, showing buildings A, B, C, D, and an office building. The plan includes property lines, easements, and various engineering notes.

Buildings and Footprint Elevations (FFE):

- EXISTING BUILDING: FFE = 840.20'
- BUILDING B: FFE = 840.20'
- BUILDING C: FFE = 839.09'
- BUILDING D: FFE = 837.75'
- OFFICE: FFE = 840.20'

Key Features and Notes:

- Tree Protection Fence (TYP):** Indicated along the northern and eastern boundaries.
- Inlet Protection (TYP):** Multiple locations marked for building inlets.
- Infiltration Construction:** A large rectangular area at the bottom of the plan, with notes:
 - Provide detail for Infiltration Basin inlet, show B612 modifications, inlet erosion prevention (ie. rip rap, or splash blocks, etc.)
 - INSTALL FILTER LOG AROUND INFILTRATION AFTER INITIAL GRADING. MAINTAIN UNTIL VEGETATION IS ESTABLISHED IN SEDIMENT BASIN.
- West 92nd Street:** Located at the bottom of the plan.
- Interstate 35N:** Located on the right side of the plan.
- West Bloomington Freeway:** Located on the right side of the plan.

Engineering Notes:

- 1 C-502: Silt Fence (TYP)
- 2 C-502: Filter Log (TYP)
- 3 C-502: Rock Construction Entrance
- 4 C-502: Tree Protection Fence (TYP)
- 5 C-502: Inlet Protection (TYP)
- 6 C-502: Inlet Protection (TYP)
- 7 C-502: Infiltration Construction

VERIFY ALL FIELD CONDITIONS AND UTILITY LOCATIONS PRIOR TO EXCAVATION/CONSTRUCTION. IF ANY DISCREPANCIES OR UNKNOWN UTILITIES ARE FOUND THAT IMPACT DESIGN OR IMPAIR CONSTRUCTION, THE ENGINEER AND OWNER SHOULD BE IMMEDIATELY NOTIFIED.

2. ALL WORK TO COMPLY WITH CURRENT MINNESOTA DEPARTMENT OF TRANSPORTATION (MDOT) STANDARD SPECIFICATIONS FOR CONSTRUCTION UNLESS NOTED.

3. FOLLOW ALL RECOMMENDATIONS PRESENTED IN GEOTECHNICAL EVALUATION REPORT PREPARED BY NTI DATED FEBRUARY 9, 2017.

4. SIDEWALKS SHALL BE RETAINED BENCHMARKED OR SLOPED TO PROVIDE SAFE WORKING CONDITIONS. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ASSESSING THE STABILITY OF AND EXECUTING PROJECT EXCAVATIONS USING SAFE METHODS. THE CONTRACTOR IS ALSO RESPONSIBLE FOR NAMING THE "COMPETENT INDIVIDUAL" AS PER SUBPART F OF 29 CFR 1926.6 (FEDERAL REGISTER - OSHA).

5. CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF SOIL, UTILITY AND BUILDING RETENTION SYSTEMS.

6. PAVEMENT

CONCRETE MIX NO. 3A32 MDOT 2461.3 SHALL BE USED FOR HAND PLACED FORMED CURB AND GUTTER, MEDIANS, DRIVEWAYS, CROSS GUTTERS, SIDEWALKS, PEDESTRIAN RAMPS AND MEDIAN. CONCRETE MIX NO. 3A22, MDOT SPECIFICATION 2461.3 SHALL BE USED FOR AN EXTRUSION MACHINE PLACEMENT OF CONCRETE. IN THE PRODUCTION OF CONCRETE, AN AIR ENTRAINING AGENT SHALL BE ADDED TO THE MIX ACCORDING TO MDOT 2461.4.

7. FORM COATING MATERIAL SHALL MEET MDOT 3902.

8. CONCRETE INSTALLATION SHALL CONFORM WITH MDOT 2531.

9. SITE CONCRETE FINISHING - CONCRETE SHALL BE STRUCK TRUE TO CROSS SECTION AS SHOWN ON THE PLANS. NO ADDITIONAL WATER MAY BE ADDED TO AID IN THE FINISHING PROCESS. A LIGHT BROOM FINISH WILL BE REQUIRED AT RIGHT ANGLES TO THE CENTER LINE ON ALL CONCRETE WORK UNLESS DIRECTED OTHERWISE. ALL EXPOSED EDGES AND JOINTS IN CURB, GUTTER, SIDEWALK AND STEPS SHALL BE ROUNDED WITH A SUITABLE EDGING TOOL. BEFORE FINAL FINISHING, THE CONTRACTOR SHALL CHECK THE CONCRETE WITH A TEN (10) FOOT STEEL STRAIGHT EDGE TO ENSURE THERE IS NO VARIATION GREATER THAN 3/16" FROM THE STRAIGHT EDGE ON TANGENT LINES OR GRADES. IF DEVIATIONS GREATER THAN 3/16" ARE FOUND THE WORK WILL BE CONSIDERED AS UNACCEPTABLE AND WILL BE REQUIRED TO BE REMOVED AND REPLACED AT NO EXPENSE TO THE OWNER.

10. CONCRETE CURING SHALL BE PERFORMED BY APPLYING A MEMBRANE CURING COMPOUND (TYPE 2, WHITE PIGMENTED, MDOT 3754) TO THE EXPOSED SURFACE OF THE CONCRETE WITHIN ONE (1) HOUR AFTER FINISHING THE CONCRETE SURFACES. WHEN THE FORMS ARE REMOVED IN LESS THAN 72 HOURS AFTER PLACING THE CONCRETE THE CURING COMPOUND SHALL BE APPLIED IMMEDIATELY TO THE EXPOSED SURFACES. OR THE TRENCHES SHALL BE BACKFILLED IMMEDIATELY WITH SUITABLE BACKFILL MATERIAL. THE RATE OF APPLICATION OF CURING COMPOUND SHALL BE 150 SQUARE FEET PER GALLON. THE COMPOUND SHALL APPEAR AS WHITE AS A SHEET OF PAPER AFTER APPLICATION ON THE CONCRETE SURFACE.

11. PREFORMED EXPANSION JOINTS SHALL MEET MDOT 3702, AND SHALL BE PROVIDED AT THE FOLLOWING LOCATIONS: AT THE BEGINNING AND END OF ALL CURB AND GUTTER RAIL, WHERE NEW CONCRETE SURROUNDS, ADJOINS, OR ABUTS ANY EXISTING FIXED OBJECTS SUCH AS FIRE HYDRANTS, BUILDING FOUNDATIONS, CONCRETE DRIVEWAYS, SIDEWALKS, AND OTHER RIGID STRUCTURES. AFTER EACH LOAD OF CONCRETE WHEN PLACING CURB AND EVERY 100 FEET WHEN PLACING SIDEWALK. CONTRACTION JOINTS WILL NOT BE SEALED BUT WILL BE REQUIRED AT A SPACING OF 10 FEET ON CURB AND GUTTER AND ON SIDEWALK CONSTRUCTION AS SHOWN ON THE PLAN. CONTRACTION JOINTS WILL BE CUT TO A DEPTH 1/3 THE THICKNESS OF THE CONCRETE. SURFACE AND BACK OF ALL CURBS. CONTRACTION JOINTS SHALL BE PLACED SO THAT NO SLAB IS LARGER THAN 100 SQUARE FEET IN AREA. THE CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTING CONTRACTION JOINTS THAT PREVENT CONCRETE FROM CRACKING AT OTHER LOCATIONS.

12. CONCRETE TESTING INCLUDING SLUMP, AIR ENTRAINMENT, TEMPERATURE AND COMPRESSIVE STRENGTH SHALL BE PERFORMED ON THE FIRST LOAD OF THE DAY FOR ALL CONCRETE POURS OF AT LEAST 4 CUBIC YARDS. AN ADDITIONAL TEST SHALL BE PERFORMED FOR EACH 100 CUBIC YARDS OR PORTION THEREOF.

13. AGGREGATE BASE FINAL SHAPING AND COMPACTION OF THE AGGREGATE BASE SHALL BE DONE JUST PRIOR TO CONSTRUCTION OF THE CONCRETE OR BITUMINOUS SURFACE. THE FINISHED SURFACE OF THE BASE SHALL SHOW NO VARIATION GREATER THAN 1/2 INCH FROM A TEN (10) FOOT STRAIGHT EDGE.

14. PLANT MIXED BITUMINOUS MIXTURE SHALL BE SPREAD WITHOUT SEGREGATION, AT THE SPECIFIED RATE TO THE CROSS SECTION SHOWN IN THE PLANS AND PER MDOT 3151.

15. ADJUST ALL SURFACE COURSES TO NOT GREATER THAN 1/4 INCH ABOVE ADJACENT CURB FRONT EDGES WHERE WATER FLOWS TO CURB, AND FLUSH WHERE WATER FLOWS AWAY FROM CURB, OR 1/2 INCH ABOVE MANHOLE FRAMES, VALVE BOXES OR OTHER FIXED STRUCTURES.

16. THE THICKNESS OF EACH BITUMINOUS COURSE SHALL BE WITHIN 1/4 INCH OF THE THICKNESS AS SHOWN ON THE PLANS. THE TOTAL THICKNESS OF ALL BITUMINOUS COURSES SHALL BE WITHIN 1/2 INCH.

17. PRIOR TO CONSTRUCTING THE BITUMINOUS BINDER AND/OR WEARING COURSES, THE CONTRACTOR SHALL SWEEP ROADWAY. THE SWEEPER SHALL BE A SELF-PROPELLED PICK-UP (WITH WATER) SWEEPER. A SIDE-SHROW SWEEPER WILL NOT BE ALLOWED.

18. TACK COAT SHALL CONFORM TO MDOT 2357.2.A.

19. BITUMINOUS PAVEMENTS SHALL BE COMPACTED TO 92% OF THE MAXIMUM THEORETICAL DENSITY. THE OWNER MAY AT THEIR OPTION PERFORM AGGREGATE AND BITUMINOUS TESTING. THE COST OF ALL FAILING TESTS MAY BE BACK-CHARGED TO THE CONTRACTOR.

	SILT FENCE
	FILTER LOG SEDIMENT CONTROL
	TREE PROTECTION FENCE
	STORM STRUCTURE PROTECTION
	ROCK CONSTRUCTION ENTRANCE
	SOD & LANDSCAPING
	MNDOT MIXTURE 33-261 STORMW/DRILL SEEDING TEMPORARY MIXTURE 21-111 OAT SEEDING RATE PLS 35 LBS/AC
	CONCRETE PAVEMENT

	EXISTING	PROPOSED
IMPERVIOUS		
BUILDING	1.019 ACRES	1.743 ACRES
PAVEMENT	1.673 ACRES	1.216 ACRES
TOTAL IMPV	2.692 ACRES	2.959 ACRES
PERVIOUS	1.258 ACRES	0.991 ACRES
TOTAL	3.950 ACRES	3.950 ACRES

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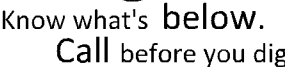
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or under my direct supervision, and that I am a
duly Licensed Professional Engineer under the
laws of the state of MINNESOTA.

SHEET C201ARC08.DWG

C-201

PROJECT NO. **ARC17008**



CASE FILE #PL201800067

Project Name / Location

Project Name	Acorn Mini Storage
Project Address	9100 W Bloomington Freeway, Bloomington MN 55431
Property ID	0902724310059
Latitude / Longitude	44.83833, -93.29900
Project Type	Commercial Site Redevelopment

Contacts

Owner	Contractor (Operator)	Preparer
Chris Kirwan	Adam Beesch	Steve Johnston, PE
Oak Management Company	B2 Builders, LLC	Élan Design Lab, Inc.
3410 Winnetka Avenue North		901 N 3 rd St.
Suite C		Suite 120
New Hope, MN 55427		Minneapolis, MN 55401
763-231-2372	612-505-6925	612-260-7982
chris.kirwan@oakmanagement.com	adam@b2builders.com	sjohnston@elanlab.com
		SWPPP Design Certification Expires 2020

General SWPPP Responsibilities

The Contractor (Operator) shall provide a knowledgeable and experienced person(s) to oversee the implementation of the SWPPP and the installation. Inspection and maintenance of the erosion and sediment control BMP's before and during construction. Training must be in conformance with the NPDES Construction Permit requirements. Training documentation must kept on-site with the SWPPP and the trained person must be available on-site within 72 hours.

Both the Owner and Contractor (Operator) shall be responsible for the proper termination and/or transfer of the permit.

The owner will be responsible for the long term operation and maintenance of the permanent storm water management system(s).

Unless specifically stated the engineer shall have no responsibility for any SWPPP activities during or after construction.

Project Description

The proposed redevelopment project converts an existing single story flex office building and associated surface parking lot into a combination cold and climate controlled storage facility through the expansion of the existing building and conversion of existing parking and landscaped areas. The project will disturb a total of 3.95 acres and increase impervious surfaces by 0.27 acres.

Soils

The existing soil, based on the USDA/NRCS mapping is a Malardi complex a sandy loam that transitions to gravelly sand at depth. Soil borings will be necessary to confirm this generalized information.

Receiving Waters

The site is within the Nine Mile Creek Watershed. The site drains to Barthel's Pond 2/3rds of mile to the west and East Marsh Lake.

Project Plans Site drains to Nine Mile Creek, 1.25 miles to the south, near James Ave. S. near W. 102nd St.

The following plan sheets are hereby incorporated into this SWPPP

Sheet Number	Description	Date
C3.1	Grading Plan	2/28/2018
C3.2	Erosion Control Plan	2/28/2018
C3.3	Grading Details	2/28/2018
C3.4	Grading Details	2/28/2018
SWPPP	SWPPP Narrative	2/28/2018

Stormwater Related Reviews and Permits

Agency	Type of Permit or Review	Status
City of Bloomington	Conditional Use Permit, Building Permit	Pending
Nine Mile Creek Watershed District	Stormwater Management and Erosion and Sediment Control	Pending
MPCA	Construction Stormwater	To be acquired by contractor.

Stormwater Management System Overview

See Stormwater Management Plan incorporated herein by reference for details on system design, flow rates and volumes and system capacities. In general the conveyance system consists of a series of catch basins, pipes, and infiltration basins that convey runoff to the southwest corner of the site.

See Operations and Maintenance Manual for post construction system maintenance requirements.

Erosion Prevention Measures - General

The Contractor (Operator) is responsible for all erosion prevention measures for the project including but are not limited to the following:

- The Contractor (Operator) shall plan and implement appropriate construction practice and construction phasing to minimize erosion and retain vegetation whenever possible
- All areas not to be disturbed shall be delineated with flags, stakes, signs, or other means necessary to protect these areas before construction begins on the site.
- All drainage ditches and/or swales shall have temporary or permanent stabilization within 24 hours of connecting to a surface water or 24 hours after construction activity in the ditch/swale has temporarily or permanently ceased.
- All pipe outlets shall have temporary or permanent energy dissipation within 24 hours of connecting to a surface water.
- All exposed soils shall be stabilized as soon as possible to limit soil erosion. In no case shall un-worked areas, including stock piles, have exposed soils for more than 14 days without providing temporary or permanent stabilization. (7 days for projects with a receiving water that is impaired or special)

Sediment Control Measures and Timing - General

The Operator (Contractor) is responsible for all sediment control measures for the project. Sediment control measures include but are not limited to the following:

- Sediment control measures shall be established on all down gradient perimeters before any up-gradient land disturbing activities begin. These measures shall remain in place until final stabilization has been established.
- On slopes with 3:1 or steeper grades there shall be no unbroken slope length greater than 75 feet.
- All storm drain inlets and culvert inlets shall be protected by an appropriate BMP during construction until all sources with potential for discharging to the inlet has been stabilized. Inlet and culvert protection shall conform to the MnDOT Specifications 2573 and 3891.
- Stock piles shall be provided with an effective sediment perimeter control and shall not be placed in any type of surface water or drainage way.
- Vehicle tracking shall be minimized with effective BMP's. Where the BMP's fail to prevent sediment from tracking onto streets the Contractor shall conduct street sweeping to remove all tracked sediment.
- The Operator is responsible for identifying the need for temporary sediment basins based on actual field conditions to protect downstream resources. Temporary sediment basins shall be constructed before up gradient vegetation is disturbed and maintained until the risk of damage to downstream resources is mitigated by other means.

Dewatering and Basin Draining Activities - General

The Operator is responsible for adhering to all dewatering and surface drainage regulations, including but not limited to the following:

- Whenever possible water from dewatering activities shall discharge to a temporary and/or permanent sediment basin.
- If water cannot be discharged to a sedimentation basin, it shall be treated with other appropriate BMP's, to effectively remove sediment.
- All discharge points shall be protected from erosion and scour.
- Discharge water shall be dispersed over an effective energy dissipation measure.
- All water from dewatering shall be discharged in a manner that does not cause nuisance conditions, erosion, or inundation of wetlands. Water shall not be discharged to adjacent residential properties. It must be discharged to the public street.

Final Stabilization - General

The Operator is responsible for ensuring final stabilization of the site, including but is not limited to the following:

- All soil disturbing activities outside of the right-of-way have been completed.
- All exposed soils have been uniformly stabilized.
- All drainage ditches, ponds and all storm water conveyance systems have been cleared of sediment and stabilized to preclude erosion.

Upon approval of the work by Owner, Watershed and City, the responsibility for the site may be transferred to the City's contractor and builders. The original contractor will remain responsible for establishment of at least 80% perennial vegetation coverage and the removal of temporary BMP's.

Temporary Sediment Basin

During construction the contractor shall excavate and maintain temporary sediment basins as needed to prevent sediment from reaching permanent filtration areas, wetlands and other environmentally sensitive areas.

Construction Sequencing

Contractor shall comply with the following sequence. The Contractor may make adjustments to the sequence if needed to address their means and methods and unanticipated field conditions.

- Install inlet protection in downstream structures.
- Install perimeter silt fence and other barriers at a minimum as indicated on the plan. The contractor is responsible for any additional sediment control that is needed to prevent sediment from leaving the site.
- Install rock construction entrance.
- Remove pavement needed for building construction. Leave the balance of pavement intact until completion of building.
- Construct building addition.
- Remove the balance of pavement as shown on plans.
- Construct infiltration basins. Provide perimeter control around basins.
- Install curb and gutter and new pavement.
- Complete landscaping
- Remove sediment barriers as building construction and permanent landscaping is completed.

- Flush storm sewer system. Remove sediment from infiltration basin as needed.
- Monitor vegetation and reinstall as needed until fully established.
- File NPDES Notice of Termination ("NOT") with MPCA within 30 days of final stabilization.

Inspection and maintenance

All inspections, maintenance, repairs, replacements and removal are to be considered incidental to the BMP bid items.

The Contractor (Operator) is responsible for completing required inspections maintenance and observation of weather conditions and rainfall amounts to ensure compliance with the permit requirements. The Contractor (Operator) shall observe the construction site once every seven (7) days during active construction and within 24 hours after a rainfall event greater than 0.5 inches in 24 hours.

The Contractor (Operator) shall keep a summary maintenance/construction observation report to be recorded after each site visit/observation. The Contractor (Operator) shall submit a copy of the written inspections monthly to the Owner. Records shall include the following:

- Date and time of inspections
- Name of person conducting inspection
- Findings and recommendations for corrective actions if necessary
- Corrective actions taken
- Date and amount of rainfalls greater than 0.5 inches in 24 hours
- Mention of any changes made to the SWPPP
- A site map indicating active construction areas and land disturbing activities.

The Contractor (Operator) must keep the SWPPP, all inspection reports and amendments onsite. The Contractor (Operator) shall designate a specific location to keep the records whenever construction activity is in progress.

All erosion prevention and sedimentation control BMP's must be inspected to ensure integrity and effectiveness. All nonfunctional BMP's must be repaired, replaced or supplemented with functional BMP's. The Contractor (Operator) must investigate and comply with the following inspection and maintenance requirements:

- All sediment barriers including silt fence, bio-logs, and similar devices must be repaired replaced or supplemented when they become nonfunctional or the sediment reaches 1/3 of the barrier height. These repairs shall be made within 24 hours of discovery.
- Temporary and permanent sediment basins must be drained and the sediment removed when the depth of sediment collected in the basin reaches 1/2 the storage volume. Drainage and removal must be completed within 72 hours of discovery.
- Surface waters, including drainage ditches and conveyance systems, must be inspected for evidence of erosion and sediment deposition. The Operator shall remove all deltas and sediment deposited in surface waters, including drainage ways, catch basins, and other drainage systems. The Operator shall re-stabilize the areas where sediment removal results in exposed soil. Removal and stabilization must take place within 7 days of discovery, unless precluded by legal, regulatory or physical constraints. The Contractor (Operator) is responsible for contacting all local, regional, state and federal authorities and receiving any applicable permits, prior to conducting any work.
- Construction site vehicle exit locations shall be inspected daily for evidence of off-site sediment tracking onto paved surfaces. Tracked sediment must be removed from all paved surfaces within 24 hours of discovery.
- The Contractor (Operator) is responsible for the operation and maintenance of temporary and permanent water quality BMP's. As well as erosion and sediment control BMP's for the duration of the construction work at the site.
- If sediment escapes the construction site, all off-site accumulations of sediment must be removed in a manner and at a frequency sufficient to minimize off-site impacts.
- All filtration areas must be inspected to ensure that no sediment from ongoing construction activities is reaching the filtration areas and these areas are protected from compaction due to construction equipment driving across the filtration area.
- The Contractor is solely responsible for all costs associated with reconstructing the infiltration basin when the functionality is compromised by the contractor's actions or inaction to protect the basin.

Pollution Prevention Management Measures

The Contractor (Operator) shall be responsible for all pollution prevention management measures. The Contractor (Operator) is responsible for informing all visitors and/or personnel on-site of the pollution prevention management measures.

All pollution prevention management measures are to be considered incidental to the overall project bid, unless otherwise noted. Pollution prevention management measures include but are not limited to the following:

- The Contractor (Operator) is responsible for the proper disposal, in compliance with MPCA disposal requirements, of all solid or liquid waste and hazardous materials on-site.
- Concrete trucks shall not be allowed to wash out or discharge surplus concrete or drum wash water on-site, unless done in an engineered leak-proof containment system. The engineered system provided by the Contractor (Operator) must include site drawings for the project file and written assurance that the system will work as designed and leave no discharge of concrete or concrete residue potential to waters of the state during a minimum of a 100-year storm event. A sign must be installed adjacent to each washout system to inform concrete equipment Operators to utilize the proper facilities. The concrete washout containment system and all related items shall be considered incidental to the project bid.
- All nonhazardous waste materials shall be collected and stored in a securely lidded metal dumpster or other approved containment method at the end of each day. Any alternative to a metal dumpster must be submitted in writing for approval by the project engineer. The dumpster shall be emptied as necessary to function as intended for debris collection. No construction garbage or waste material shall be buried on-site.
- A licensed sanitary waste management Contractor shall collect all sanitary waste from the portable units at a rate necessary to maintain designed function.
- All fertilizers shall be stored in a covered shelter. Partially used bags shall be transferred to a sealable bin to reduce the chance of spillage.
- External washing of trucks and other construction vehicles and engine degreasing are prohibited at the construction site. All vehicles on-site shall be monitored for leaks and receive regular

prevention maintenance to reduce the chance of leakage. Petroleum products shall be stored in tightly sealed containers. Which are clearly labeled. Spill kits shall be included with all fueling sources and maintenance activities. Secondary containment measures shall be installed and maintained by the Operator.

- Any asphalt substances used on-site shall be applied in accordance with manufacturer's recommendations.
- All paint containers and curing compounds shall be tightly sealed and stored when not required for use. Excess paint and/or curing compounds shall not be discharged into the storm sewer system and shall be properly disposed of according to manufacturer's instruction.
- Materials and equipment necessary for spill clean-up shall be kept in an enclosed trailer or shed on-site. Equipment shall include. But not limited to, brooms, mops, dust pans, rags, gloves, goggles, absorbent (kitty litter) oil absorbent booms and diapers and buckets.
- All spills shall be contained and cleaned up immediately upon discovery. Spills large enough to reach the storm water conveyance system shall be reported to the Minnesota duty officer at 1-800-422-0798.

Quantities

Practice	Detail / Spec.	Unit	Quantity
Silt Fence		LF	
Heavy Duty Silt Fence		LF	
Bio Roll Sediment Control		LF	
Tree Protection Fence		LF	
Rock Construction Entrance		Each	
Erosion Control Blanket		SY	
Storm Structure Protection		Each	
Concrete Washout Area		Each	
Seed	MnDOT MIX 35-241	SY	
Seed	MnDOT MIX 33-261	SY	
Erosion Control Seeding & Tactifier	MnDOT 3884	SY	

Post Construction Operation and Maintenance

Maintenance of the storm water management facilities will be the responsibility of a Owner and will be subject to an agreement with the City of Bloomington and Nine Mile Creek Watershed District. The agreement will include the following items.

- Infiltration basins shall be monitored for the first year after each rainfall of 0.5" or greater to verify infiltration basin is dry with 48 hours or less. Contact Engineer if infiltration is not occurring within the prescribed period.
- Sediment and trash accumulation shall be inspected on an annual basis and removed when facility is impacted. Owner is strongly encouraged to vacuum sweep entire site each spring before spring rains wash sediment.
- Debris must be disposed in a licensed landfill.
- Sediment shall be tested for contaminants and disposed of in a manner consistent with state and watershed regulations.
- Clean debris from storm sewer inlets on an as needed basis.
- Noxious weeds shall be removed from the site on an annual basis before they go to seed.

Amendments to the SWPPP

The SWPPP will be amended as needed and/or as required by provisions of the permit. Amendments will be approved by both the Owner and Contractor (Operator) and will be attached to the SWPPP as an additional sheet. The SWPPP and amendments will be kept on site by the Contractor (Operator) whenever construction activity is in progress.

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PROJECT

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BLOOMINGTON, MN

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02/28/2018

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CERTIFICATION

I hereby certify that this plan was prepared by me, or under my direct supervision, and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.

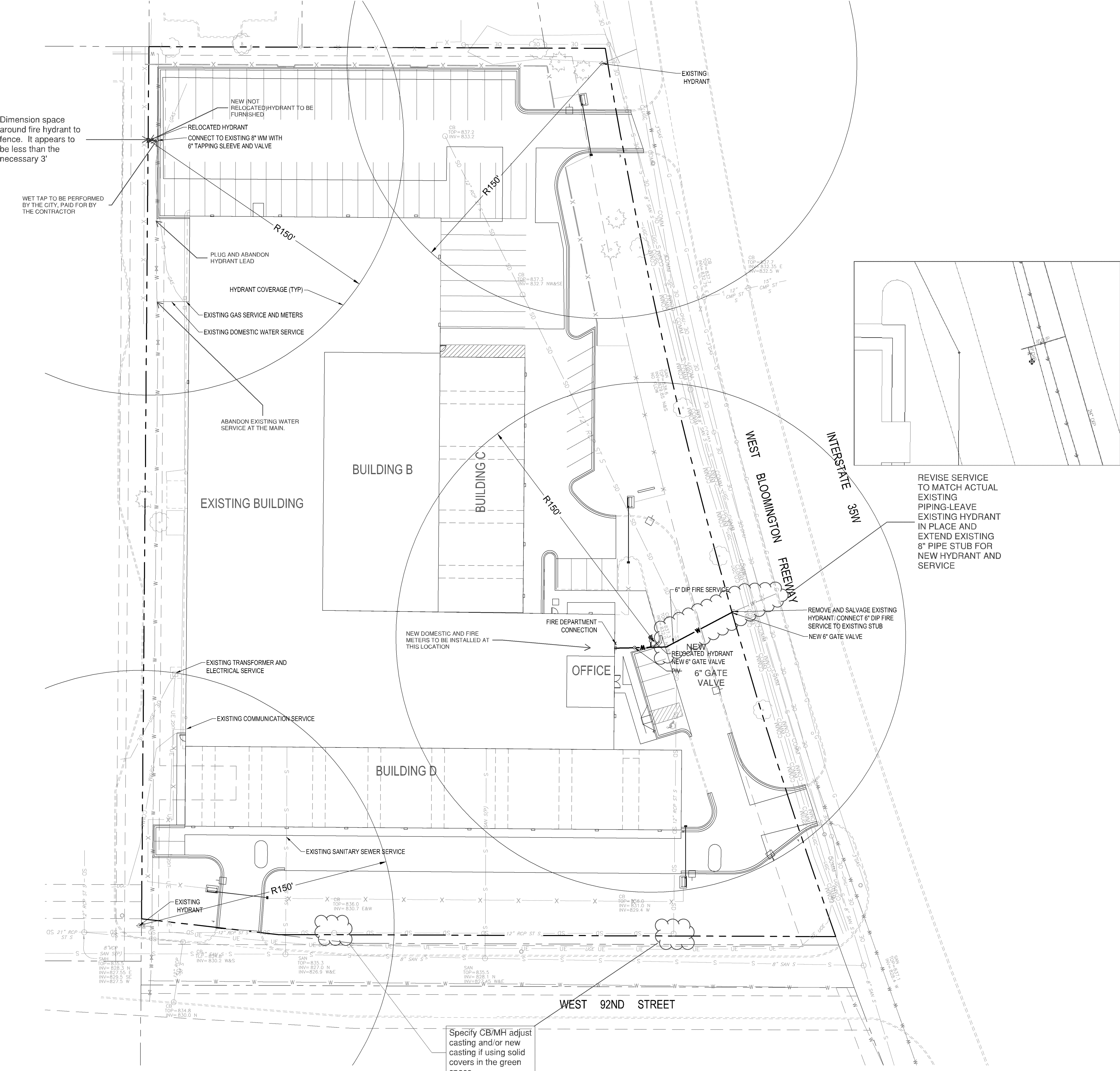
Stephen M. Johnston DATE
REGISTRATION NO. 18914 02/28/18

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SWPPP

C-202

PROJECT NO.
ARC17008



UTILITY NOTES

1. VERIFY ALL CONNECTIONS TO EXISTING UTILITY SERVICES PRIOR TO CONSTRUCTION. ANY DISCREPANCIES BETWEEN LOCATED UTILITIES AND THE EXISTING CONDITIONS PLAN SHOULD BE NOTED AND FORWARDED TO THE ENGINEER.
2. CONTRACTOR TO PROVIDE ADEQUATE MEANS AND METHODS TO ASSURE ADJACENT PROPERTY IS NOT DAMAGED DURING UTILITY INSTALLATION.
3. PIPE LENGTHS SHOWN ARE MEASURED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.
4. UTILITY SERVICE LOCATIONS WITHIN BUILDING ARE SHOWN CORRECT AS OF THE DATE OF THIS PLAN. THE CONTRACTOR SHALL VERIFY LOCATIONS BY COMPARING THIS PLAN WITH THE MECHANICAL PLANS PRIOR TO ANY UTILITY CONSTRUCTION.
5. PIPE MATERIALS: (TO BE VERIFIED)

WATERMAIN	6" DIP CLASS 52
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6. ALL UTILITY CONSTRUCTION TO CONFORM WITH STATE, CITY ENGINEER'S ASSOCIATION OF MINNESOTA (CEAM), AND CITY OF BLOOMINGTON STANDARD SPECIFICATIONS.
7. ADJUST ALL STRUCTURES, PUBLIC AND PRIVATE, TO PROPOSED GRADES WHERE DISTURBED. COMPLY WITH ALL REQUIREMENTS OF UTILITY OWNERS. STRUCTURES BEING RESET TO PAVED AREAS TO MEET OWNERS REQUIREMENTS FOR TRAFFIC LOADING.
8. MAINTAIN 7.5' COVER ON ALL NEW WATERMAIN.

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CERTIFICATION

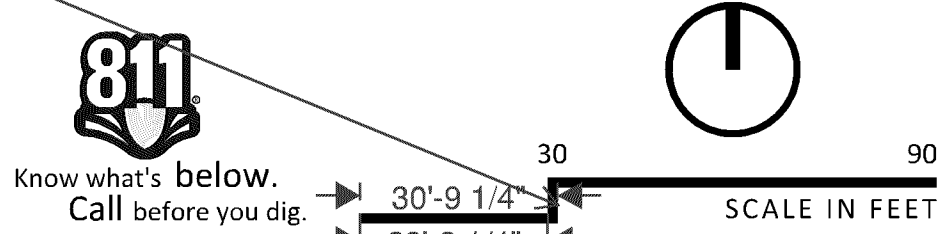
I hereby certify that this plan was prepared by me, or under my direct supervision, and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.

NOT FOR CONSTRUCTION

Stephen M. Johnston
REGISTRATION NO. 18914
DATE
02/28/18

SHEET C301ARC08.DWG

Please provide a different scale symbology. It is unclear if you measure to the near side, far side or middle of the line given that the line is 2" thick at 30 scale (using the 150' hydrant dimension) Also since there are two lines but no vertical lines you can't measure from 0'-90' without a projection from the 90' for an electronic review. (It probably works ok on paper)



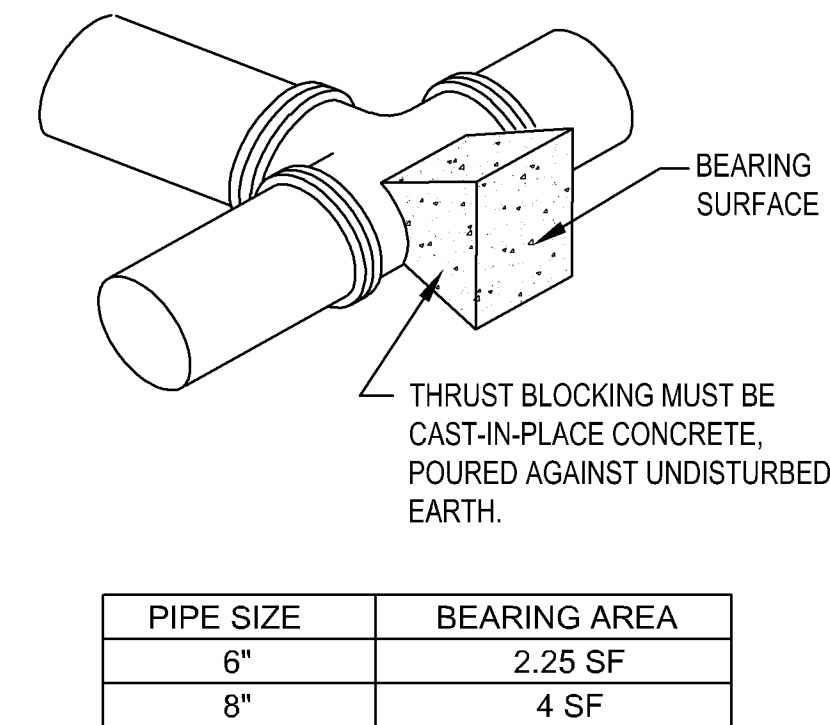
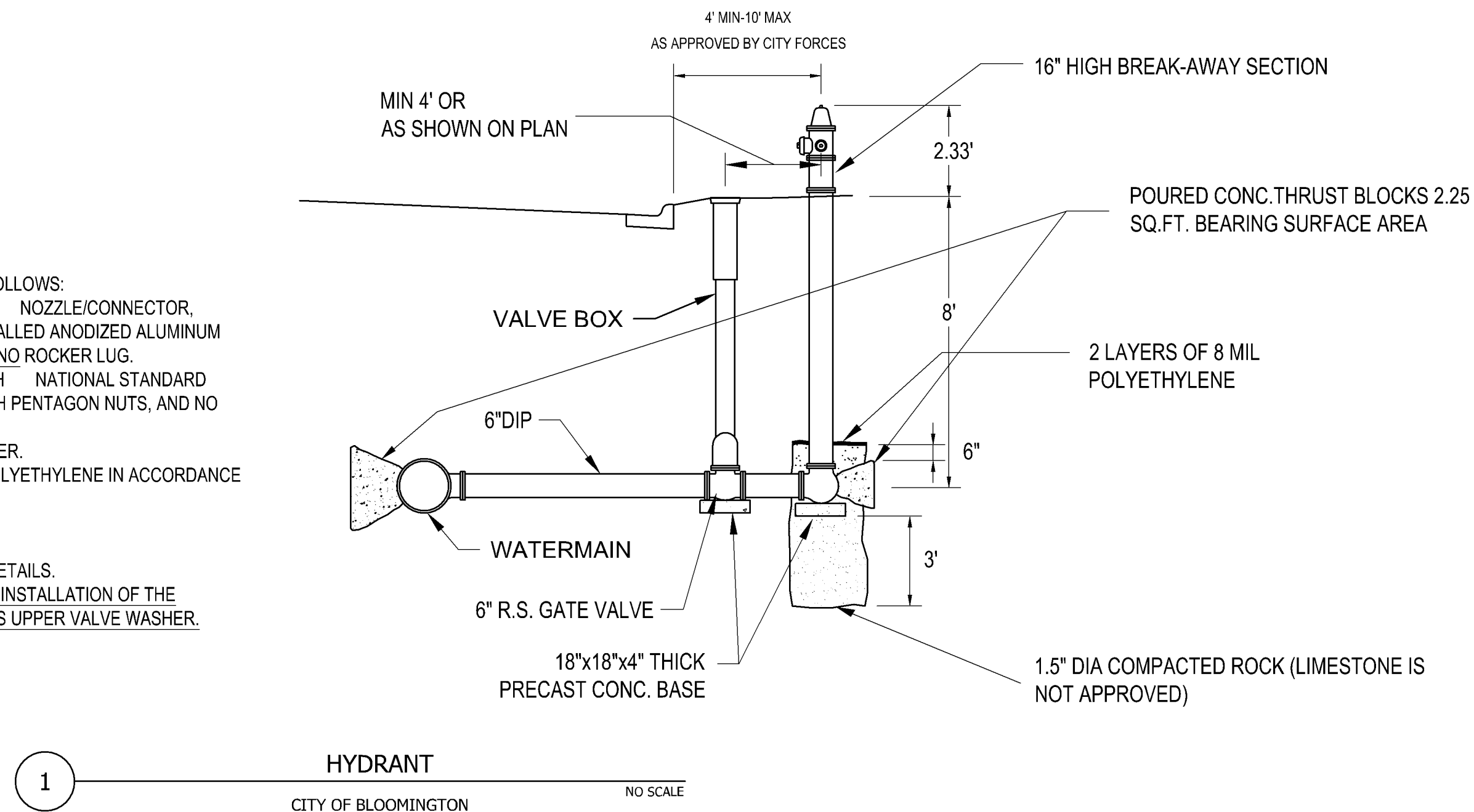
UTILITY PLAN

C-301

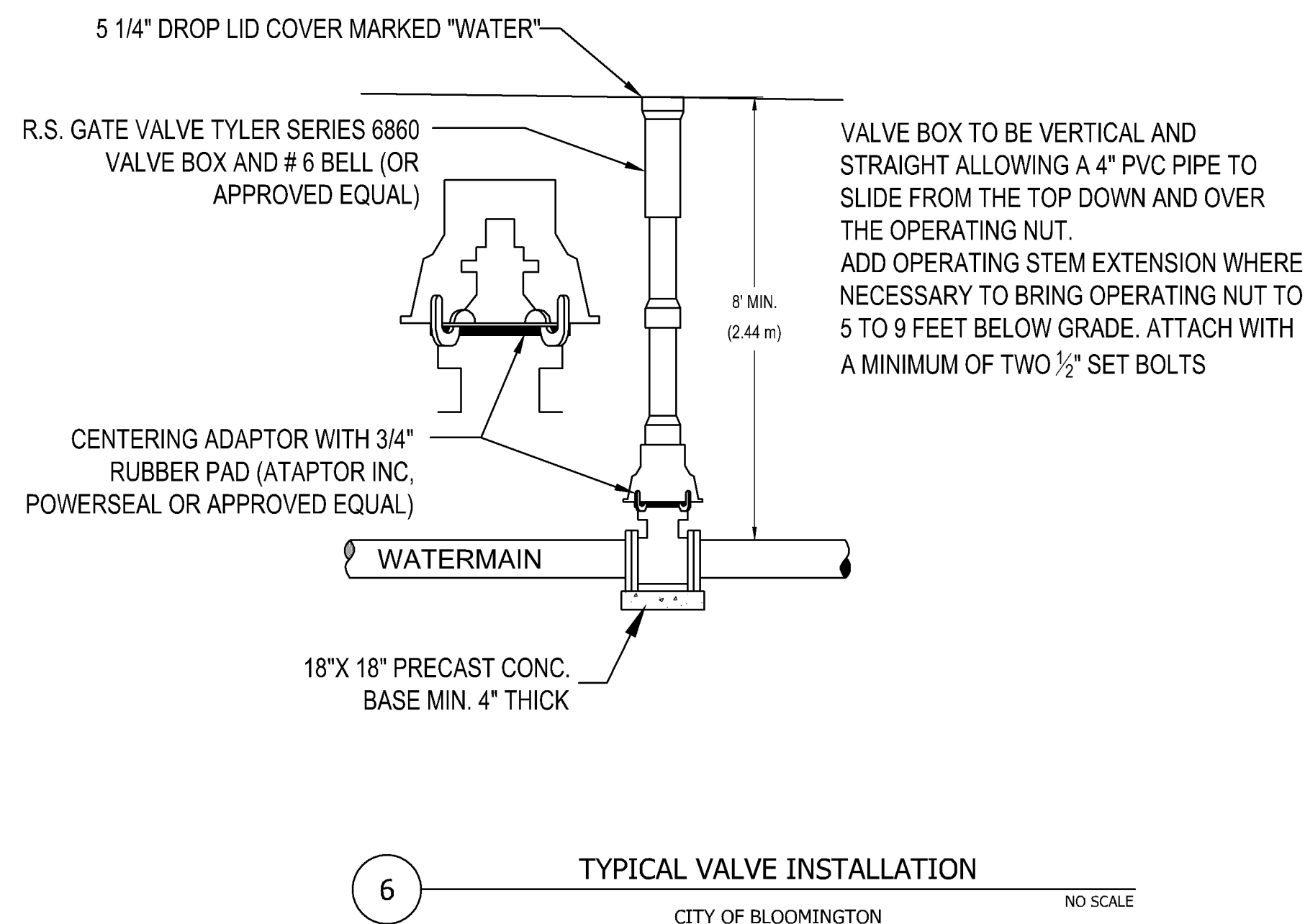
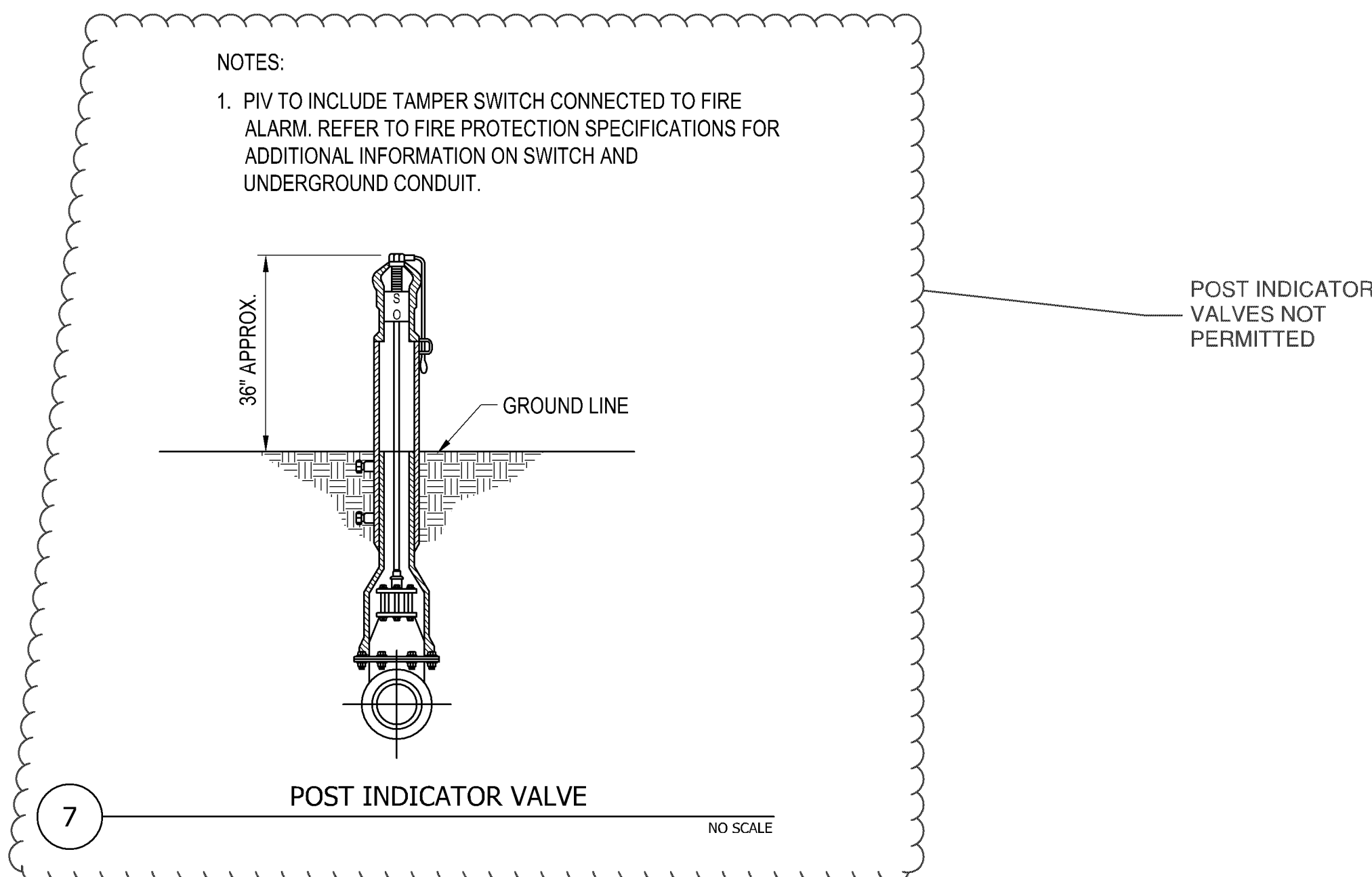
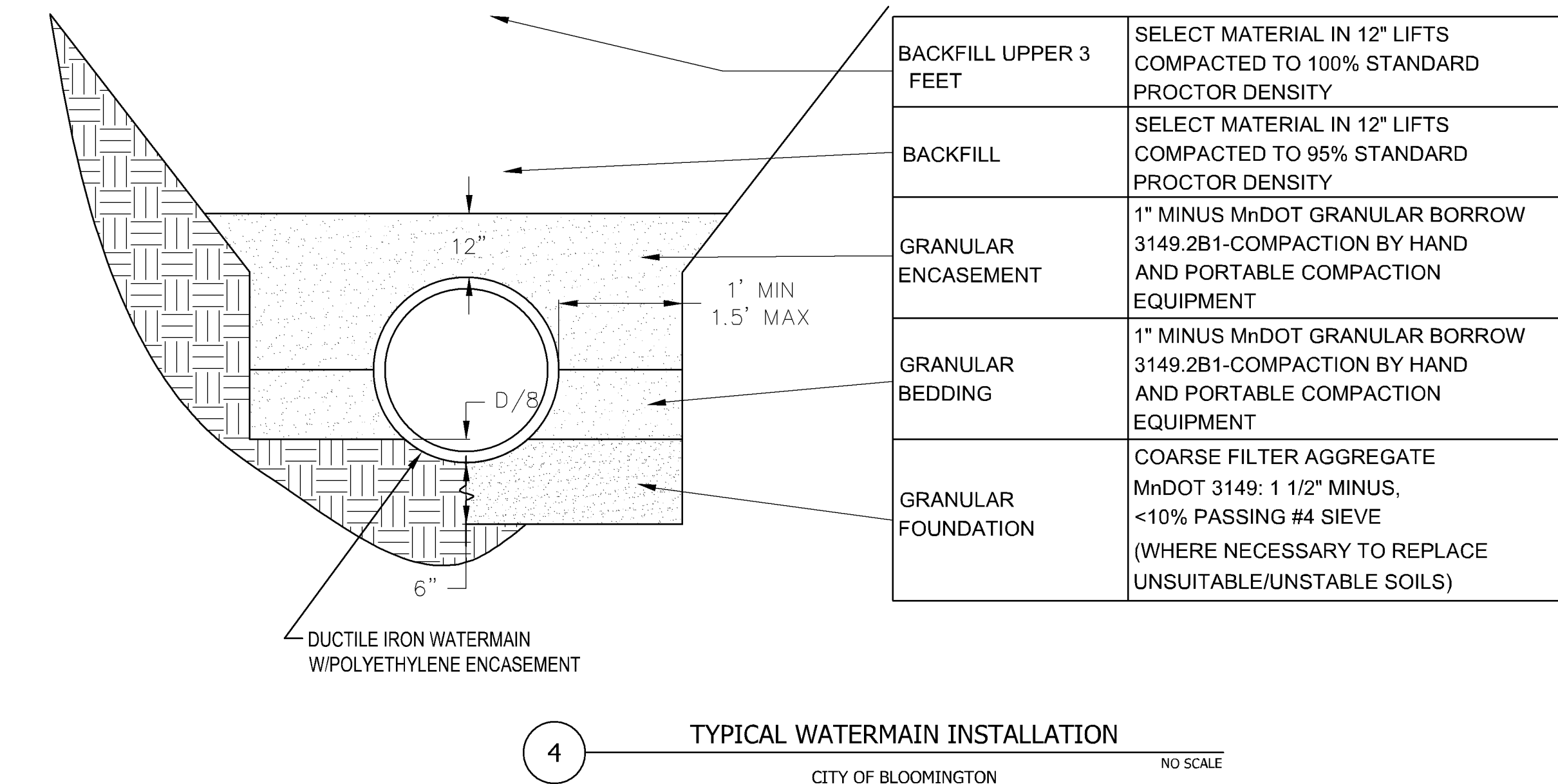
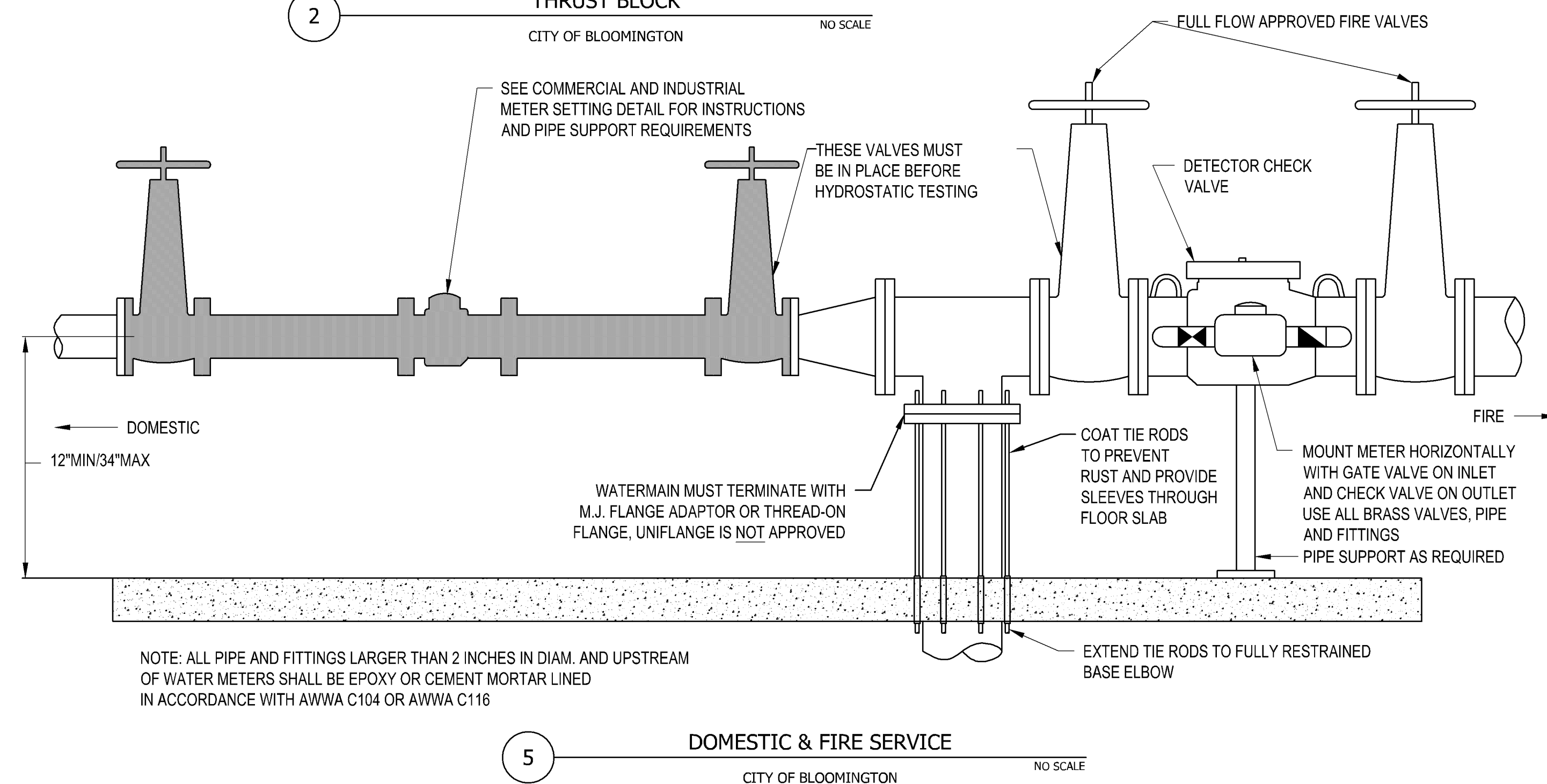
PROJECT NO.
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CASE FILE #PL201800067

- HYDRANT TO BE:
 - WATEROUS PACER CLASSIC,
 - MUELLER SUPERCENTURION 250 MODEL A-423.
 - OR APPROVED EQUAL.
- EQUIP WITH THREE HOSE NOZZLES/CONNECTIONS AS FOLLOWS:
 - ONE - FACTORY INSTALLED 5 INCH STORZ PUMPER NOZZLE/CONNECTOR, INCLUDING A MANUFACTURER SUPPLIED AND INSTALLED ANODIZED ALUMINUM NOZZLE CAP WITH A 1.5 INCH PENTAGON NUT AND NO ROCKER LUG.
 - TWO - 2.5 INCH HOSE NOZZLES/CONNECTIONS (WITH NATIONAL STANDARD THREADS) AND STANDARD NOZZLE CAPS WITH 1.5 INCH PENTAGON NUTS, AND NO ROCKER LUGS.
- USE SS NUTS AND BOLTS AS APPROVED BY THE ENGINEER.
- ALL EXPOSED WATERMAIN SHALL BE WRAPPED WITH POLYETHYLENE IN ACCORDANCE WITH AWWA C-105.
- BARREL TO BE BRIGHT RED.
- ALL VALVES TO OPEN COUNTER-CLOCKWISE.
- SEE TYPICAL VALVE INSTALLATION DETAIL FOR VALVE DETAILS.
- WATEROUS PACER CLASSIC HYDRANTS SHALL INCLUDE INSTALLATION OF THE MANUFACTURERS MOST CURRENT ANTI-CHATTER BRASS UPPER VALVE WASHER.



- NOTES:**
1. THRUST BLOCKS TO BE USED FOR BENDS 22 1/2" AND OVER, INCLUDING HYDRANTS AND HYDRANT TEES.
 2. THRUST BLOCKS ARE REQUIRED REGARDLESS OF ANY OTHER RESTRAINT METHODS USED ON WATERMAIN LESS THAN 12" IN DIA.
 3. RESTRAINT METHODS ON WATERMAIN LARGER THAN 12" SHALL BE MEGALUGS, LOCKING GASKETS OR OTHER APPROVED EQUAL. THE LENGTH OF RESTRAINT SHALL BE AS COMPUTED BY DIPRA.



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CERTIFICATION

I hereby certify that this plan was prepared by me,
or under my direct supervision, and that I am a
duly Licensed Professional Engineer under the
laws of the state of MINNESOTA.

Stephen M. Johnston
REGISTRATION NO. 18914

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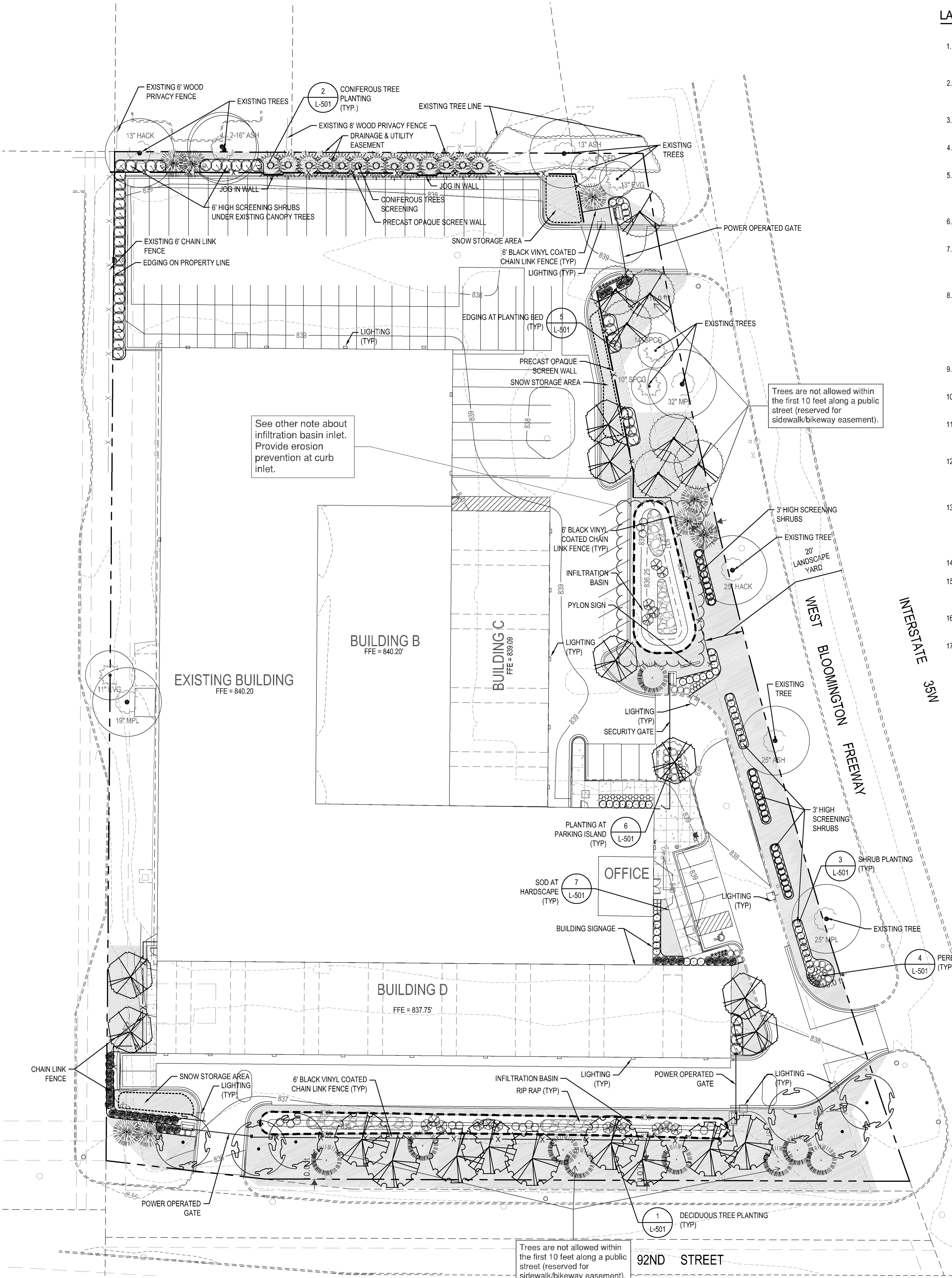
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DETAILS

C-503

PROJECT NO. _____

ARC17008



LANDSCAPE NOTES

- LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR FINISHED GRADING AND POSITIVE SURFACE DRAINAGE IN ALL LANDSCAPE AREAS. LANDSCAPE CONTRACTOR MUST ENSURE THAT THE FINAL GRADES ARE MET AS SHOWN ON GRADING PLAN. IF ANY DISCREPANCIES ARE FOUND, IMMEDIATELY NOTIFY LANDSCAPE ARCHITECT FOR RESOLUTION.
- ALL PLANT MATERIALS ARE TO CONFORM WITH STATE & LOCAL CONSTRUCTION STANDARDS AND THE CURRENT ADDITION OF THE AMERICAN ASSOCIATION OF NURSERYMEN STANDARDS. ALL PLANT MATERIALS ARE TO BE HEALTHY, HARDY STOCK, AND FREE FROM ANY DISEASES, DAMAGE, AND DISFIGURATION.
- QUANTITIES OF PLANTS LISTED ON THE PLAN ARE TO GOVERN ANY DISCREPANCY BETWEEN THE QUANTITIES SHOWN ON THE PLANT SCHEDULE AND PLAN. PLACE PLANTS IN PROPER SPACING FOLLOWING LAYOUT FIGURES.
- TOPSOIL TO BE MNDOT 3877.2B LOAM TOPSOIL BORROW FOR LANDSCAPED AREAS AND PLANTING BEDS. PROVIDE ROOTING TOPSOIL BORROW MNDOT 3877.2E FOR PLANT RESTORATION, WATER QUALITY, AND INFILTRATION PLANTING.
- PLANTING SOIL TO BE CONSISTED OF 50% SELECT TOPSOIL BORROW (MNDOT 3877) AND 50% GRADE 2 COMPOST (MNDOT 3890). PLANTING SOIL TO HAVE A PH BETWEEN 6.5-7.5, BE FREE OF CHEMICAL CONTAMINANTS, DEBRIS, LARGE ROCKS GREATER THAN 1/2" DIAMETER, AND FRAGMENTS OF WOOD. SUBSOIL SHALL BE SCARIFIED TO A DEPTH OF 4" BEFORE PLANTING SOIL IS SPREAD.
- SPREAD PLANTING SOIL AT MINIMUM EIGHTEEN (18) INCH DEEP IN ALL PLANTING BEDS PRIOR TO PLANTING. THOROUGHLY WATER TWICE TO FACILITATE CONSOLIDATION PRIOR TO PLANTING. DO NOT OVERLY COMPACT SOIL.
- SOD SHOWN ON LANDSCAPE PLAN TO BE INSTALLED BY LANDSCAPE CONTRACTOR. SOD TO BE MNDOT 3878.2A, DENSE, AND OF UNIFORM TEXTURE. FREE OF WEEDS AND DISEASE. APPLY MINIMUM SIX (6) INCHES OF SELECT TOPSOIL BORROW AND THOROUGHLY APPLY FERTILIZER TO TOP TWO (2) INCHES BEFORE LAYING SOD. LANDSCAPE CONTRACTOR TO MAINTAIN SODDED AREAS IN HEALTHY CONDITION UNTIL FIRMLY ROOTED.
- MULCH TO BE SHREDDED HARDWOOD BARK MULCH (MNDOT 3882 TYPE 6), CONSISTED OF RAW WOOD MATERIAL FROM TIMBER AND BE A PRODUCT OF A MECHANICAL CHIPPER, HAMMER MILL, OR TUB GRINDER. THE MATERIAL SHALL BE SUBSTANTIALLY FREE OF MOLD, DIRT, SAWDUST, AND FOREIGN MATERIAL AND SHALL NOT BE IN AN ADVANCED STATE OF DECOMPOSITION. THE MATERIAL SHALL NOT CONTAIN CHIPPED UP MANUFACTURED BOARDS OR CHEMICALLY TREATED WOOD, INCLUDING, BUT NOT LIMITED TO, WATER BOARD, PARTICLE BOARD, AND CHROMIATED COPPER ARSENATE (CCA) OR PENTA TREATED WOOD. THE MATERIAL SHALL BE TWICE-GROUND/ SHREDDED, SUCH THAT, NO INDIVIDUAL PIECE SHALL EXCEED 2 INCHES IN ANY DIMENSION.
- APPLY FOUR (4) INCH DEPTH OF SHREDDED HARDWOOD BARK MULCH IN FOUR (4) FOOT DIAMETER RING AROUND ALL TREES. NO ALUMINUM EDGING IS REQUIRED.
- EDGE ALL SHRUB BEDS WITH 3/16" X 4" MILL FINISHED ALUMINUM EDGING WITH STAKES. ALL EDGING TO BE COMMERCIAL GRADE.
- APPLY FOUR (4) INCH DEPTH OF SHREDDED HARDWOOD BARK MULCH IN ALL SHRUB BED AREAS AND APPLY THREE (3) INCH DEPTH OF SHREDDED HARDWOOD BARK MULCH IN PERENNIAL AREAS. PRIOR TO MULCHING, APPLY PRE-EMERGENT HERBICIDE TO ALL PLANTING BEDS.
- FERTILIZER TO BE A COMMERCIAL FORMULA AND APPLIED PER MANUFACTURER'S RECOMMENDATION. PROVIDE FERTILIZER WITH PERCENTAGE OF NITROGEN REQUIRED TO PROVIDE NOT LESS THAN 1 POUND OF ACTUAL NITROGEN PER 1,000 SQ.FT. OF LAWN AND 10 PERCENT OF POTASSIUM. NITROGEN MUST BE IN A FORM AVAILABLE TO LAWN DURING THE INITIAL ESTABLISHMENT. PROVIDE SLOW RELEASE FERTILIZER 20-10-5 FOR TREES AND SHRUBS.
- LANDSCAPED AREAS AS INDICATED ON PLAN SHALL BE IRRIGATED WITH AN UNDERGROUND IRRIGATION SYSTEM. NO WATER IS ALLOWED ON ANY PAVEMENT, PARKING, WALKWAY, AND BUILDING. THE IRRIGATION CONTRACTOR IS TO DESIGN AND SUBMIT SHOP DRAWING OF IRRIGATION DESIGN AND CALCULATIONS TO LANDSCAPE ARCHITECT FOR REVIEW 5 DAYS PRIOR TO PURCHASING AND INSTALLATION. IRRIGATION DESIGN IS TO MEET ALL CITY AND STATE PLUMBING CODES AND REQUIREMENTS.
- FOLLOW LANDSCAPE DETAILS FOR ALL INSTALLATION, UNLESS OTHERWISE NOTED.
- ALL NATIVE SEEDING USED ON THIS PROJECT SHALL BE CERTIFIED TO BE OF MINNESOTA (OR AS SPECIFIED) ORIGIN BY THE MINNESOTA CROP IMPROVEMENT ASSOCIATION (MCIA). DOCUMENTATION VERIFYING THE ORIGIN OF THIS SEED IS TO BE PROVIDED TO THE LANDSCAPE ARCHITECT AT LEAST 30 DAYS PRIOR TO INSTALLATION DATE.
- FOLLOW SEEDING METHOD, SEEDING INSTALLATION, AND SITE PREPARATION AS PER THE MNDOT SEEDING MANUAL 2014 UNLESS NOTED OTHERWISE ON THE LANDSCAPE PLANS OR IN THE SPECIFICATION BOOKLET.
- LANDSCAPE CONTRACTOR SHALL MAINTAIN PLANTS IN HEALTHY CONDITION THROUGHOUT WARRANTY PERIOD. THE WARRANTY PERIOD IS TWO FULL YEARS FROM DATE OF PROVISIONAL ACCEPTANCE UNTIL FINAL ACCEPTANCE. WARRANTY PERIOD FOR PLANT MATERIAL INSTALLED AFTER JUNE 1ST SHALL COMMENCE THE FOLLOWING YEAR.

LEGEND

- SOD
- RIP RAP
- FILTRATION BASIN SEED MIXTURE
MNDOT MIXTURE 33-261 STORMWATER SOUTH & WEST
DRILL SEEDING
- EXISTING TREE

According to the City's supplemental landscaping policy, 50% of the frontage of a building facing a public street should be landscaped with foundation plantings. The southern elevation and a portion of the eastern elevation would be subject to these requirements.

PLANT SCHEDULE

KEY	QUANT.	COMMON NAME	SCIENTIFIC NAME	SIZE	ROOT COND.	MATURE SIZE
DECIDUOUS TREES						
	8	SIENNA GLEN MAPLE	ACER X FREEMANII 'SIENNA'	2.5' CAL.	B&B	50H X 35W
	9	RIVER BIRCH	BETULA Papyrifera 'VAREN'	10' CLUMP	B&B	40H X 30W
	7	ESPRESSO KENTUCKY COFFEETREE	GYMNOCLADUS DIOICUS 'ESPRESSO - JFS'	2.5' CAL.	B&B	50H X 35W
	6	SWAMP WHITE OAK	QUERCUS BICOLOR	2.5' CAL.	B&B	50H X 40W
CONIFEROUS TREES						
	8	NORWAY SPRUCE	PICEA ABIES	6' HT.	B&B	40H X 25W
	9	EASTERN WHITE PINE	PINUS STROBUS	6' HT.	B&B	60H X 30W
	13	BLACK HILLS SPRUCE	PICEA GLAUCA DENSATA	6' HT.	B&B	35H X 25W
DECIDUOUS SHRUBS						
	16	IROQUOIS BEAUTY BLACK CHOKEBERRY	ARONIA MELANOCARPA 'MORTON'	5 GAL.	POT	4'H X 4'W
	43	PRAIRIE FIRE DOGWOOD	CORNUS ALBA 'AUREA'	5 GAL. (48" HT MIN.)	POT	6'H X 6'W
	17	GRAY DOGWOOD	CORNUS RACEMOSA	5 GAL.	POT	6'H X 6'W
	49	DWARF BUSH HONEYSUCKLE	DIERVILLA LONICERA	5 GAL. (24" HT MIN.)	POT	3'H X 4'W
	22	GROW-LOW FRAGRANT SUMAC	RHUS AROMATICA 'GRO-Low'	3 GAL.	POT	2'H X 5'W
CONIFEROUS SHRUBS						
	31	MANEY JUNIPER	JUNIPERUS CHINENSIS 'MANEY'	5 GAL. (36" HT MIN.)	POT	5'H X 5'W
	27	GREY OWL JUNIPER	JUNIPERUS VIRGINIANA 'GREY OWL'	5 GAL. (24" HT MIN.)	POT	3'H X 4'W
PERENNIALS						
	59	BIG TIME HAPPY DAYLILY	HEMEROCALLIS 'BIG TIME HAPPY'	1 GAL.	POT	1.5'H X 1.5'W
	26	SHENANDOAH SWITCH GRASS	PANICUM VIRGATUM 'SHENANDOAH'	1 GAL.	POT	4'H X 2'W

SUBSTITUTIONS: IF ANY SUBSTITUTIONS ARE REQUIRED, SUBMIT WRITTEN DOCUMENTS AND PROPOSED SUBSTITUTIONS TO LANDSCAPE ARCHITECT FOR APPROVAL 5 DAYS PRIOR TO PURCHASE AND/OR INSTALLATION.

LANDSCAPE SUMMARY

LANDSCAPE STANDARDS

DEVELOPABLE LANDSCAPING AREA (DEVELOPMENT SITE) = 172,061 SF.

	REQUIRED
1 TREE / 2,500 SF. OF DEVELOPABLE LANDSCAPING AREA	69 TREES
1 SHRUB / 1,000 SF OF DEVELOPABLE LANDSCAPING AREA	172 SHRUBS
LANDSCAPE YARD	20' MIN. TO RIGHT-OF-WAY 5' MIN. NOT ADJACENT TO STREET
PARKING LOT ISLAND	1 DECIDUOUS TREE/ PARKING LOT
PERIMETER SCREENING	SCREENING ABUTTING RESIDENTIAL DISTRICT
PARKING LOT SCREENING	3' MIN. - 4' MAX. SCREENING (2' HIGH AT PLANTING & 3' MIN. MATURE FOR SHRUB)

Only seven existing trees are within the property boundary, whereas the plan notes nine trees retained. Trees that are off-site do not count towards required landscaping quantities. A minimum of 69 trees must be located within the property.

PROVIDED
TOTAL 69 TREES 30 DECIDUOUS TREES 30 CONIFEROUS TREES 9 RETAINED EXISTING ON-SITE TREES (5 CONIFEROUS) (PROVIDE 57% CONIFEROUS TREES FOR SITE SCREENING)
TOTAL 205 SHRUBS & 85 PERENNIALS
1 DECIDUOUS TREE/ PARKING LOT
PRECAST OPAQUE SCREEN WALL, SHRUBS, & CONIFEROUS TREES
3' HIGH MIN. SHRUBS (2' MIN. AT PLANTING)

OWNER

OAK
MANAGEMENT &
DEVELOPMENT
COMPANY
3410 WINNETKA
AVENUE N SUITE C
NEW HOPE, MN 55427
c/o CHRIS KIRWAN
T (763) 231-2372

OWNER REPRESENTATIVE

CEANN COMPANY
10700 OLD COUNTY
ROAD 15,
PLYMOUTH, MN 55441
c/o DAVID A HUNT
T (952) 484-4451

ARCHITECTURAL
CONSORTIUM L.L.C.
901 NORTH THIRD STREET,
SUITE 220
MINNEAPOLIS, MN 55401
612-436-4030

PROJECT

ACORN MINI
STORAGE
BLOOMINGTON, MN

ISSUE

DEVELOPMENT
APPLICATION
02/28/2018

REVISION DATE

SHEET INDEX

- G-001 COVER SHEET
- C-002 ALTA/ASCM SURVEY
- C-002 TOPOGRAPHIC SURVEY
- C-010 DEMOLITION PLAN
- C-101 SITE PLAN
- C-201 GRADING & EROSION CONTROL PLAN
- C-202 SWPPP
- C-301 UTILITY PLAN
- C-301 DETAILS
- C-302 DETAILS
- C-303 DETAILS
- L-101 LANDSCAPE PLAN
- L-501 LANDSCAPE DETAILS
- A3-01 BUILDING ELEVATIONS
- A3-01 BUILDING ELEVATIONS - COLORED
- E-101 SITE PHOTOMETRICS

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www.elanlab.com

CERTIFICATION

I hereby certify that this plan was prepared by me, or under my direct supervision, and that I am a duly Licensed Landscape Architect under the laws of the state of Minnesota.

Pilarsinee Sarathong DATE
REGISTRATION NO. 40509 02/28/18

SHEET L101ARC08.DWG

LANDSCAPE PLAN

L-101

PROJECT NO.

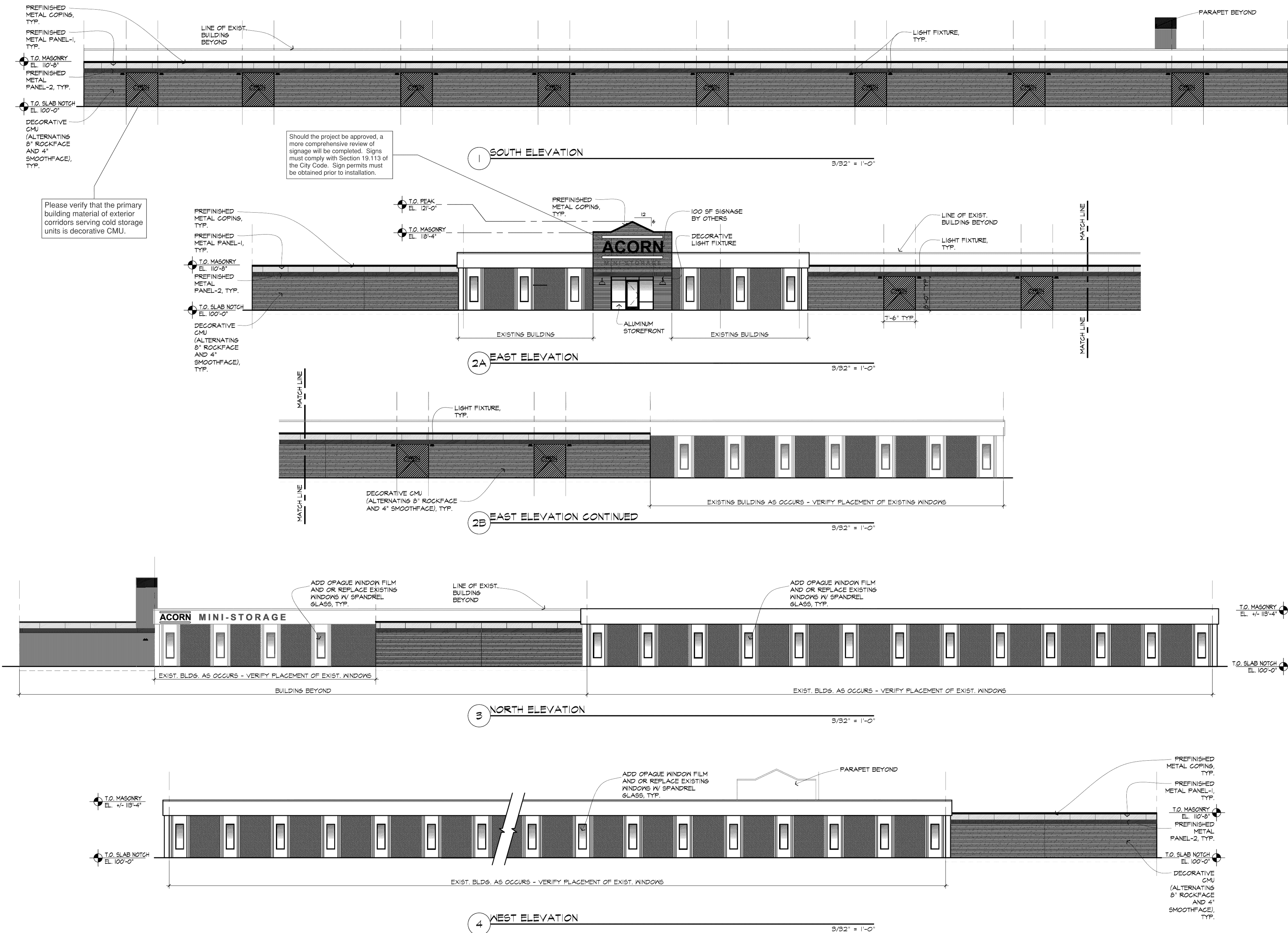
ARC17008

811
Know what's below.
Call before you dig.



30 90
SCALE IN FEET

1 LANDSCAPE PLAN
1" = 30'



Mark	Revision / Issue	Date
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PRELIMINARY
NOT FOR CONSTRUCTION

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision, and that I am a duly licensed Architect under the laws of the State of Minnesota.

Printed Name: Kathy L. Anderson

Signature: _____
Date: _____ License #: _____

ACORN
MINI STORAGE

BLOOMINGTON, MN

EXTERIOR BUILDING
ELEVATIONS

PROJECT NUMBER:	17-1085-01
ISSUED DATE:	02/28/18
DRAWN BY:	MR
CHECKED BY:	KA

A3.1