

PL201700265  
PL2017-265

# Site Development Plans

for

# American Boulevard Storage

## Bloomington, Minnesota

Presented by:

## Cascade Storage Partners, LLC.

**Sambatek**  
www.sambatek.com  
12800 Whitewater Drive, Suite 300  
Minnetonka, MN 55343  
763.476.6010 telephone  
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Engineering | Surveying | Planning | Environmental

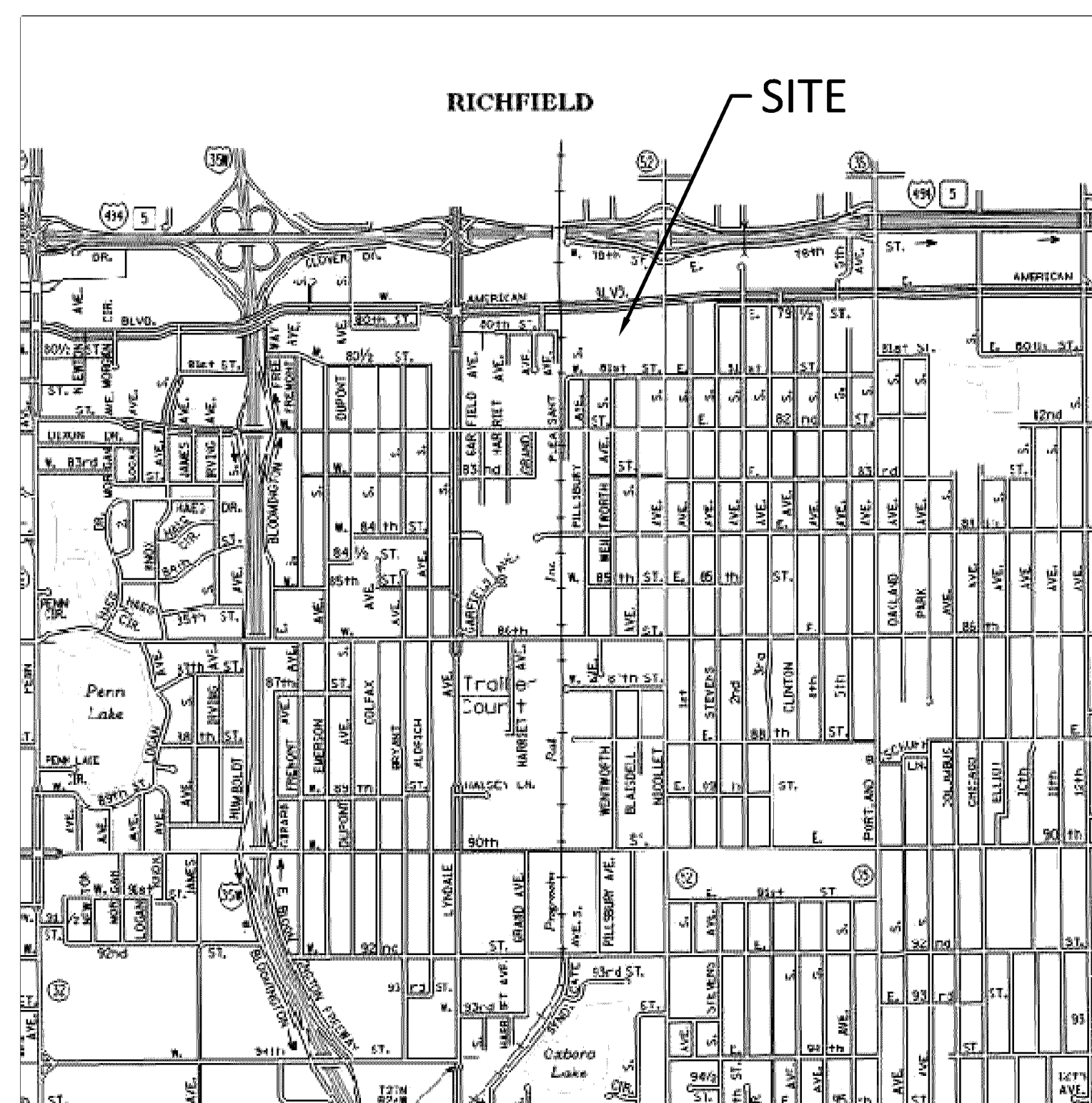
**Client**  
**CASCADE STORAGE PARTNERS, LLC.**  
700 E. MOOREHEAD ST., SUITE 100B  
CHARLOTTE, NC 28202

**Project**  
**AMERICAN BOULEVARD STORAGE**

**Location**  
**BLOOMINGTON, MN**  
101 AMERICAN BLVD W

**GOVERNING SPECIFICATION**

- CITY OF BLOOMINGTON STANDARD SPECIFICATIONS AND STANDARD DETAIL PLATES
- CITY ENGINEER'S ASSOCIATION OF MINNESOTA STANDARD SPECIFICATIONS (2013)
- MNDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION (2018 EDITION)



VICINITY MAP  
NO SCALE



**SHEET INDEX**

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L1.01	LANDSCAPE PLAN
L1.02	LANDSCAPE DETAILS

**ENGINEERING DIVISION**  
Approved By: Julie Long, PE  
10/08/2018 10:35:59 AM

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**Certification**

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 professional ENGINEER under the laws of the state of Minnesota.

*Brady Busseman*  
Brady D. Busseman

Registration No. 44579 Date: 09/26/2018

If applicable, contact us for a wet signed copy of this plan which is available upon request at Sambatek's, Minnetonka, MN office.

**Summary**

Designed: BDB Drawn: JEB  
Approved: BDB Book / Page:  
Phase: CONSTRUCTION Initial Issue: 09/26/2018

**Revision History**

No. Date By Submittal / Revision  
A 10/04/18 JEB REVISE WATERMAIN

**Sheet Title**  
**TITLE SHEET**

**Sheet No. Revision**

**C1.01 A**

**Project No. 21012**

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**Project**  
**AMERICAN BOULEVARD STORAGE**

**Location**  
**BLOOMINGTON, MN**

101 AMERICAN BLVD W

**Certification**

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

*Mark R. Salo*  
Mark R. Salo  
Registration No. 43933 Date: 04/18/2018

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A 10/04/18 JEB REVISE WATERMAIN

**Sheet Title**  
**EXISTING CONDITIONS**

**Sheet No. Revision**  
**C2.01 A**

**Project No.** 21012

**DESCRIPTION**

THE WEST 373 FEET OF TRACT V, REGISTERED LAND SURVEY NO. 861, FILES OF REGISTRAR OF TITLES, COUNTY OF HENNEPIN.

HENNEPIN COUNTY, MINNESOTA  
TORRENS PROPERTY

**PROPERTY SUMMARY**

1. ADDRESS: 101 AMERICAN BOULEVARD WEST (P.I.D. 0302724210015).
2. THE GROSS AREA OF THE SUBJECT PROPERTY IS 118,652 SQUARE FEET OR 2.7239 ACRES.
3. THE BUILDING(S) AND EXTERIOR DIMENSIONS OF THE OUTSIDE WALL AT GROUND LEVEL ARE SHOWN ON THE SURVEY. IT MAY NOT BE THE FOUNDATION WALL.

**BENCHMARKS**

1. THE VERTICAL DATUM IS BASED ON NAVD88.
- BENCHMARK #1  
TOP NUT OF HYDRANT LOCATED ON THE NORTHEASTERLY CORNER OF SUBJECT PROPERTY  
ELEV.=836.23
- BENCHMARK #2  
TOP NUT OF HYDRANT LOCATED ON THE NORTHWESTERLY CORNER OF SUBJECT PROPERTY  
ELEV.=837.34

**SURVEY NOTES**

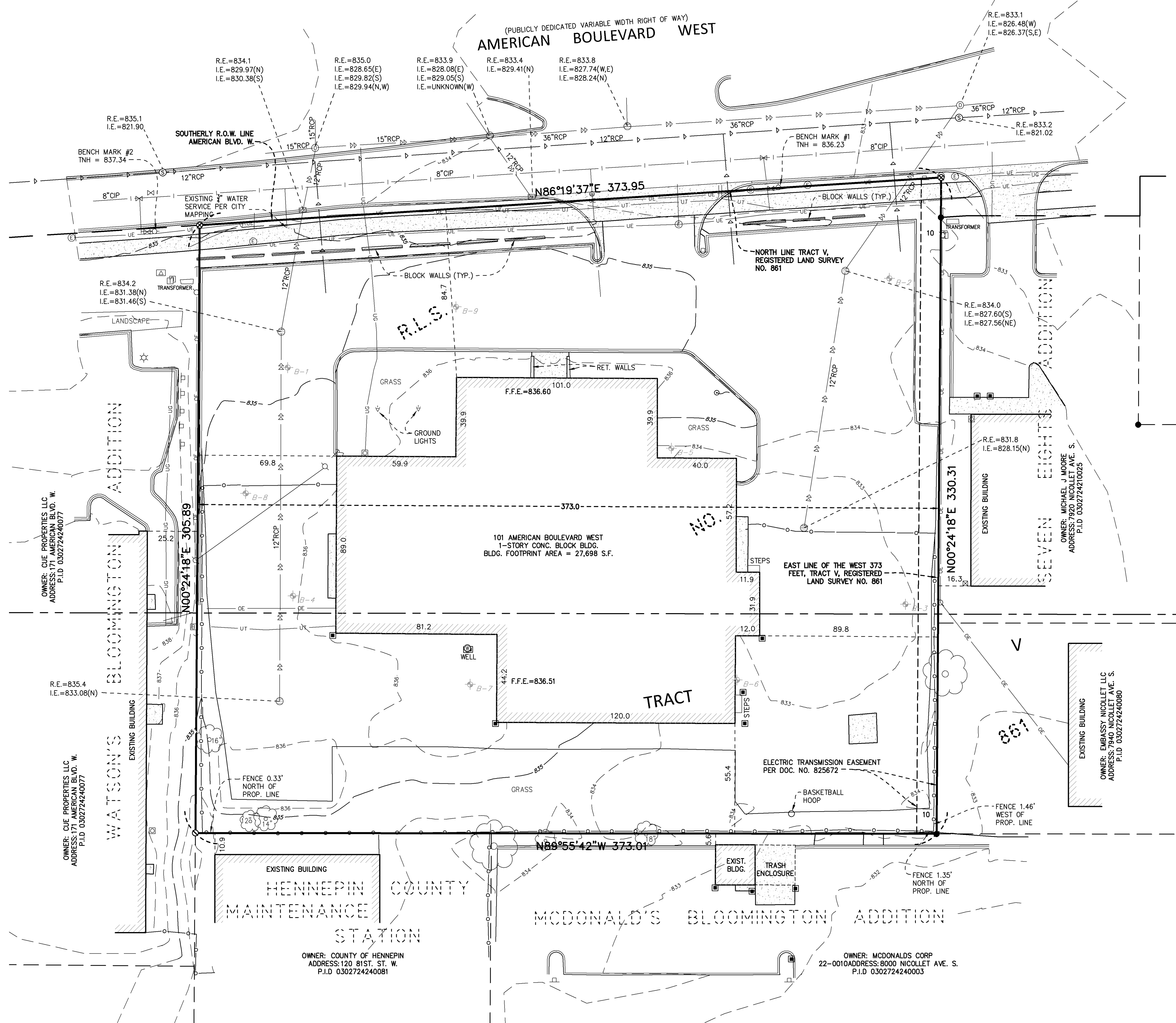
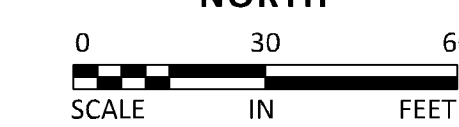
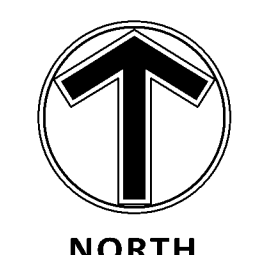
1. THE BEARING SYSTEM IS BASED ON THE HENNEPIN COUNTY COORDINATE SYSTEM, NAD83 (1986 ADJUST), WITH AN ASSUMED BEARING OF N86°12'46"E FOR THE NORTH LINE OF TRACT V.

**DEVELOPMENT SUMMARY**

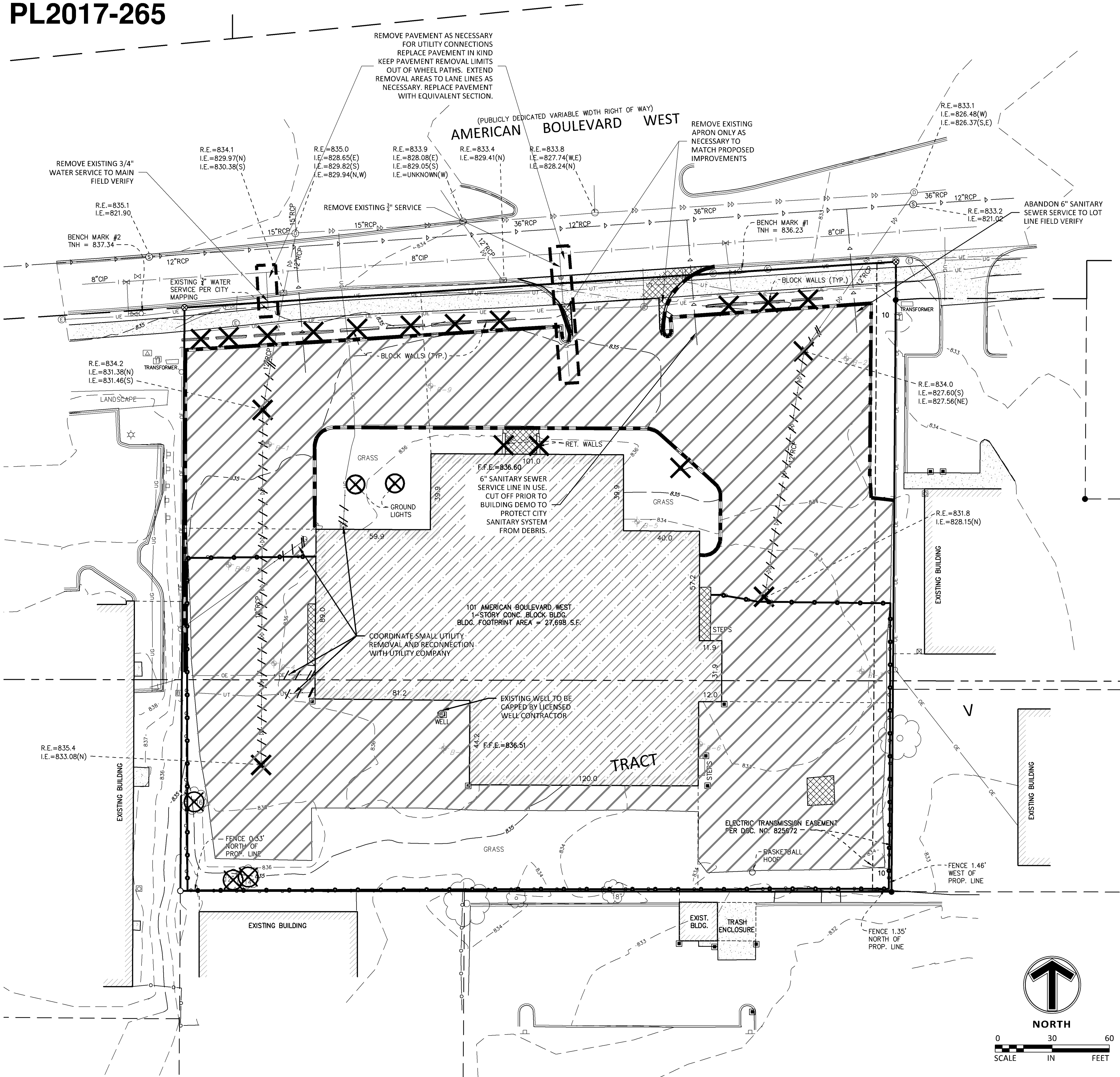
AREA		
GROSS SITE AREA	118,652 SF	2.72 AC
LESS R-O-W	11,632 SF	0.27 AC
NET SITE AREA	107,020 SF	2.46 AC
BUILDING COVERAGE		38%
FLOOR AREA RATIO		1.09
IMPERVIOUS AREA		78%
BUILDING SETBACKS		
FRONT YARD		40 FEET
REAR YARD		25 FEET
SIDE YARD		10 FEET
PARKING SETBACKS		
FRONT YARD		20 FEET
REAR YARD		5 FEET
SIDE YARD		5 FEET
ZONING		
EXISTING ZONING		I-3
PROPOSED ZONING		I-3
PARKING REQUIREMENTS		
5'x18' STALLS [(3/100 UNITS) * 900 UNITS]		27 STALLS
9'x18' STALLS [(1/285 SF OFFICE) * 1200 SF]		4 STALLS
TOTAL		31 STALLS
RV STORAGE REQUIRED		10,702 SF
PARKING PROVIDED		
ADA STALLS		1 STALL
INTERNAL STALLS		4 STALLS
9'x18' STALLS		11 STALLS
TOTAL [INITIAL BUILD @ (1.35/100 UNITS) * 900 UNITS]		16 STALLS
TOTAL W/ PROOF OF PARKING (15 STALLS)		31 STALLS
OUTDOOR RV STORAGE PROVIDED		10,811 SF
PERCENTAGE OF SITE DEDICATED TO OUTDOOR STORAGE		10.1%

**LEGEND**

● FOUND MONUMENT	○ SET MONUMENT MARKED LS 47481	⊕ ELECTRIC METER	⊙ LIGHT	⊠ AIR CONDITIONER	⊙ GUY ANCHOR	⊙ UTILITY POLE	⊙ POST	⊙ SIGN	⊕ WATERMAIN	⊕ SANITARY SEWER	⊕ STORM SEWER	⊕ FLARED END SECTION	⊕ ELECTRIC TRANSFORMER	⊕ TELEPHONE PEDESTAL	⊕ WOOD FENCE	⊕ FLAG POLE	⊕ CHAIN LINK FENCE	--- EASEMENT LINE	--- SETBACK LINE	--- CONCRETE CURB	--- BUILDING LINE	--- BUILDING CANOPY	⊕ DECIDUOUS TREE	⊕ CONIFEROUS TREE	⊕ BITUMINOUS SURFACE	⊕ CONCRETE SURFACE
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**LEGEND**

GAS METER	EXISTING
HYDRANT	
LIGHT	
STORM SEWER	
DRAIN TILE	
WATERMAIN	
SANITARY SEWER	
OVERHEAD ELECTRIC	
UNDERGROUND TELEPHONE	
UNDERGROUND CABLE TV	
UNDERGROUND ELECTRIC	
UNDERGROUND GAS	
CHAIN LINK FENCE	
STONE RETAINING WALL	
GUARD RAIL	
HANDRAIL	
EDGE OF TREES	
TREES / SHRUBS	
CONCRETE	
GUARD POLES	
SIGNS	
CONCRETE CURB	
BITUMINOUS CURB	
BUILDING	
REMOVE EXISTING UTILITY LINE	
REMOVE EXIST CONCRETE CURB	
REMOVE EXISTING BITUMINOUS PAVEMENT	
REMOVE EXISTING CONCRETE PAVEMENT	
REMOVE EXISTING BUILDING	
REMOVE EXISTING TREE	
REMOVE EXISTING	
REMOVE EXISTING CHAIN LINK FENCE	
REMOVE EXISTING LIGHT FIXTURE	

**DEMOLITION NOTES**

- DEMOLITION NOTES ARE NOT COMPREHENSIVE. CONTRACTOR SHALL VISIT THE SITE PRIOR TO CONSTRUCTION TO OBTAIN A CLEAR UNDERSTANDING OF THE INTENDED SCOPE OF WORK.
- THE DESIGN SHOWN IS BASED ON ENGINEER'S UNDERSTANDING OF EXISTING CONDITIONS. THE EXISTING CONDITIONS SHOWN ON THIS PLAN ARE BASED UPON ALTA AND TOPOGRAPHIC MAPPING PREPARED BY SAMBATEK DATED 03-14-2018. IF CONTRACTOR DOES NOT ACCEPT EXISTING TOPOGRAPHY AS SHOWN ON THE PLANS WITHOUT EXCEPTION, CONTRACTOR SHALL HAVE MADE, AT OWN EXPENSE, A TOPOGRAPHIC SURVEY BY A REGISTERED LAND SURVEYOR AND SUBMIT IT TO THE OWNER FOR REVIEW.
- THE CONTRACTOR IS RESPONSIBLE FOR DEMOLITION, REMOVAL, AND DISPOSING IN A LOCATION APPROVED BY ALL GOVERNING AUTHORITIES AND IN ACCORDANCE WITH APPLICABLE CODES, OF ALL STRUCTURES, PADS, WALLS, FLUMES, FOUNDATIONS, PARKING, DRIVES, DRAINAGE STRUCTURES, UTILITIES, ETC., SUCH THAT THE IMPROVEMENTS SHOWN ON THE PLANS CAN BE CONSTRUCTED. ALL FACILITIES TO BE REMOVED SHALL BE UNDERCUT TO SUITABLE MATERIAL AND BROUGHT TO GRADE WITH SUITABLE COMPACTED FILL MATERIAL PER THE GEOTECHNICAL REPORT AND/OR GEOTECHNICAL ENGINEER.
- CLEARING AND GRUBBING: CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL DEBRIS FROM THE SITE AND DISPOSING THE DEBRIS IN A LAWFUL MANNER. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED FOR DEMOLITION AND DISPOSAL.
- CONTRACTOR IS RESPONSIBLE FOR THE DISCONNECTION OF UTILITY SERVICES TO EXISTING BUILDINGS PRIOR TO DEMOLITION OF THE BUILDINGS.
- CONTRACTOR SHALL COORDINATE WITH RESPECTIVE UTILITY COMPANIES PRIOR TO REMOVAL AND/OR RELOCATION OF UTILITIES. CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES CONCERNING PORTIONS OF WORK WHICH MAY BE PERFORMED BY THE UTILITY COMPANIES' FORCES AND ANY FEES WHICH ARE TO BE PAID TO UTILITY COMPANIES FOR SERVICES. CONTRACTOR IS RESPONSIBLE FOR PAYING ALL FEES AND CHARGES.
- CONTRACTOR IS SPECIFICALLY CAUTIONED THAT LOCATIONS OF EXISTING UTILITIES SHOWN ON THIS PLAN HAVE BEEN DETERMINED FROM INFORMATION AVAILABLE. ENGINEER ASSUMES NO RESPONSIBILITY FOR THE UTILITY MAPPING ACCURACY. PRIOR TO START OF ANY DEMOLITION ACTIVITY, THE CONTRACTOR SHALL NOTIFY UTILITY COMPANIES 48 HOURS PRIOR TO ANY EXCAVATION FOR ON-SITE LOCATIONS OF EXISTING UTILITIES. THE LOCATIONS OF UTILITIES SHALL BE OBTAINED BY THE CONTRACTOR BY CALLING MINNESOTA GOPHER STATE ONE CALL AT 800-252-1166 OR 651-454-0002.
- THE MAPPING LOCATION OF ALL EXISTING SEWERS, PIPING, AND UTILITIES SHOWN ARE NOT TO BE INTERPRETED AS THE EXACT LOCATION, OR AS THE ONLY OBSTACLES THAT MAY OCCUR ON THE SITE. VERIFY EXISTING CONDITIONS AND PROCEED WITH CAUTION AROUND ANY ANTICIPATED FEATURES. GIVE NOTICE TO ALL UTILITY COMPANIES REGARDING DESTRUCTION AND REMOVAL OF ALL SERVICE LINES AND CAP ALL LINES BEFORE PROCEEDING WITH WORK. UTILITIES DETERMINED TO BE ABANDONED SHALL BE REMOVED IF UNDER THE BUILDING INCLUDING 10' BEYOND FOUNDATIONS.
- ELECTRICAL, TELEPHONE, CABLE, WATER, FIBER OPTIC CABLE AND/OR GAS LINES NEEDING TO BE REMOVED OR RELOCATED SHALL BE COORDINATED WITH THE AFFECTED UTILITY COMPANY. ADEQUATE TIME SHALL BE PROVIDED FOR LOCATION AND CLOSE COORDINATION WITH THE UTILITY COMPANY IS NECESSARY TO PROVIDE A SMOOTH TRANSITION IN UTILITY SERVICE. CONTRACTOR SHALL PAY CLOSE ATTENTION TO EXISTING UTILITIES WITHIN THE ROAD RIGHT OF WAY DURING CONSTRUCTION.
- CONTRACTOR MUST PROTECT THE PUBLIC AT ALL TIMES WITH FENCING, BARRICADES, ENCLOSURES, ETC., TO THE BEST PRACTICES.
- CONTINUOUS ACCESS SHALL BE MAINTAINED FOR THE SURROUNDING PROPERTIES AT ALL TIMES DURING DEMOLITION OF THE EXISTING FACILITIES.
- PRIOR TO DEMOLITION OCCURRING, ALL EROSION CONTROL DEVICES ARE TO BE INSTALLED AND APPROVED BY THE LOCAL AUTHORITY.
- CONTRACTOR SHALL LIMIT SAW-CUT & PAVEMENT REMOVAL TO ONLY THOSE AREAS WHERE IT IS REQUIRED AS SHOWN ON THESE CONSTRUCTION PLANS BUT IF ANY DAMAGE IS INCURRED ON ANY OF THE SURROUNDING PAVEMENT, ETC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ITS REMOVAL AND REPAIR.
- CONTRACTOR TO PROTECT EXISTING FEATURES WHICH ARE TO REMAIN. DAMAGE TO ANY EXISTING CONDITIONS TO REMAIN WILL BE REPLACED AT CONTRACTOR'S EXPENSE.
- ABANDON OR REMOVE ALL SANITARY, WATER AND STORM SERVICES PER CITY STANDARDS. COORDINATE ALL WORK WITH CITY. ALL STREET RESTORATION SHALL BE COMPLETED IN COMPLIANCE WITH LOCAL STANDARDS.
- CONTRACTOR SHALL PREPARE AND SUBMIT TO THE GOVERNING AUTHORITY A TRAFFIC AND/OR PEDESTRIAN TRAFFIC PLAN PER CITY/COUNTY/STATE STANDARDS TO BE APPROVED BY THE LOCAL GOVERNING AUTHORITY.

THE SUBSURFACE UTILITY INFORMATION SHOWN ON THESE PLANS IS A UTILITY QUALITY LEVEL D. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF ASCE 91.30-07, TITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DIRECTION OF EXISTING SUBSURFACE UTILITY DATA." THE CONTRACTOR AND/OR SUBCONTRACTORS SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, BY CONTACTING THE NOTIFICATION CENTER (GOPHER STATE ONE FOR MINNESOTA). THE CONTRACTOR AND/OR SUBCONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES, WHICH MIGHT BE OCCASIONED BY HIS OR HER FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UTILITIES (UNDERGROUND AND OVERHEAD).

IF THE CONTRACTOR ENCOUNTERS ANY DRAIN TILE WITHIN THE SITE, HE OR SHE SHALL NOTIFY THE ENGINEER WITH THE LOCATION, SIZE, INVERT AND IF THE TILE LINE IS ACTIVE. NO DRAIN TILE SHALL BE BACKFILLED WITHOUT APPROVAL FROM THE PROJECT ENGINEER.

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

Oct 04, 2018 - 2:45pm - User:jbauer L:\PROJECTS\2017\2017-CAD\Civil\Sheet\2017-C2-DEM.Dwg

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**Location**  
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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 professional ENGINEER under the laws of the state of Minnesota.

*Brady D. Busselman*  
Brady D. Busselman  
Registration No. 44579 Date: 09/26/2018

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**Revision History**

No.	Date By	Submittal / Revision
A	10/04/18	JEB REVISE WATERMAIN

**Sheet Title**  
**DEMOLITION PLAN**

**Sheet No. Revision**  
**C2.03 A**

**Project No.** 21012

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**Sheet Title**  
**SITE PLAN**

**Sheet No. Revision**  
**C3.01 A**

**Project No.** 21012

**LEGEND**

	PROPOSED	EXISTING	FUTURE AMERICAN BLVD IMPROVEMENTS
PROPERTY LIMIT	---	---	---
CURB & GUTTER	---	---	---
EASEMENT	---	---	---
BUILDING	---	---	---
RETAINING WALL	---	---	---
WETLAND LIMITS	---	---	---
TREELINE	---	---	---
SAWCUT LINE	---	---	---
SIGN	---	---	---
PIPE BOLLARD	---	---	---
NUMBER OF PARKING STALLS PER ROW	---	---	---
KEY NOTE	---	---	---
LIGHTPOLE, SEE LIGHTING PLAN	---	---	---

	STANDARD DUTY ASPHALT PAVING	HEAVY DUTY ASPHALT PAVING	CONCRETE PAVING	CONCRETE SIDEWALK
	---	---	---	---

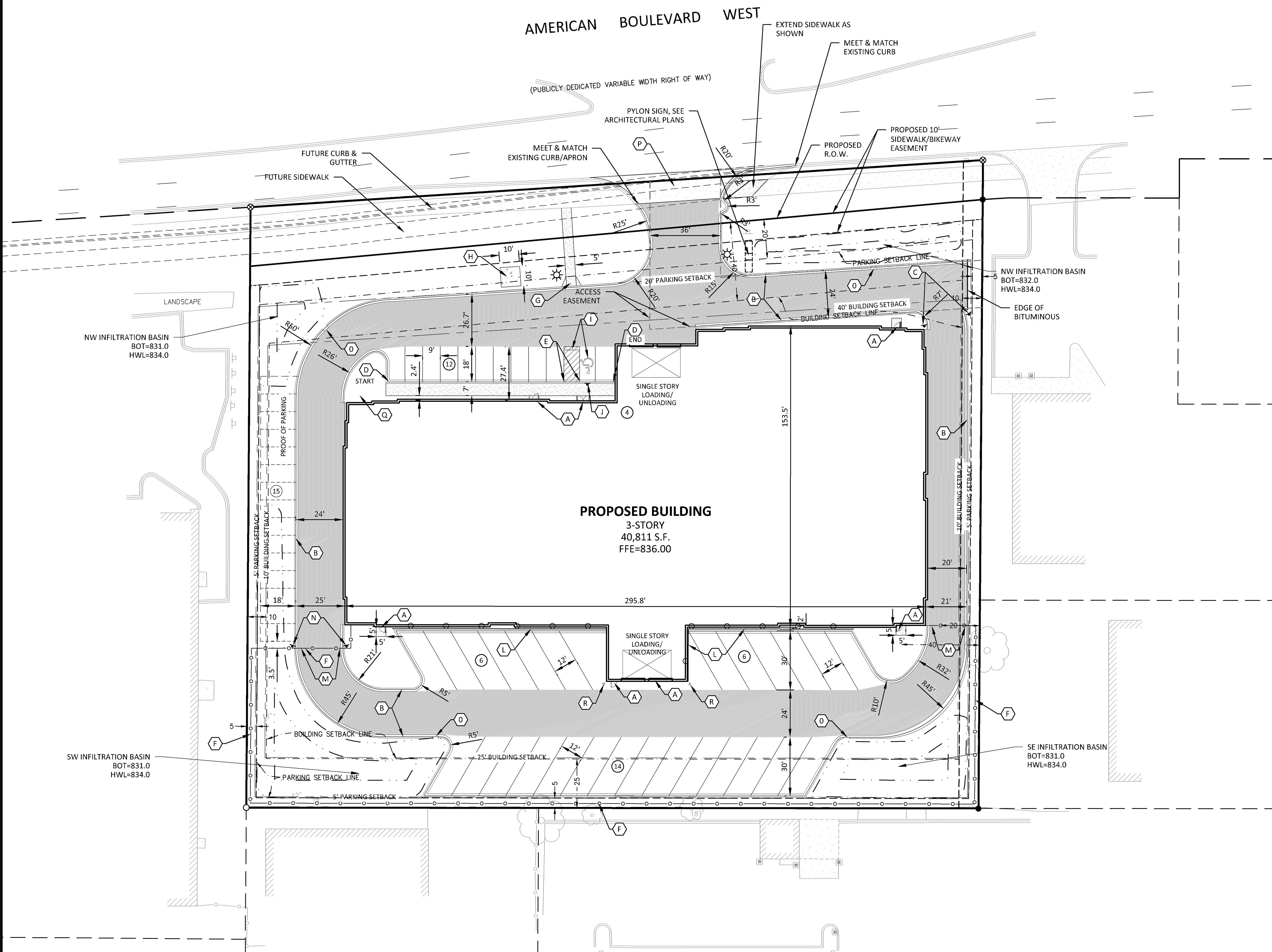
  

**DEVELOPMENT SUMMARY**

AREA		
GROSS SITE AREA	118,652 SF	2.72 AC
LESS R-O-W	11,632 SF	0.27 AC
NET SITE AREA	107,020 SF	2.46 AC
BUILDING COVERAGE		38%
FLOOR AREA RATIO		1.09
IMPERVIOUS AREA		78%
BUILDING SETBACKS		
FRONT YARD	40 FEET	
REAR YARD	25 FEET	
SIDE YARD	10 FEET	
PARKING SETBACKS		
FRONT YARD	20 FEET	
REAR YARD	5 FEET	
SIDE YARD	5 FEET	
ZONING		
EXISTING ZONING		I-3
PROPOSED ZONING		I-3
PARKING REQUIREMENTS		
9'x18' STALLS [(3/100 UNITS) * 900 UNITS]	27 STALLS	
9'x18' STALLS [(1/285 SF OFFICE) * 1200 SF]	4 STALLS	
TOTAL	31 STALLS	
RV STORAGE REQUIRED	10,702 SF	
PARKING PROVIDED		
ADA STALLS	1 STALL	
INTERNAL STALLS	4 STALLS	
9'x18' STALLS	11 STALLS	
TOTAL [INITIAL BUILD @ (1.35/100 UNITS) * 900 UNITS]	16 STALLS	
TOTAL W/ PROOF OF PARKING (15 STALLS)	31 STALLS	
OUTDOOR RV STORAGE PROVIDED	10,811 SF	
PERCENTAGE OF SITE DEDICATED TO OUTDOOR STORAGE	10.1%	

- DEVELOPMENT NOTES**
- ALL DIMENSIONS ARE ROUNDED TO THE NEAREST TENTH FOOT.
  - ALL DIMENSIONS SHOWN ARE TO THE FACE OF CURB TO FACE OF CURB UNLESS OTHERWISE NOTED.
  - CONTRACTOR SHALL REVIEW PAVEMENT GRADIENT AND CONSTRUCT "GUTTER OUT" WHERE WATER DRAINS AWAY FROM CURB. ALL OTHER AREAS SHALL BE CONSTRUCTED AS "GUTTER IN" CURB. COORDINATE WITH GRADING CONTRACTOR.
  - ALL AREAS ARE ROUNDED TO THE NEAREST SQUARE FOOT.
  - ALL PARKING STALLS TO BE 9' IN WIDTH AND 18' IN LENGTH UNLESS OTHERWISE INDICATED. PARKING STALLS WILL BE PAINTED WHITE.
  - CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF EXIT PORCHES, RAMPS, PRECISE BUILDING DIMENSIONS AND EXACT BUILDING UTILITY ENTRANCE LOCATIONS.
  - SEE ARCHITECTURAL PLANS FOR LIGHT POLE FOUNDATION DETAIL AND FOR EXACT LOCATIONS OF LIGHT POLE.
  - REFER TO FINAL PLAT FOR LOT BOUNDARIES, LOT NUMBERS, LOT AREAS, AND LOT DIMENSIONS.
  - ALL GRADIENTS ON SIDEWALKS ALONG THE ADA ROUTE SHALL HAVE A MAXIMUM LONGITUDINAL SLOPE OF 5% (1:20), EXCEPT AT CURB RAMPS (1:12). GRADES GREATER THAN 5% AT CURB RAMPS REQUIRE A LANDING, AND A MAXIMUM CROSS SLOPE OF 2.00% (1:50). THE MAXIMUM SLOPE IN ANY DIRECTION ON AN ADA PARKING STALL OR ACCESS AISLE SHALL BE 2.00% (1:50). THE CONTRACTOR SHALL REVIEW AND VERIFY THE GRADIENT IN THE FIELD ALONG THE ADA ROUTES PRIOR TO PLACING CONCRETE OR BITUMINOUS PAVEMENT. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY IF THERE IS A DISCREPANCY BETWEEN THE GRADIENT IN THE FIELD VERSUS THE DESIGN GRADIENT AND COORDINATE WITH GRADING CONTRACTOR.
  - "NO PARKING" SIGNS SHALL BE PLACED ALONG ALL DRIVEWAYS AS REQUIRED BY CITY.

- KEY NOTES**
- BUILDING, STOOPS, STAIRS SEE ARCHITECTURAL PLANS
  - B-612 CONCRETE CURB AND GUTTER, SEE DETAIL SHEET C9.02
  - "DO NOT ENTER" SIGN, MN MUTCD R5-1
  - MODIFIED B6-12 CURB & GUTTER AT SIDEWALK, SEE DETAIL SHEET C9.03
  - FLAT CURB SECTION
  - AMERISTAR MAJESTIC 6 FOOT 2-RAIL STEEL FENCE
  - ACCESSIBLE RAMP, SEE DETAIL SHEET C9.03
  - TRANSFORMER, VERIFY PAD DIMENSIONS WITH ELECTRIC COMPANY
  - ACCESSIBLE STALL STRIPING, SEE DETAIL SHEET C9.03
  - ACCESSIBLE PARKING SIGN, SEE DETAIL SHEET C9.03
  - CONCRETE SIDEWALK, SEE DETAIL SHEET C9.03
  - GUARD RAIL, SEE DETAIL SHEET C9.03
  - FENCE GATES, SEE ARCHITECTURAL PLANS
  - "BEGIN ONE WAY" SIGN, MN MUTCD R6-6
  - 3' CURB CUT WITH RAIN GUARDIAN, SEE DETAIL SHEET C9.04
  - COMMERCIAL DRIVEWAY APRON, SEE DETAIL SHEET C9.02
  - BIKE RACK (2), SEE DETAIL SHEET C9.02
  - PIPE BOLLARD, SEE DETAIL SHEET C9.03



THE SUBSURFACE UTILITY INFORMATION SHOWN ON THESE PLANS IS A UTILITY QUALITY LEVEL D. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF ASCE/CES 38-02, TITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA." THE CONTRACTOR AND/OR SUBCONTRACTORS SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. BY CONTACTING THE NOTIFICATION CENTER (CGPHER STATE ONE) FOR MINNESOTA, THE CONTRACTOR AND/OR SUBCONTRACTOR AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES, WHICH MIGHT BE OCCASIONED BY HIS OR HER FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UTILITIES (UNDERGROUND AND OVERHEAD).

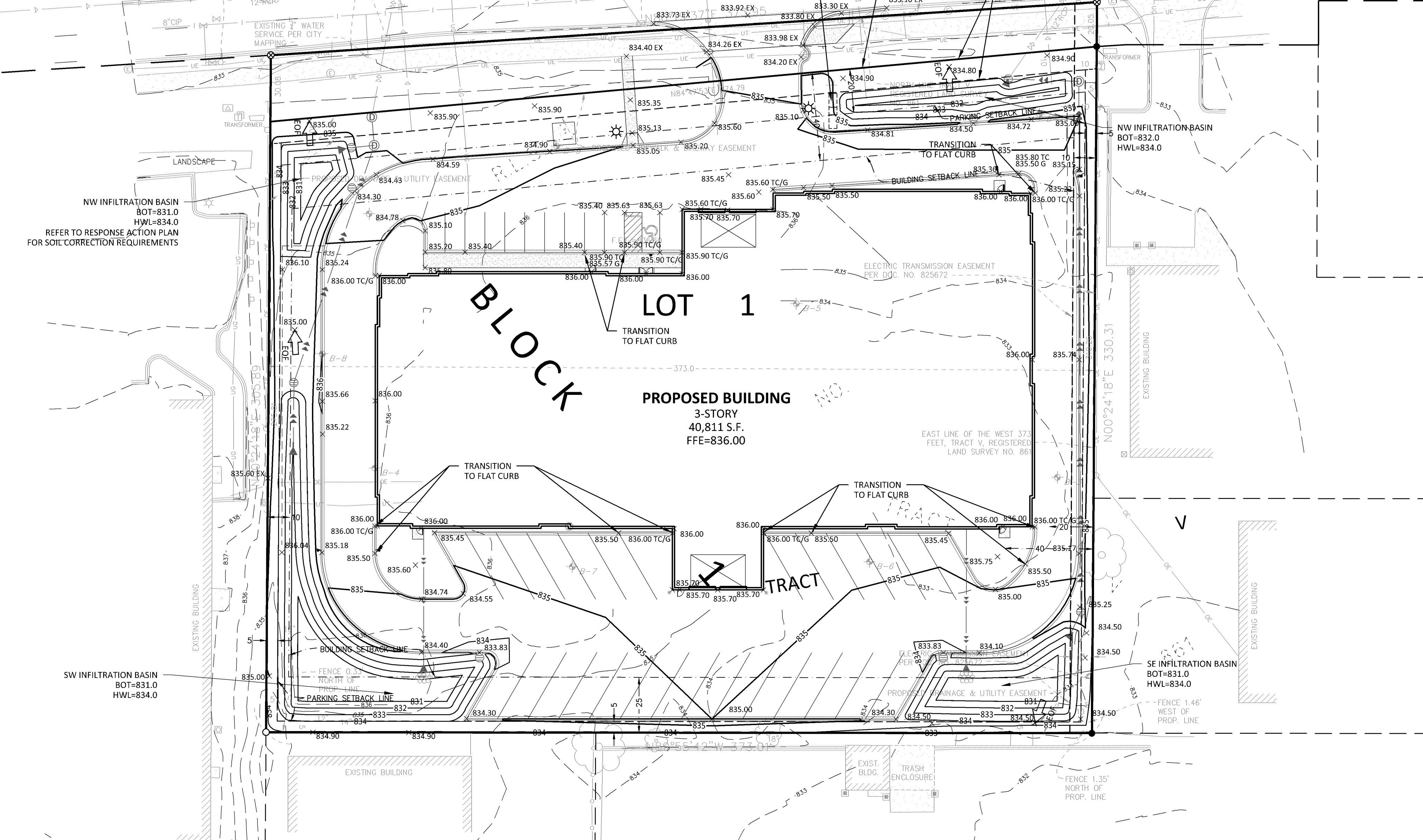
IF THE CONTRACTOR ENCOUNTERS ANY DRAIN TILE WITHIN THE SITE, HE OR SHE SHALL NOTIFY THE ENGINEER WITH THE LOCATION, SIZE, INVERT AND IF THE TILE LINE IS ACTIVE. NO DRAIN TILE SHALL BE BACKFILLED WITHOUT APPROVAL FROM THE PROJECT ENGINEER.

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

**ENGINEERING DIVISION**  
Approved By: Julie Long, PE  
10/08/2018 10:36:31 AM

LEGEND

- PROPERTY LIMIT
CURB & GUTTER
STORM SEWER
DRAIN TILE
BUILDING
RETAINING WALL
WETLAND LIMITS
TREELINE
SPOT ELEVATION
CONTOUR
RIP RAP
OVERFLOW ELEV.
SOIL BORINGS



PL201700265
PL2017-265

GRADING NOTES

- 1. PROPOSED CONTOURS ARE TO FINISHED SURFACE ELEVATION...
2. CONTRACTOR SHALL REVIEW PAVEMENT GRADIENT AND CONSTRUCT "GUTTER OUT" WHERE WATER DRAINS AWAY FROM CURB...
3. ALL GRADIENT ON SIDEWALKS ALONG THE ADA ROUTE SHALL HAVE A MAXIMUM LONGITUDINAL SLOPE OF 5% (1:20)...
4. CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID PROPERTY DAMAGE TO ADJACENT PROPERTIES...
5. SAFETY NOTICE TO CONTRACTORS: IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES...
6. CONTRACTOR SHALL COMPLETE THE SITE GRADING CONSTRUCTION IN ACCORDANCE WITH THE REQUIREMENTS OF THE OWNER'S SOILS ENGINEER...
7. A GEOTECHNICAL ENGINEERING SOILS REPORT HAS BEEN COMPLETED BY: COMPANY: PROFESSIONAL SERVICE INDUSTRIES, INC.
8. CONTRACTOR SHALL OBTAIN A COPY OF THE SOILS REPORT.
9. A RESPONSE ACTION PLAN HAS BEEN COMPLETED BY: COMPANY: PROFESSIONAL SERVICE INDUSTRIES, INC.
10. CONTRACTOR SHALL OBTAIN A COPY AND COMPLY WITH THE REQUIREMENTS OF THE RESPONSE ACTION PLAN.
11. CONTRACTOR SHALL COMPLETE DEWATERING AS REQUIRED TO COMPLETE THE SITE GRADING CONSTRUCTION.
12. PRIOR TO PLACEMENT OF THE AGGREGATE BASE, A TEST ROLL SHALL BE PERFORMED ON THE STREET AND PARKING AREA SUBGRADE...
13. REPLACE ALL SUBGRADE SOIL DISTURBED DURING THE CONSTRUCTION THAT HAVE BECOME UNSUITABLE AND WILL NOT PASS A TEST ROLL...
14. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND MAINTAINING VEHICULAR AND PEDESTRIAN TRAFFIC CONTROL DEVICES...
15. EXISTING TREES AND OTHER NATURAL VEGETATION WITHIN THE PROJECT AND/OR ADJACENT TO THE PROJECT AREA OF PRIME CONCERN...
16. EXCAVATE TOPSOIL FROM AREAS TO BE FURTHER EXCAVATED OR REGRADED AND STOCKPILE IN AREAS DESIGNATED ON THE SITE...
17. TRENCH BORROW CONSTRUCTION: IF ALLOWED BY THE OWNER, CONTRACTOR SHALL COMPLETE "TRENCH BORROW" EXCAVATION...
18. FINISHED GRADING SHALL BE COMPLETED, CONTRACTOR SHALL UNIFORMLY GRADE AREAS WITHIN LIMITS OF GRADING...
19. TOLERANCES
19.a. THE RESIDENTIAL BUILDING SUBGRADE FINISHED SURFACE ELEVATION SHALL NOT VARY BY MORE THAN 0.30 FOOT ABOVE, OR 0.30 FOOT BELOW...
19.b. THE COMMERCIAL BUILDING SUBGRADE FINISHED SURFACE ELEVATION SHALL NOT VARY BY MORE THAN 0.10 FOOT ABOVE, OR 0.10 FOOT BELOW...
19.c. THE STREET OR PARKING AREA SUBGRADE FINISHED SURFACE ELEVATION SHALL NOT VARY BY MORE THAN 0.05 FOOT ABOVE, OR 0.10 FOOT BELOW...
19.d. AREAS WHICH ARE TO RECEIVE TOPSOIL SHALL BE GRADED TO WITHIN 0.30 FOOT ABOVE OR BELOW THE REQUIRED ELEVATION...
19.e. TOPSOIL SHALL BE GRADED TO PLUS OR MINUS 1/2 INCH OF THE SPECIFIED THICKNESS.
20. AFTER THE SITE GRADING IS COMPLETED, IF EXCESS OR SHORTAGE OF SOIL MATERIAL EXISTS, CONTRACTOR SHALL TRANSPORT ALL EXCESS SOIL MATERIAL OFF THE SITE TO AN AREA SELECTED BY THE CONTRACTOR, OR IMPORT SUITABLE MATERIAL TO THE SITE.
21. CONTRACTOR SHALL DETERMINE THE LOCATION OF ANY HAUL ROADS THAT MAY BE REQUIRED TO COMPLETE THE SITE GRADING CONSTRUCTION AND SHALL INDICATE HAUL ROADS ON EROSION AND SEDIMENT CONTROL "SITE MAP"...

INFILTRATION BASIN CONSTRUCTION NOTES

- 1. INFILTRATION BASIN CONSTRUCTION REQUIREMENTS:
1.a. THE INFILTRATION BASIN SHALL BE EXCAVATED TO NO LOWER THAN 2.0 FEET ABOVE FINISHED GRADE DURING CONSTRUCTION...
1.b. HEAVY EQUIPMENT SHALL NOT TRAVEL WITHIN THE INFILTRATION BASIN AREA...
1.c. INFILTRATION BASIN SHALL BE PROTECTED BY SILT FENCE DURING ALL CONSTRUCTION ACTIVITIES...
1.d. ALL FLARED END SECTION INLETS AND CATCH BASIN MANHOLE INLETS SHALL HAVE INLET EROSION CONTROL PROTECTION...
1.e. ABOVE THE INFILTRATION BASIN OUTLET ELEVATION, INCLUDING THE BERM AND DISTURBED AREAS...
2. PERFORMANCE TESTING OF INFILTRATION BASINS:
2.a. A MINIMUM OF ONE INFILTRATION TEST SHALL BE COMPLETED FOR EACH INFILTRATION BASIN...
2.b. TWO ADDITIONAL TESTS WILL BE REQUIRED FOR EACH 0.5 ACRE OF INFILTRATION BASIN FLOOR AREA...
2.c. TEST PROCEDURE WILL FOLLOW ASTM D-3385-09 "STANDARD TEST METHOD FOR INFILTRATION RATE OF SOILS IN FIELD USING DOUBLE-RING INFILTROMETER"...
2.d. TEST WILL BE CONDUCTED AT THE FINISHED BASIN FLOOR ELEVATION...
2.e. TEST WILL BE FOR A PERIOD AS OUTLINED IN ASTM D-3385-09...
2.f. THE TEST RESULTS WILL BE AVERAGED TO OBTAIN THE INFILTRATION RATE USED FOR ACCEPTANCE...
2.g. THE LOWEST MEASURED INFILTRATION RATE SHALL EXCEED THE DESIGN INFILTRATION RATE OF 0.45 INCHES/HOUR...
2.h. THE AVERAGE OF THE MEASURED INFILTRATION RATES MUST MEET OR EXCEED THE DESIGN RATE OF 0.45 INCHES/HOUR...
IF THE INFILTRATION RATE AS TESTED DOES NOT MEET OR EXCEED THE REQUIRED RATE AS DETERMINED ABOVE, CONTRACTOR WILL BE REQUIRED TO COMPLETE SOIL CORRECTIVE AND/OR SOIL REPLACEMENT WORK AS NECESSARY WITHIN THE INFILTRATION BASIN AREA AT THE CONTRACTOR'S EXPENSE UNTIL THE INFILTRATION RATE AS TESTED EXCEEDS THE REQUIRED RATE AS DETERMINED ABOVE...
3. SEED APPLICATION PROCEDURE:
3.a. CONTRACTOR SHALL RESEED OR REPLANT ANY AREAS ON WHICH THE ORIGINAL SEED HAS FAILED TO GERMINATE...
3.b. IF ALTERNATIVE METHODS OF INFILTRATION BASIN CONSTRUCTION ARE PROPOSED BY THE CONTRACTOR...
3.c. COSTS FOR REMEDIATION (IF REQUIRED) TO COMPLETE INFILTRATION BASIN CONSTRUCTION WILL BE CONDUCTED AT THE CONTRACTOR'S EXPENSE.

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Client
CASCADE STORAGE PARTNERS, LLC.
700 E. MOOREHEAD ST., SUITE 100B
CHARLOTTE, NC 28202

Project
AMERICAN BOULEVARD STORAGE

Location
BLOOMINGTON, MN
101 AMERICAN BLVD W

Certification
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 professional ENGINEER under the laws of the state of Minnesota.

Brady D. Busselman
Brady D. Busselman
Registration No. 44579 Date: 09/26/2018

Summary
Designed: BDB Drawn: JEB
Approved: BDB Book / Page:
Phase: CONSTRUCTION/Issue: 09/26/2018

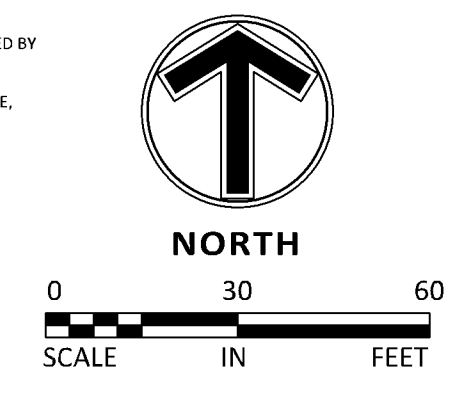
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A 10/04/18 JEB REVISE WATERMAIN

Sheet Title
GRADING PLAN

Sheet No. Revision
C4.01 A

Project No. 21012

ENGINEERING DIVISION
Approved By: Julie Long, PE
10/08/2018 10:37:04 AM



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PL2017-265

Engineering | Surveying | Planning | Environmental  
**Client**  
**CASCADE STORAGE PARTNERS, LLC.**  
700 E. MOOREHEAD ST., SUITE 100B  
CHARLOTTE, NC 28202

**Project**  
**AMERICAN BOULEVARD STORAGE**

**Location**  
**BLOOMINGTON, MN**  
101 AMERICAN BLVD W

**Certification**  
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 professional ENGINEER under the laws of the state of Minnesota.

*Brady D. Busselman*  
Brady D. Busselman  
Registration No. 44579 Date: 09/26/2018  
If applicable, contact us for a wet signed copy of this plan which is available upon request at Sambatek's, Minnetonka, MN office.

**Summary**  
Designed: BDB Drawn: JEB  
Approved: BDB Book / Page:  
Phase: CONSTRUCTION Initial Issue: 09/26/2018

**Revision History**  
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A 10/04/18 JEB REVISE WATERMAIN

**Sheet Title**  
**EROSION CONTROL PHASE I**

**Sheet No. Revision**  
**C5.01 A**

**Project No.** 21012

**LEGEND**

CURB & GUTTER	PROPOSED	EXISTING
STORM SEWER		
DRAIN TILE		
CONTOUR		
RIP RAP		
OVERFLOW ELEV.		
SILT FENCE		
SILT DIKE		
LIMITS OF DISTURBANCE		
SOIL BORINGS		
DIRECTION OF OVERLAND FLOW		
TEMPORARY DIVERSION DITCH		
CHECK DAM		
LIMITS OF DRAINAGE SUB-BASIN		
BIO-ROLL		
INLET PROTECTION DEVICE 1		
INLET PROTECTION DEVICE 2		
TEMPORARY STONE CONSTRUCTION ENTRANCE		
TEMPORARY SEDIMENT BASIN		
TEMPORARY STORAGE AND PARKING AREA		
TEMPORARY STABILIZATION MEASURES (SEED, MULCH, MATS OR BLANKETS AS OUTLINED IN THE SWPPP)		

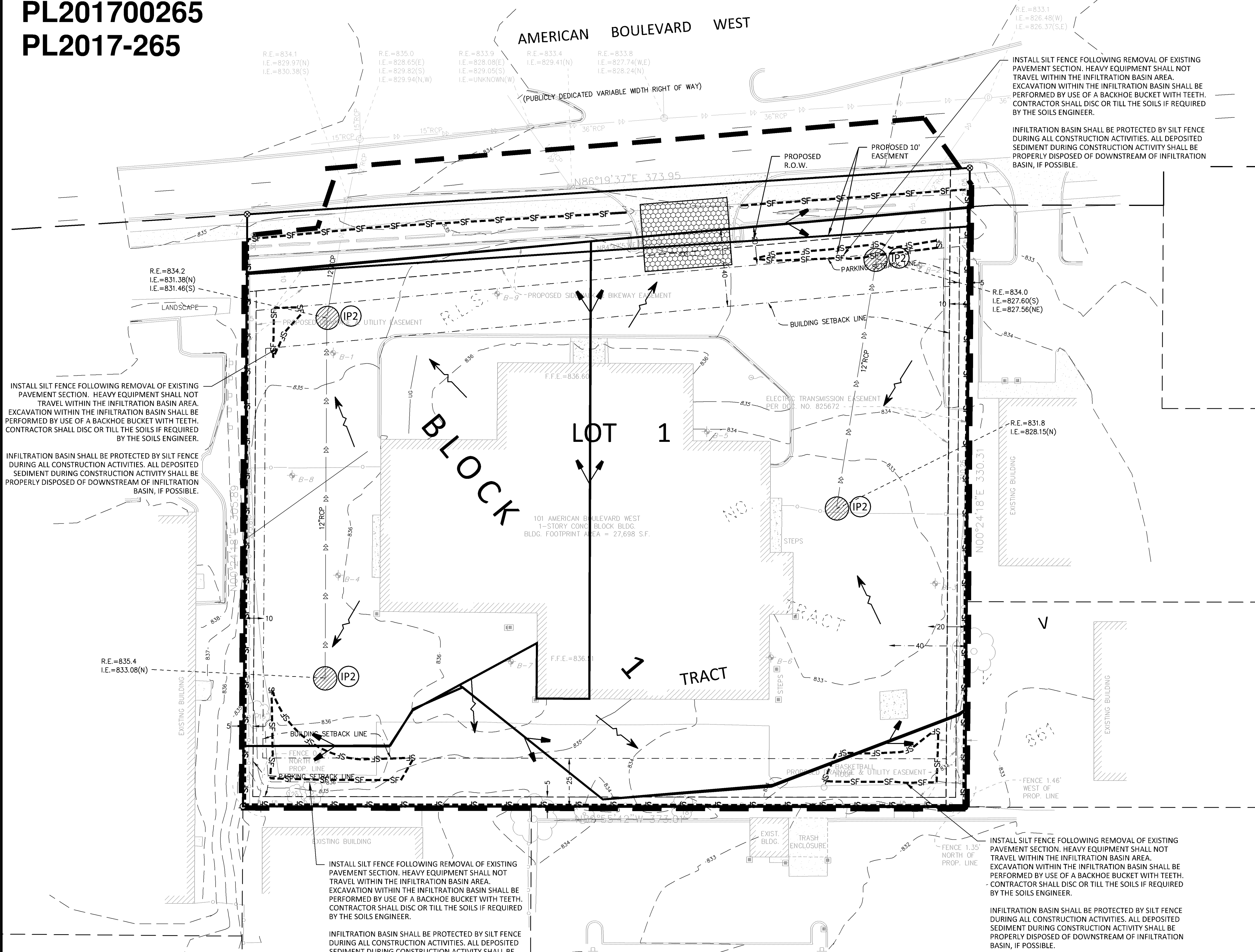
**NOTE TO CONTRACTOR**

THE EROSION CONTROL PLAN SHEETS ALONG WITH THE REST OF THE SWPPP MUST BE KEPT ONSITE UNTIL THE NOTICE OF TERMINATION IS FILED WITH THE MPCA. THE CONTRACTOR MUST UPDATE THE SWPPP, INCLUDING THE EROSION CONTROL PLAN SHEETS AS NECESSARY TO INCLUDE ADDITIONAL REQUIREMENTS, SUCH AS ADDITIONAL OR MODIFIED BMPs DESIGNED TO CORRECT PROBLEMS IDENTIFIED. AFTER FILING THE NOTICE OF TERMINATION, THE SWPPP, INCLUDING THE EROSION CONTROL PLAN SHEETS, AND ALL REVISIONS TO IT MUST BE SUBMITTED TO THE OWNER, TO BE KEPT ON FILE IN ACCORDANCE WITH THE RECORD RETENTION REQUIREMENTS DESCRIBED IN THE SWPPP NARRATIVE.

**EROSION CONTROL MATERIALS QUANTITIES**

ITEM	UNIT	QUANTITY
SILT FENCE	LINEAR FEET	1295
SILT DIKE	LINEAR FEET	0
BIO-ROLL	LINEAR FEET	0
CONSTRUCTION ENTRANCE	UNIT	1
INLET PROTECTION DEVICE (IP-1)	UNIT	0
INLET PROTECTION DEVICE (IP-2)	UNIT	6

\* REFER TO SHEET C5.03 FOR GENERAL NOTES, MAINTENANCE NOTES, LOCATION MAPS, AND STANDARD DETAILS

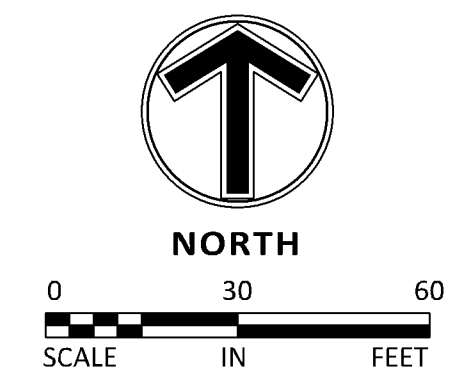


**SOIL EROSION / SEDIMENTATION CONTROL OPERATION TIME SCHEDULE**

CONSTRUCTION SEQUENCE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
TEMPORARY CONTROL MEASURES																		
STRIP & STOCKPILE TOPSOIL																		
ROUGH GRADE / SEDIMENT CONTROL																		
TEMPORARY CONSTRUCTION ROADS																		
FOUNDATION / BUILDING CONSTRUCTION																		
SITE CONSTRUCTION																		
PERMANENT CONTROL STRUCTURES																		
FINISH GRADING																		
LANDSCAPING / SEED / FINAL STABILIZATION																		
STORM FACILITIES																		

NOTE: CONTRACTOR OR GENERAL CONTRACTOR TO COMPLETE TABLE WITH THEIR SPECIFIC PROJECT SCHEDULE

**ENGINEERING DIVISION**  
Approved By: Julie Long, PE  
10/08/2018 10:37:26 AM



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PL201700265  
PL2017-265



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Engineering | Surveying | Planning | Environmental

**Client**  
**CASCADE STORAGE PARTNERS, LLC.**  
700 E. MOOREHEAD ST., SUITE 100B  
CHARLOTTE, NC 28202

**Project**  
**AMERICAN BOULEVARD STORAGE**

**Location**  
**BLOOMINGTON, MN**  
101 AMERICAN BLVD W

**Certification**  
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 professional ENGINEER under the laws of the state of Minnesota.

*Brady Busseman*  
Brady D. Busseman  
Registration No. 44579 Date: 09/26/2018  
If applicable, contact us for a wet signed copy of this plan which is available upon request at Sambatek's, Minnetonka, MN office.

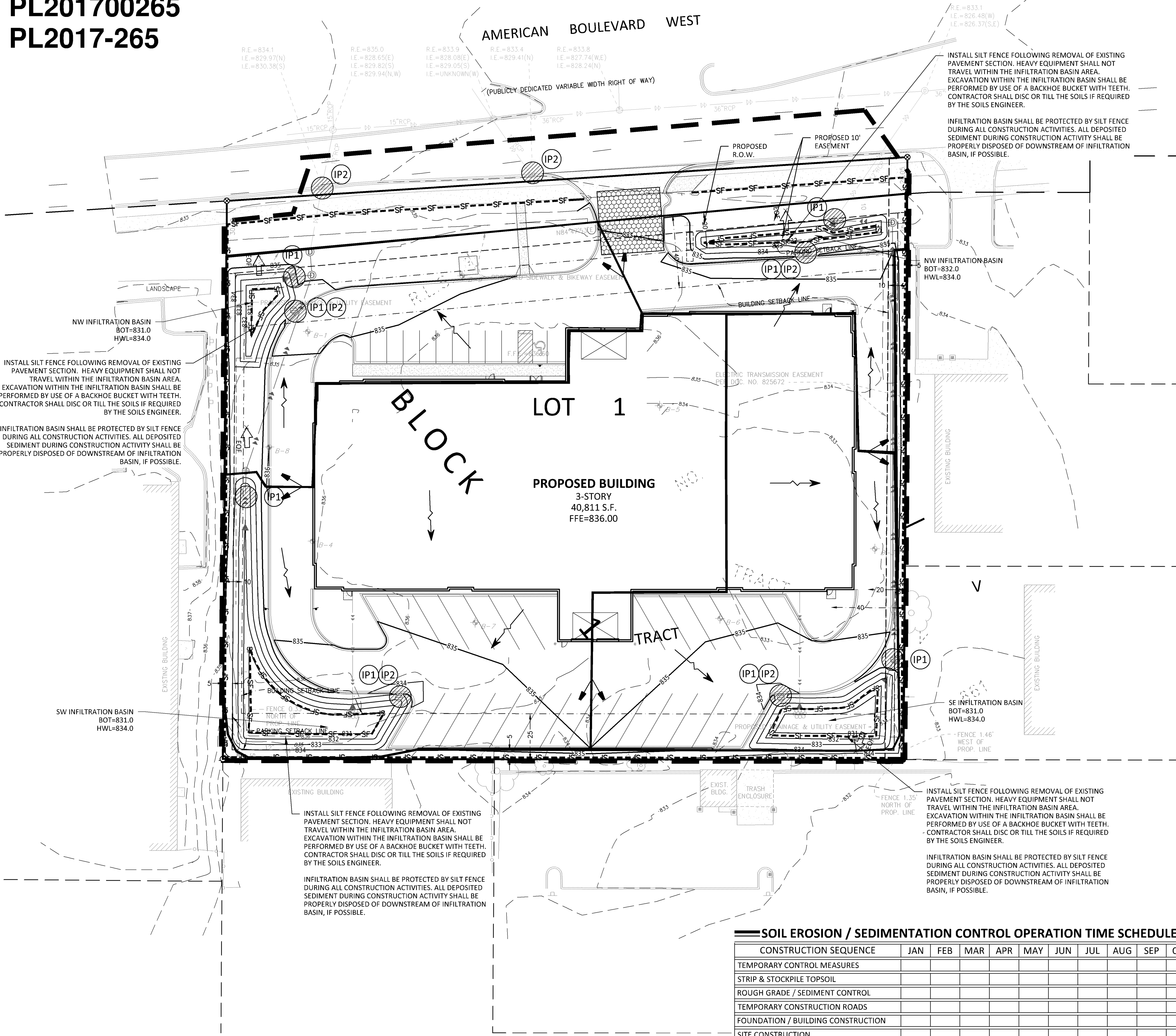
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No. Date By Submittal / Revision  
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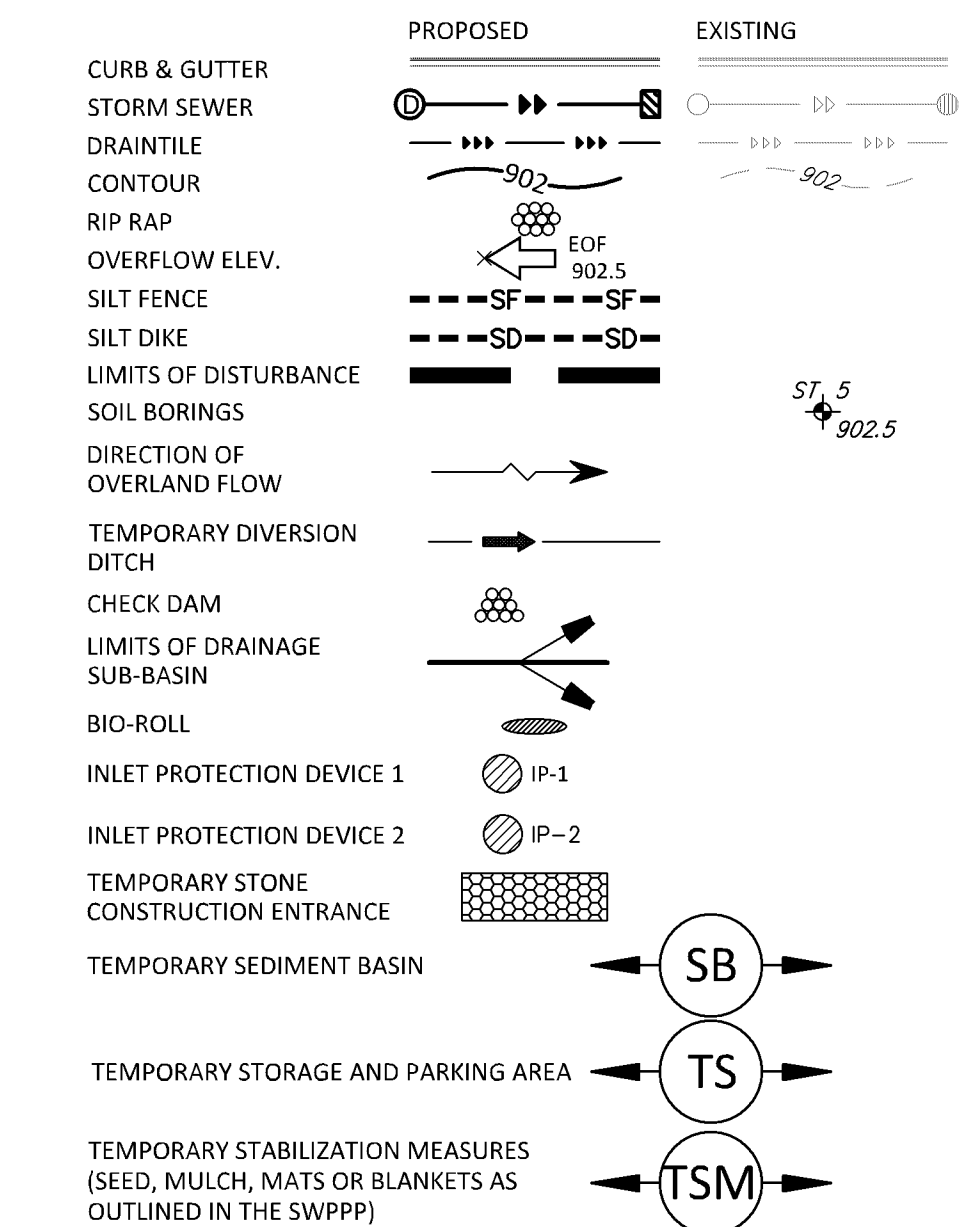
**Sheet Title**  
**EROSION CONTROL PHASE II**

**Sheet No. Revision**  
**C5.02 A**

**Project No.** 21012



**LEGEND**



**NOTE TO CONTRACTOR**

THE EROSION CONTROL PLAN SHEETS ALONG WITH THE REST OF THE SWPPP MUST BE KEPT ONSITE UNTIL THE NOTICE OF TERMINATION IS FILED WITH THE MPCA. THE CONTRACTOR MUST UPDATE THE SWPPP, INCLUDING THE EROSION CONTROL PLAN SHEETS AS NECESSARY TO INCLUDE ADDITIONAL REQUIREMENTS, SUCH AS ADDITIONAL OR MODIFIED BMPs DESIGNED TO CORRECT PROBLEMS IDENTIFIED. AFTER FILING THE NOTICE OF TERMINATION, THE SWPPP, INCLUDING THE EROSION CONTROL PLAN SHEETS, AND ALL REVISIONS TO IT MUST BE SUBMITTED TO THE OWNER, TO BE KEPT ON FILE IN ACCORDANCE WITH THE RECORD RETENTION REQUIREMENTS DESCRIBED IN THE SWPPP NARRATIVE.

**EROSION CONTROL MATERIALS QUANTITIES**

ITEM	UNIT	QUANTITY
SILT FENCE	LINEAR FEET	1928
SILT DIKE	LINEAR FEET	0
BIO-ROLL	LINEAR FEET	0
CONSTRUCTION ENTRANCE	UNIT	1
INLET PROTECTION DEVICE (IP-1)	UNIT	8
INLET PROTECTION DEVICE (IP-2)	UNIT	6

\* REFER TO SHEET C5.03 FOR GENERAL NOTES, MAINTENANCE NOTES, LOCATION MAPS, AND STANDARD DETAILS

**ENGINEERING DIVISION**  
Approved By: Julie Long, PE  
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**SOIL EROSION / SEDIMENTATION CONTROL OPERATION TIME SCHEDULE**

CONSTRUCTION SEQUENCE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	
TEMPORARY CONTROL MEASURES																			
STRIP & STOCKPILE TOPSOIL																			
ROUGH GRADE / SEDIMENT CONTROL																			
TEMPORARY CONSTRUCTION ROADS																			
FOUNDATION / BUILDING CONSTRUCTION																			
SITE CONSTRUCTION																			
PERMANENT CONTROL STRUCTURES																			
FINISH GRADING																			
LANDSCAPING / SEED / FINAL STABILIZATION																			
STORM FACILITIES																			

NOTE: CONTRACTOR OR GENERAL CONTRACTOR TO COMPLETE TABLE WITH THEIR SPECIFIC PROJECT SCHEDULE

THE SUBSURFACE UTILITY INFORMATION SHOWN ON THESE PLANS IS A UTILITY QUALITY LEVEL. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF ASCE/CI 38-02, TITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA." THE CONTRACTOR AND/OR SUBCONTRACTORS SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, BY CONTACTING THE NOTIFICATION CENTER (Gopher State One) FOR MINNESOTA. THE CONTRACTOR AND/OR SUBCONTRACTOR AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES, WHICH MIGHT BE OCCASIONED BY HIS OR HER FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UTILITIES (UNDERGROUND AND OVERHEAD).  
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GENERAL EROSION NOTES:

- CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE GOVERNING CODES AND BE CONSTRUCTED TO SAME. WHERE A CONFLICT EXISTS BETWEEN LOCAL JURISDICTIONAL STANDARD SPECIFICATIONS AND SAMBATEK STANDARD SPECIFICATIONS, THE MORE STRINGENT SPECIFICATION SHALL APPLY.
- THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) IS COMPRISED OF THIS DRAWING (EROSION & SEDIMENTATION CONTROL PLAN-ESC PLAN), THE STANDARD DETAILS, THE PLAN NARRATIVE, AND ITS APPENDICES, PLUS THE PERMIT AND ALL SUBSEQUENT REPORTS AND RELATED DOCUMENTS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETING & SUBMITTING THE APPLICATION FOR THE MPCA GENERAL STORMWATER PERMIT FOR CONSTRUCTION ACTIVITY. ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED WITH STORM WATER POLLUTION PREVENTION SHALL OBTAIN A COPY OF THE SWPPP AND THE STATE OF MINNESOTA NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM GENERAL PERMIT (NPDES PERMIT) AND BECOME FAMILIAR WITH THE CONTENTS. THE SWPPP AND ALL OTHER RELATED DOCUMENTS MUST BE KEPT AT THE SITE DURING CONSTRUCTION.
- CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES (BMP'S) AS REQUIRED BY THE SWPPP & PERMITS. CONTRACTOR SHALL OVERSEE THE INSPECTION & MAINTENANCE OF THE BMP'S AND EROSION PREVENTION FROM BEGINNING OF CONSTRUCTION AND UNTIL CONSTRUCTION IS COMPLETED, IS APPROVED BY ALL AUTHORITIES, AND THE NOTICE OF TERMINATION (NOT) HAS BEEN FILED WITH THE MPCA BY EITHER THE OWNER OR OPERATOR AS APPROVED ON PERMIT. ADDITIONAL BMP'S SHALL BE IMPLEMENTED AS DICTATED BY CONDITIONS AT NO ADDITIONAL COST TO OWNER THROUGHOUT ALL PHASES OF CONSTRUCTION.
- CONTRACTOR SHALL COMPLY WITH TRAINING REQUIREMENTS IN THE GENERAL PERMIT.
- BMP'S AND CONTROLS SHALL CONFORM TO FEDERAL, STATE, OR LOCAL REQUIREMENTS OR MANUAL OF PRACTICE, AS APPLICABLE. CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY PERMITTING AGENCY OR OWNER.
- ESC PLAN MUST CLEARLY DELINEATE ALL STATE WATERS. PERMITS FOR ANY CONSTRUCTION ACTIVITY IMPACTING STATE WATERS OR REGULATED WETLANDS MUST BE MAINTAINED ON SITE AT ALL TIMES.
- CONTRACTOR SHALL MINIMIZE CLEARING TO THE MAXIMUM EXTENT PRACTICAL OR AS REQUIRED BY THE GENERAL PERMIT. THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THE ESC PLANS SHALL BE CLEARLY DELINEATED (E.G. WITH FLAGS, STAKES, SIGNS, SILT FENCE, ETC.) ON THE DEVELOPMENT SITE BEFORE WORK BEGINS. GROUND DISTURBING ACTIVITIES MUST NOT OCCUR OUTSIDE THE LIMITS OF DISTURBANCE.
- GENERAL CONTRACTOR SHALL DENOTE ON PLAN THE TEMPORARY PARKING AND STORAGE AREA WHICH SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AND CLEANING AREA, EMPLOYEE PARKING AREA, AND AREA FOR LOCATING PORTABLE FACILITIES, OFFICE TRAILERS, AND TOILET FACILITIES.
- ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) MUST BE LIMITED TO A DEFINED AREA OF THE SITE AND SHALL BE CONTAINED AND PROPERLY TREATED OR DISPOSED. NO ENGINE DEGREASING IS ALLOWED ON SITE.
- ALL LIQUID AND SOLID WASTES GENERATED BY CONCRETE WASHOUT OPERATIONS MUST BE CONTAINED IN A LEAK-PROOF CONTAINMENT FACILITY OR IMPERMEABLE LINER. A COMPACTED CLAY LINER IS NOT ACCEPTABLE. THE LIQUID AND SOLID WASTES MUST NOT CONTACT THE GROUND, AND THERE MUST NOT BE RUNOFF FROM THE CONCRETE WASHOUT OPERATIONS OR AREAS. LIQUID AND SOLID WASTES MUST BE DISPOSED OF PROPERLY AND IN COMPLIANCE WITH MPCA REGULATIONS. A SIGN MUST BE INSTALLED ADJACENT TO EACH WASHOUT FACILITY TO INFORM CONCRETE EQUIPMENT OPERATORS TO UTILIZE THE PROPER FACILITIES. SELF-CONTAINED CONCRETE WASHOUTS ON CONCRETE DELIVERY TRUCKS ARE ALLOWED.
- SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOTATION BOOMS SHALL BE MAINTAINED ON SITE OR READILY AVAILABLE TO CONTAIN AND CLEAN-UP FUEL OR CHEMICAL SPILLS AND LEAKS.
- DUST ON THE SITE SHALL BE CONTROLLED. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.
- SOLID WASTE: COLLECTED SEDIMENT, ASPHALT & CONCRETE MILLINGS, FLOATING DEBRIS, PAPER, PLASTIC, FABRIC, CONSTRUCTION & DEMOLITION DEBRIS & OTHER WASTES MUST BE DISPOSED OF PROPERLY & MUST COMPLY WITH MPCA DISPOSAL REQUIREMENTS.
- HAZARDOUS MATERIALS: OIL, GASOLINE, PAINT & ANY HAZARDOUS SUBSTANCES MUST BE PROPERLY STORED, INCLUDING SECONDARY CONTAINMENT, TO PREVENT SPILLS, LEAKS OR OTHER DISCHARGE. RESTRICTED ACCESS TO STORAGE AREAS MUST BE PROVIDED TO PREVENT VANDALISM. STORAGE & DISPOSAL OF HAZARDOUS WASTE MUST BE IN COMPLIANCE WITH MPCA REGULATIONS.
- ALL STORM WATER POLLUTION PREVENTION MEASURES PRESENTED ON THIS PLAN, AND IN THE SWPPP, SHALL BE INITIATED AS SOON AS PRACTICABLE AND PRIOR TO SOIL DISTURBING ACTIVITIES UPSLOPE.
- DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS STOPPED SHALL BE TEMPORARILY SEED, WITHIN 14 DAYS OF INACTIVITY. SEEDING SHALL BE IN ACCORDANCE WITH MN/DOT SEED MIXTURE NUMBER 21-111 OR 21-112 DEPENDING ON THE SEASON OF PLANTING (SEE MN/DOT SPECIFICATION SECTION 2575.3) SEEDING METHOD AND APPLICATION RATE SHALL CONFORM TO MN/DOT SPECIFICATION SECTION 2575.3. TEMPORARY MULCH SHALL BE APPLIED IN ACCORDANCE WITH MN/DOT SPECIFICATION SECTION 2575.3F AND 2575.3G. ALTERNATIVELY, HYDRAULIC SOIL STABILIZER IN ACCORDANCE WITH MN/DOT SPECIFICATION SECTION 2575.3H MAY BE USED IN PLACE OF TEMPORARY MULCH.
- DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS PERMANENTLY STOPPED SHALL BE PERMANENTLY STABILIZED. THESE AREAS SHALL BE STABILIZED IN ACCORDANCE WITH THE TIME TABLE DESCRIBED ABOVE. REFER TO THE GRADING PLAN AND/OR LANDSCAPE PLAN FOR VEGETATIVE COVER.
- CONTRACTORS OR SUBCONTRACTORS WILL BE RESPONSIBLE FOR REMOVING SEDIMENT FROM CONVEYANCES & FROM TEMPORARY SEDIMENTATION BASINS THAT ARE TO BE USED AS PERMANENT WATER QUALITY MANAGEMENT BASINS. SEDIMENT MUST BE STABILIZED TO PREVENT IT FROM BEING WASHED BACK INTO THE BASIN, CONVEYANCES, OR DRAINAGEWAYS DISCHARGING OFF-SITE OR TO SURFACE WATERS. THE CLEANOUT OF PERMANENT BASINS MUST BE SUFFICIENT TO RETURN THE BASIN TO STORAGE CAPACITY.
- ON-SITE & OFF-SITE SOIL STOCKPILE AND BORROW AREAS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION THROUGH IMPLEMENTATION OF BMP'S. STOCKPILE AND BORROW AREA LOCATIONS SHALL BE NOTED ON THE SITE MAP AND PERMITTED IN ACCORDANCE WITH GENERAL PERMIT REQUIREMENTS.
- TEMPORARY SOIL STOCKPILES MUST HAVE SILT FENCE OR OTHER EFFECTIVE SEDIMENT CONTROLS & CANNOT BE PLACED IN SURFACE WATERS, INCLUDING STORMWATER CONVEYANCES SUCH AS CURB & GUTTER SYSTEMS OR CONDUITS & DITCHES.
- SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.
- DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION CONTROL MEASURES (SILT FENCES, CHECK DAMS, INLET PROTECTION DEVICES, ETC.) TO PREVENT EROSION.
- ALL CONSTRUCTION SHALL BE STABILIZED AT THE END OF EACH WORKING DAY, THIS INCLUDES BACKFILLING OF TRENCHES FOR UTILITY CONSTRUCTION AND PLACEMENT OF GRAVEL OR BITUMINOUS PAVING FOR ROAD CONSTRUCTION.

DEVELOPER/OWNER: \_\_\_\_\_

SITE OPERATOR / GENERAL CONTRACTOR: \_\_\_\_\_

SUPERINTENDENT: \_\_\_\_\_

MAINTENANCE NOTES:

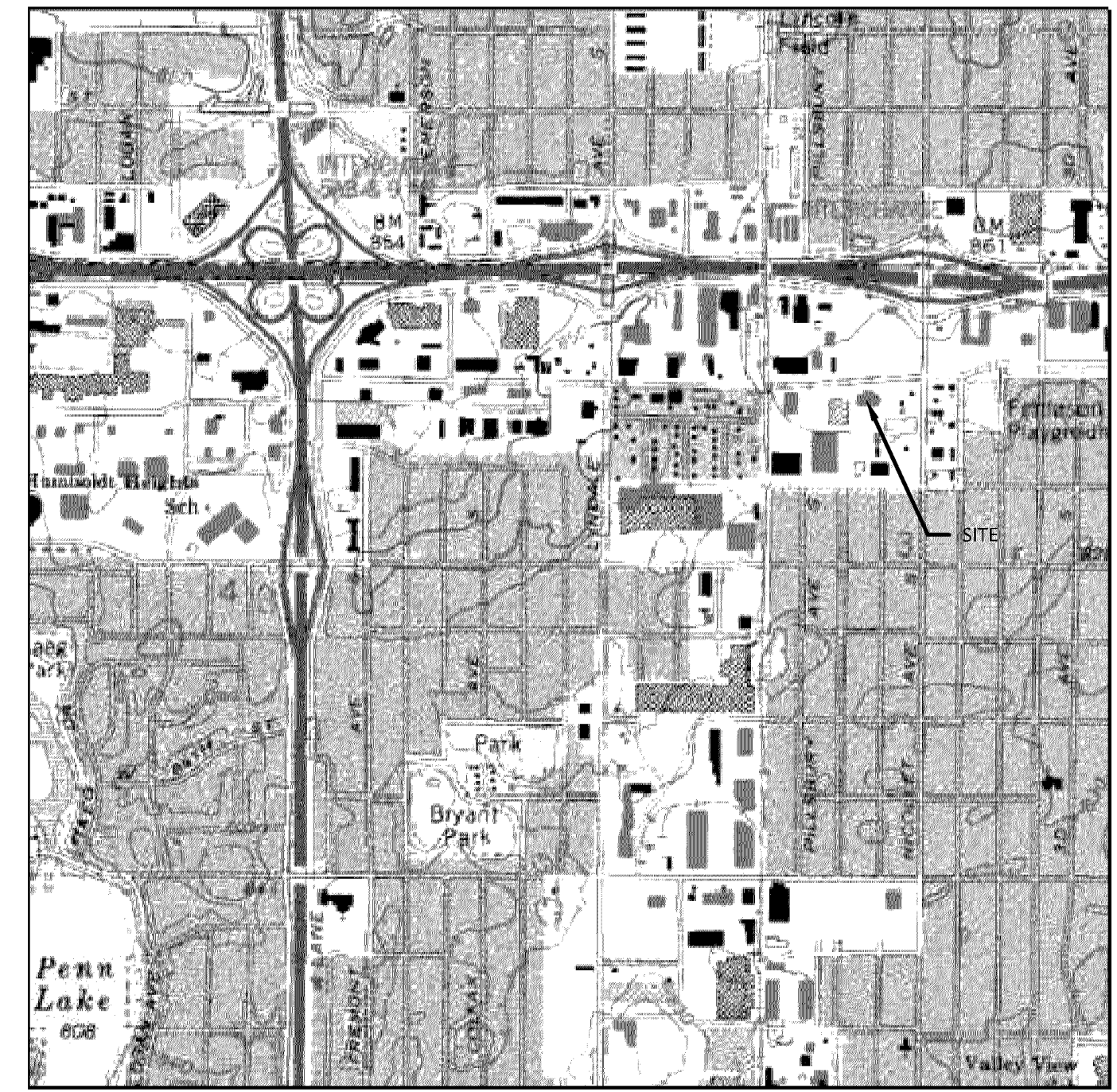
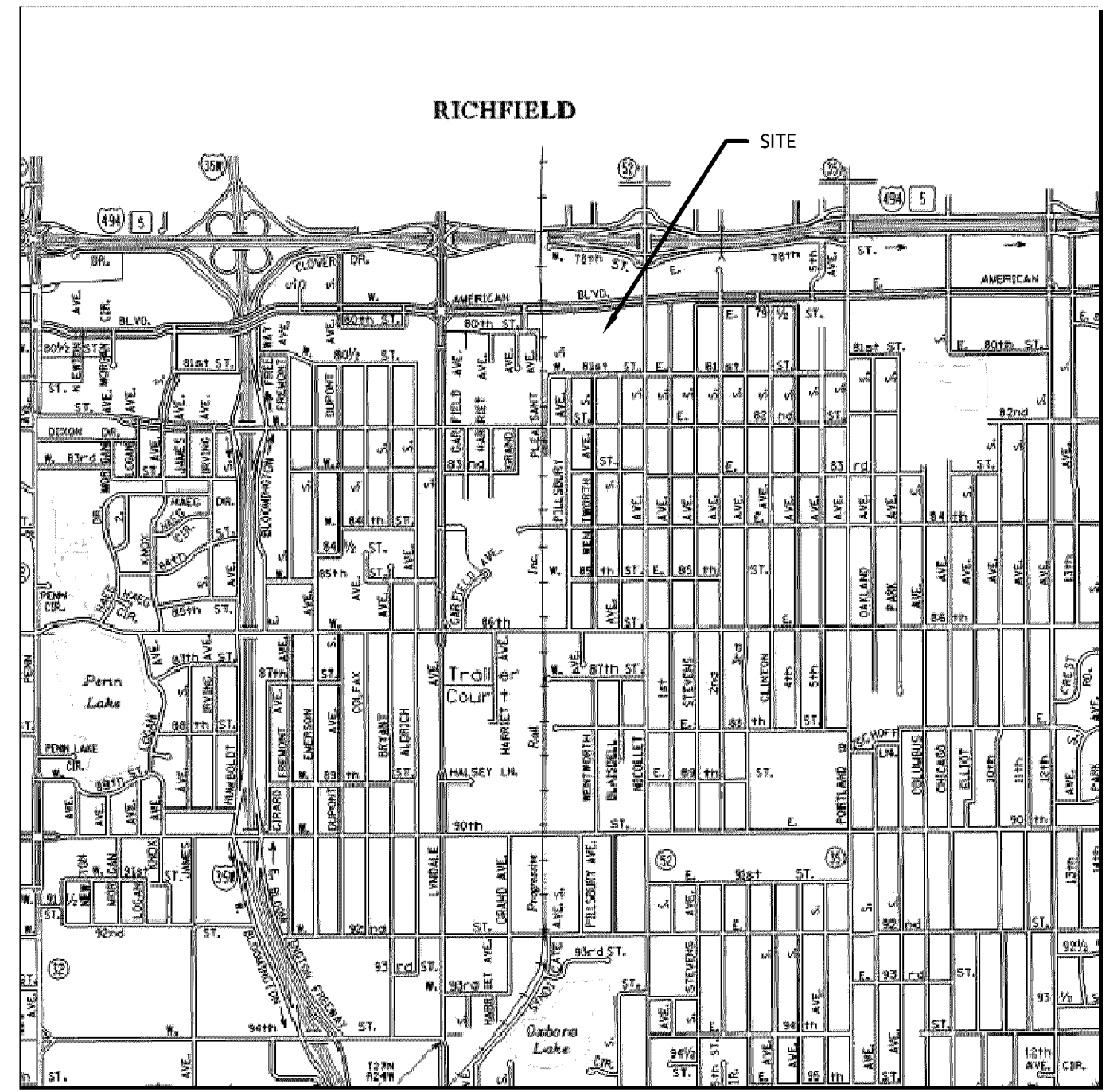
- ALL SILT FENCES STATED ON THIS EROSION AND SEDIMENT CONTROL PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. THE DESIGNATED CONTACT PERSON NOTED ON THIS PLAN MUST ROUTINELY INSPECT THE CONSTRUCTION ON SITE ONCE EVERY SEVEN DAYS DURING ACTIVE CONSTRUCTION AND WITHIN 24 HOURS AFTER A RAINFALL EVENT GREATER THAN 0.5 INCHES IN 24 HOURS. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CLEANED AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:
- ALL SILT FENCES MUST BE REPAIRED, REPLACED, OR SUPPLEMENTED WHEN THEY BECOME NONFUNCTIONAL OR THE SEDIMENT REACHES 1/3 OF THE HEIGHT OF THE FENCE. THESE REPAIRS MUST BE MADE WITHIN 24 HOURS OF DISCOVERY, OR AS SOON AS FIELD CONDITIONS ALLOW ACCESS.
  - TEMPORARY AND PERMANENT SEDIMENTATION 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, OR AS SOON AS FIELD CONDITIONS ALLOW ACCESS.
  - SURFACE WATERS, INCLUDING DRAINAGE DITCHES AND CONVEYANCE SYSTEMS, MUST BE INSPECTED FOR EVIDENCE OF SEDIMENT BEING DEPOSITED BY EROSION. CONTRACTOR MUST REMOVE ALL DELTAS AND SEDIMENT DEPOSITED IN SURFACE WATERS, INCLUDING DRAINAGE WAYS, CATCH BASINS, AND OTHER DRAINAGE SYSTEMS, AND RESTABILIZE THE AREAS WHERE SEDIMENT REMOVAL RESULTS IN EXPOSED SOIL. THE REMOVAL AND STABILIZATION MUST TAKE PLACE WITHIN SEVEN (7) DAYS OF DISCOVERY UNLESS PRECLUDED BY LEGAL, REGULATORY, OR PHYSICAL ACCESS CONSTRAINTS. CONTRACTOR SHALL USE ALL REASONABLE EFFORTS TO OBTAIN ACCESS, IF PRECLUDED, REMOVAL AND STABILIZATION MUST TAKE PLACE WITHIN SEVEN (7) CALENDAR DAYS OF OBTAINING ACCESS. CONTRACTOR 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 MUST BE INSPECTED FOR EVIDENCE OF OFF-SITE SEDIMENT TRACKING ONTO PAVED SURFACES. TRACKED SEDIMENT MUST BE REMOVED FROM ALL OFF-SITE PAVED SURFACES, WITHIN 24 HOURS OF DISCOVERY, OR IF APPLICABLE, WITHIN A SHORTER TIME TO COMPLY WITH THE GENERAL PERMIT.
  - CONTRACTOR IS RESPONSIBLE FOR THE OPERATION AND MAINTENANCE OF TEMPORARY AND PERMANENT WATER QUALITY MANAGEMENT BMP'S, AS WELL AS ALL EROSION PREVENTION AND SEDIMENT CONTROL BMP'S, FOR THE DURATION OF THE CONSTRUCTION WORK AT THE SITE. THE PERMITTEE(S) ARE RESPONSIBLE UNTIL ANOTHER PERMITTEE HAS ASSUMED CONTROL (ACCORDING TO PART II.B.5 OF THE MPCA GENERAL PERMIT) OVER ALL AREAS OF THE SITE THAT HAVE NOT BEEN FINALLY STABILIZED OR THE SITE HAS UNDERGONE FINAL STABILIZATION, AND A (N.O.T.) HAS BEEN SUBMITTED TO THE MPCA.
  - IF SEDIMENT ESCAPES THE CONSTRUCTION SITE, OFF-SITE ACCUMULATIONS OF SEDIMENT MUST BE REMOVED IN A MANNER AND AT A FREQUENCY SUFFICIENT TO MINIMIZE OFF-SITE IMPACTS (E.G., FUGITIVE SEDIMENT IN STREETS COULD BE WASHED INTO STORM SEWERS BY THE NEXT RAIN AND/OR POSE A SAFETY HAZARD TO USERS OF PUBLIC STREETS).
  - ALL INFILTRATION AREAS MUST BE INSPECTED TO ENSURE THAT NO SEDIMENT FROM ONGOING CONSTRUCTION ACTIVITIES IS REACHING THE INFILTRATION AREA AND THESE AREAS ARE PROTECTED FROM COMPACTION DUE TO CONSTRUCTION EQUIPMENT DRIVING ACROSS THE INFILTRATION AREA.

SEQUENCE OF CONSTRUCTION

- PHASE I:
- INSTALL STABILIZED CONSTRUCTION ENTRANCES.
  - CONSTRUCT THE SILT FENCES ON THE SITE.
  - BEGIN DEMOLITION OF EXISTING IMPROVEMENTS.
  - BEGIN GRADING THE SITE.
  - START CONSTRUCTION OF BUILDING PAD AND STRUCTURES.
- PHASE II:
- TEMPORARILY SEED DENUDED AREAS.
  - INSTALL UTILITIES, UNDERDRAINS, STORM SEWERS, CURBS AND GUTTERS.
  - INSTALL RIP RAP AROUND OUTLET STRUCTURES.
  - INSTALL INLET PROTECTION AROUND ALL STORM SEWER STRUCTURES.
  - PREPARE SITE FOR PAVING.
  - PAVE SITE.
  - INSTALL INLET PROTECTION DEVICES.
  - COMPLETE GRADING AND INSTALL PERMANENT SEEDING AND PLANTING.
  - COMPLETE CONSTRUCTION OF INFILTRATION BASINS ONCE SITE IS STABILIZED.
  - REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES (ONLY IF SITE IS STABILIZED), IF REQUIRED BY THE CONTRACT

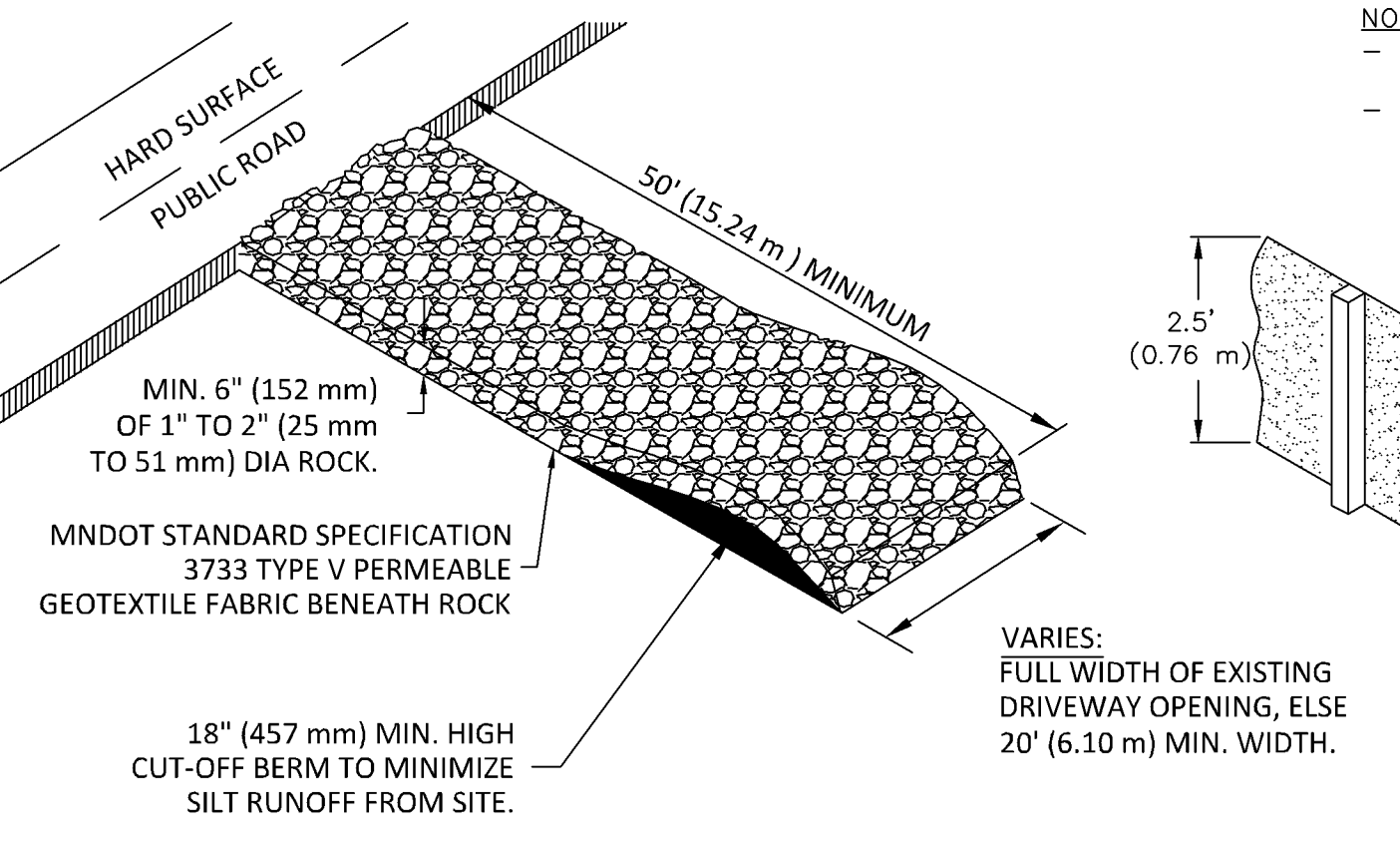
AREA SUMMARY IN ACRES

PAVEMENT AREA	0.97 AC±
BUILDING AREA	0.89 AC±
SEEDED AREA	0.86 AC±
TOTAL DISTURBED	2.72 AC±
PRE - CONSTRUCTION IMPERVIOUS	2.02 AC±
POST - CONSTRUCTION IMPERVIOUS	1.87 AC±

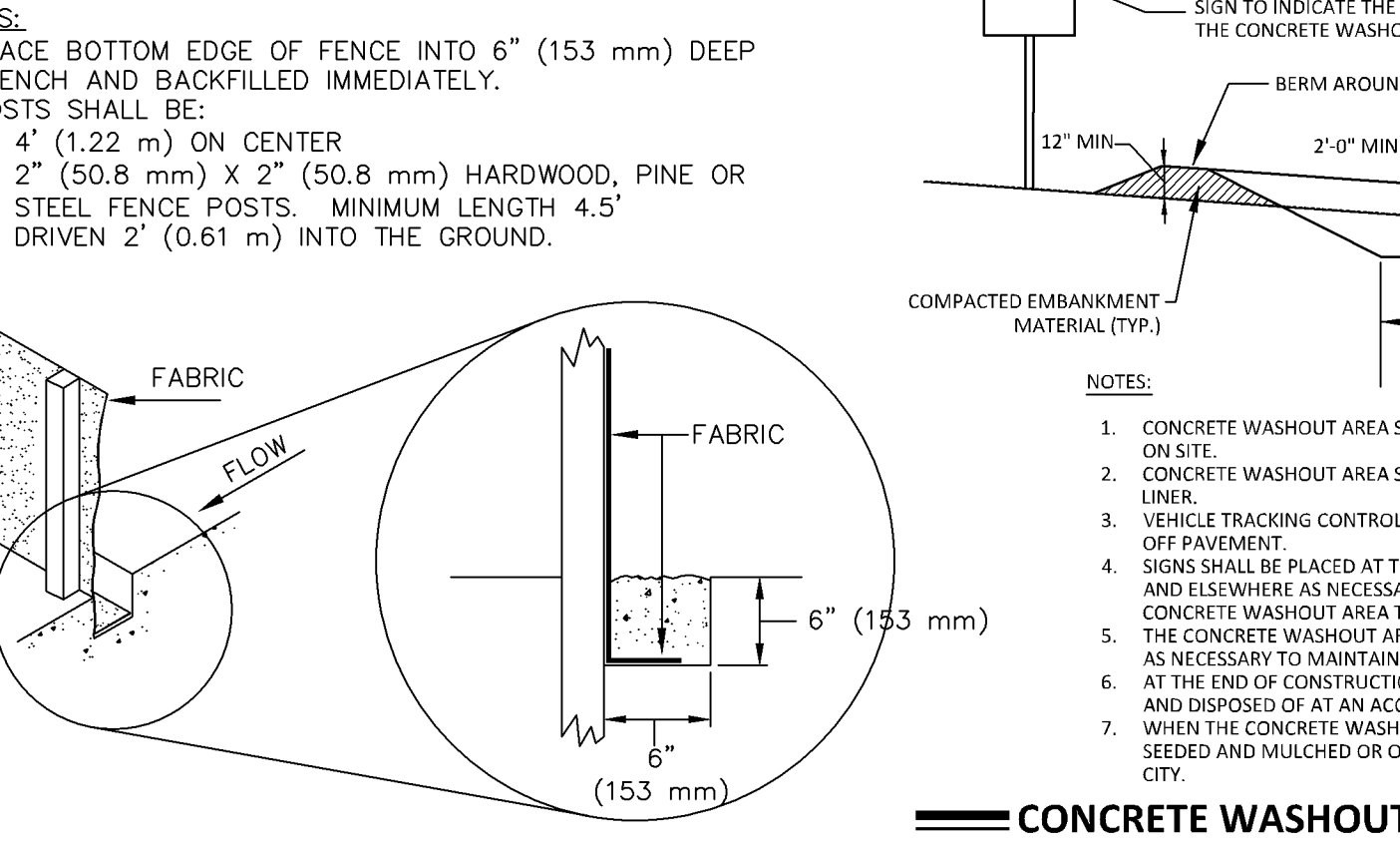


SITE LOCATION MAP  
NOT TO SCALE

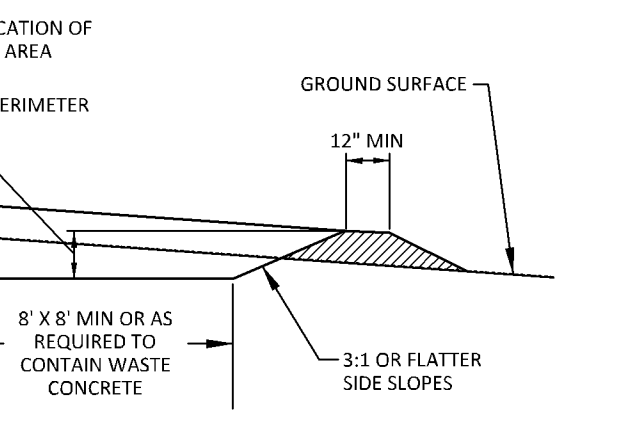
USGS MAP  
NOT TO SCALE



ROCK CONSTRUCTION ENTRANCE AT ACCESS ROADS  
ROCK-ENTR.dwg 4/2009

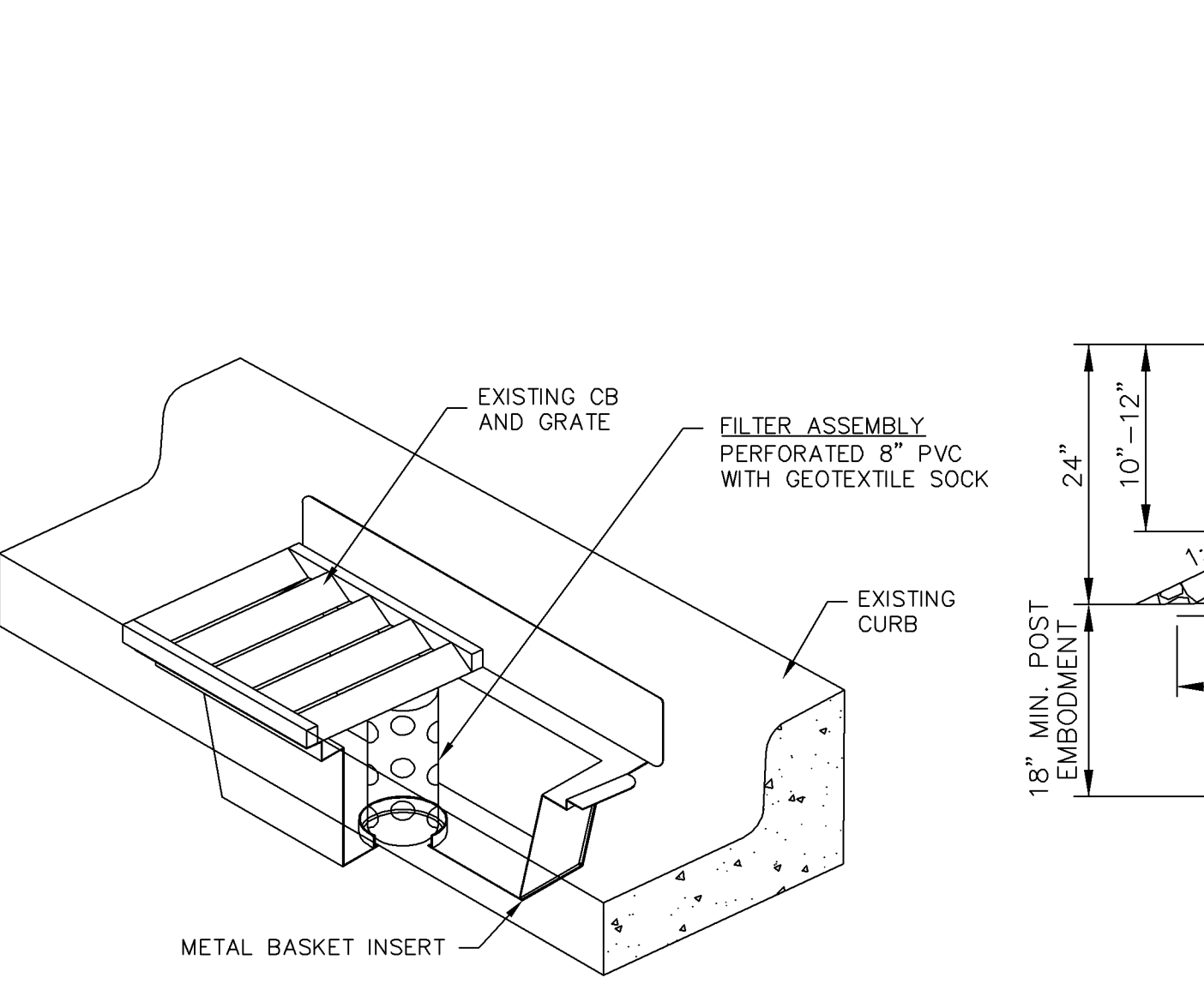


EROSION CONTROL FENCE  
SILT\_FEN\_STD.dwg 4/2009

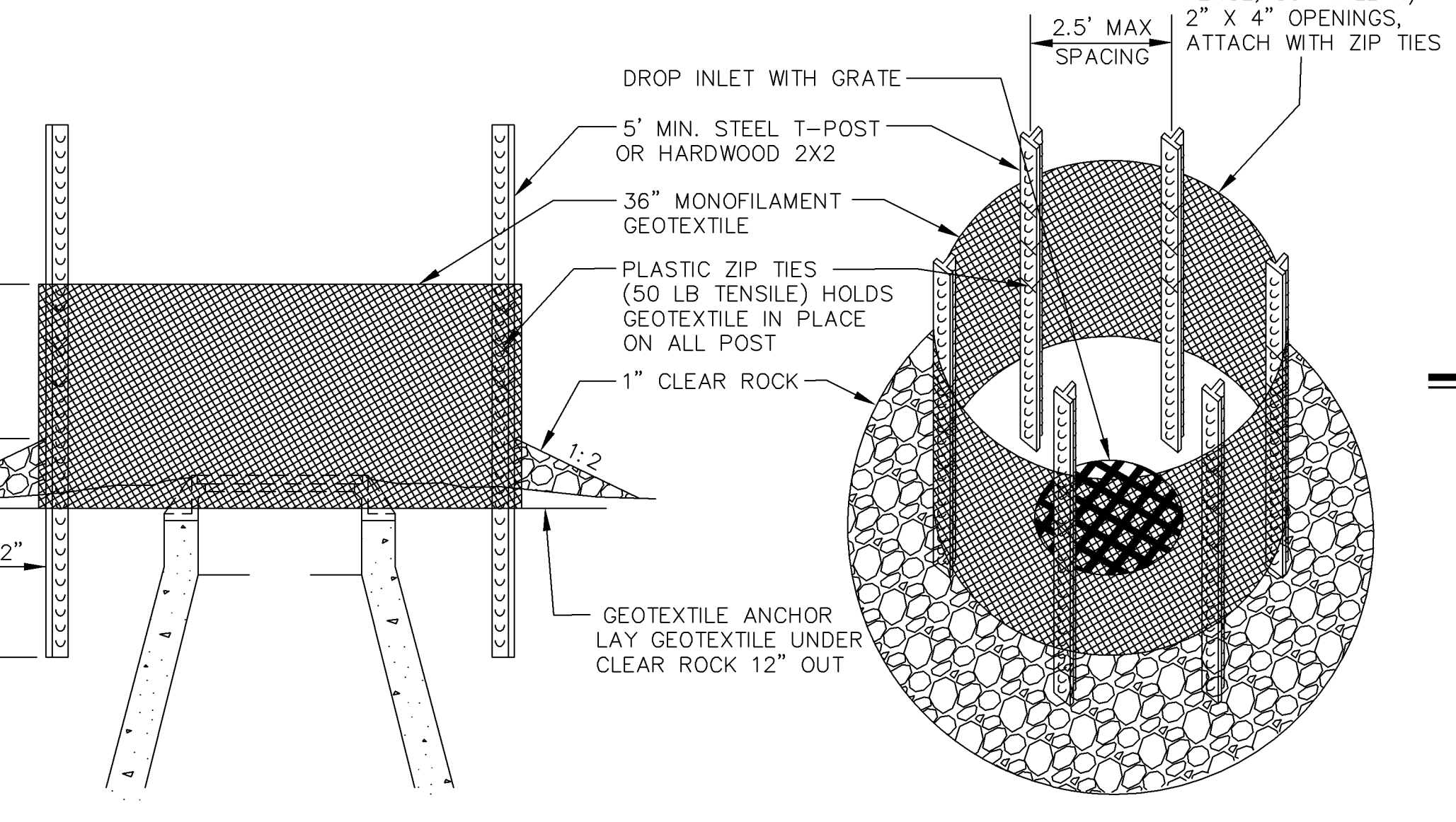


- NOTES:
- CONCRETE WASHOUT AREA SHALL BE INSTALLED PRIOR TO ANY CONCRETE PLACEMENT ON SITE.
  - CONCRETE WASHOUT AREA SHALL BE LINED WITH MINIMUM 30 MIL THICK PLASTIC LINER.
  - VEHICLE TRACKING CONTROL IS REQUIRED IF ACCESS TO CONCRETE WASHOUT AREA IS OFF PAVEMENT.
  - SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE WASHOUT AREA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CONCRETE WASHOUT AREA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.
  - THE CONCRETE WASHOUT AREA SHALL BE REPAIRED AND ENLARGED OR CLEANED OUT AS NECESSARY TO MAINTAIN CAPACITY FOR WASTED CONCRETE.
  - AT THE END OF CONSTRUCTION, ALL CONCRETE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF AT AN ACCEPTED WASTE SITE.
  - WHEN THE CONCRETE WASHOUT AREA IS REMOVED, THE DISTURBED AREA SHALL BE SEED, MULCHED OR OTHERWISE STABILIZED IN A MANNER ACCEPTED BY THE CITY.

CONCRETE WASHOUT AREA  
NOT TO SCALE



INLET PROTECTION, METAL BASKET TYPE (IP-2)



USE WHERE INLET DRAINS IN AN AREA WITH SLOPES AT 1:3 OR LESS

INLET PROTECTION  
SILT FENCE RING AND ROCK FILTER BERM (IP-2)  
INLET\_PROTECTION\_RING.dwg 4/2009

**Sambatek**  
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763.476.8532 facsimile

Engineering | Surveying | Planning | Environmental

**Client**  
**CASCADE STORAGE PARTNERS, LLC.**  
700 E. MOOREHEAD ST., SUITE 100B  
CHARLOTTE, NC 28202

**Project**  
**AMERICAN BOULEVARD STORAGE**

**Location**  
**BLOOMINGTON, MN**  
101 AMERICAN BLVD W

**Certification**

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 professional ENGINEER under the laws of the state of Minnesota.

*Brady D. Busseman*  
Brady D. Busseman  
Registration No. 44579 Date: 09/26/2018

If applicable, contact us for a wet signed copy of this plan which is available upon request at Sambatek's, Minnetonka, MN office.

**Summary**

Designed: BDB Drawn: JEB  
Approved: BDB Book / Page:  
Phase: CONSTRUCTION Initial Issue: 09/26/2018

**Revision History**

No.	Date	By	Submittal / Revision
A	10/04/18	JEB	REVISE WATERMAIN

**Sheet Title**  
**EROSION CONTROL NOTES & DETAILS**

**Sheet No. Revision**  
**C5.03 A**

**Project No.** 21012

## SECTION 1: SITE EVALUATION, ASSESSMENT, AND PLANNING

### 1.1 PROJECT/SITE INFORMATION

AMERICAN BOULEVARD STORAGE  
101 AMERICAN BOULEVARD WEST  
CITY: BLOOMINGTON  
STATE: MN  
ZIP CODE: 55420  
COUNTY: HENNEPIN

NPDES PERMIT NUMBER: TBD

### 1.2 CONTACT INFORMATION/RESPONSIBLE PARTIES

COMPANY/ORGANIZATION NAME: CASCADE STORAGE PARTNERS, LLC.  
CONTACT NAME: JOSH DAVIS  
ADDRESS: 700 E. MOOREHEAD ST., SUITE 100B  
CITY, STATE, ZIP CODE: CHARLOTTE, NC 28202  
TELEPHONE NUMBER: 720-800-2142  
EMAIL: JOSH@PAMLCOINVEST.COM

#### GENERAL CONTRACTOR (TO BE COMPLETED BY GENERAL CONTRACTOR):

COMPANY/ORGANIZATION NAME:  
CONTACT NAME:  
ADDRESS:  
CITY, STATE, ZIP CODE:  
TELEPHONE NUMBER:  
FAX/EMAIL:

INSERT AREA OF CONTROL (IF MORE THAN ONE OPERATOR AT SITE):

THE GENERAL CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE MINNESOTA GENERAL PERMIT AUTHORIZATION TO DISCHARGE STORM WATER ASSOCIATED WITH CONSTRUCTION ACTIVITY UNDER THE NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM/STATE DISPOSAL SYSTEM PERMIT PROGRAM (GENERAL PERMIT). THE GENERAL CONTRACTOR MUST COMPLY WITH ANY LOCAL GOVERNING AGENCY (LGU) HAVING JURISDICTION CONCERNING EROSION AND SEDIMENT CONTROL. THE GENERAL CONTRACTOR SHALL BE REQUIRED TO BE A CO-APPLICANT WITH THE OWNER. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE EROSION AND SEDIMENT CONTROL DEVICES.

THE "APPLICATION FOR GENERAL STORM-WATER PERMIT FOR CONSTRUCTION ACTIVITY (MN R100001)" SHALL BE COMPLETED BY THE GENERAL CONTRACTOR AND SUBMITTED ONLINE, ALONG WITH THE REQUIRED APPLICATION FEE, THROUGH THE MPCA'S WEBSITE.

UNLESS NOTIFIED BY THE MINNESOTA POLLUTION CONTROL AGENCY (MPCA) TO THE CONTRARY, APPLICANTS WHO SUBMIT A COMPLETE APPLICATION FORM IN ACCORDANCE WITH THE REQUIREMENTS OF THE GENERAL PERMIT ARE AUTHORIZED TO DISCHARGE STORM WATER FROM THE CONSTRUCTION SITE UNDER THE TERMS AND CONDITIONS OF THIS PERMIT SEVEN (7) CALENDAR DAYS THE ONLINE APPLICATION PROCESS IS COMPLETE([HTTPS://NETWEB.PCA.STATE.MN.US/PRIVATE/](https://netweb.pca.state.mn.us/private/)).

(NOTE: ALL PROJECTS UNDER 50 ACRES MUST SUBMIT THE PERMIT APPLICATION USING THE ONLINE PROCESS. MAILED APPLICATIONS ARE ONLY ACCEPTED FOR PROJECTS THAT DISTURB 50 OR MORE ACRES, AND HAVE A DISCHARGE POINT WITHIN 1 MILE OF A PROTECTED WATER.)

ADDITIONALLY, AUTHORIZATION WILL BE DELAYED UNDER THE FOLLOWING CIRCUMSTANCES:

- IF THE PROJECT DISTURBS 50 ACRES OR MORE AND HAS A DISCHARGE POINT WITHIN 1 MILE AND FLOWS TO AN IMPAIRED OR SPECIAL WATER WHOSE DISCHARGE MAY REACH AN IMPAIRED OR SPECIAL WATER LISTED IN APPENDIX A OF THE GENERAL PERMIT THE APPLICANT SHALL SUBMIT THE STORM WATER POLLUTION PREVENTION PLAN AND A COMPLETED APPLICATION AT LEAST 30 CALENDAR DAYS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES. UNLESS NOTIFIED BY THE MPCA TO THE CONTRARY, COVERAGE BECOMES EFFECTIVE 30 CALENDAR DAYS AFTER THE POSTMARKED DATE OF THE COMPLETED APPLICATION.
- IF THE PROJECT INCLUDES ALTERNATIVE METHODS THE APPLICATION AND TWO ALTERNATIVE TREATMENT PLANS MUST BE SUBMITTED A MINIMUM OF 90 DAY BEFORE CONSTRUCTION STARTS.

#### EROSION & SEDIMENT CONTROL SUBCONTRACTOR (RESPONSIBLE FOR IMPLEMENTING & UPDATING SWPPP - TO BE COMPLETED BY CONTRACTOR):

COMPANY/ORGANIZATION NAME:  
CONTACT NAME:  
ADDRESS:  
CITY, STATE, ZIP CODE:  
TELEPHONE NUMBER:  
FAX/EMAIL:

#### EROSION & SEDIMENT CONTROL INSPECTOR (SEE PART 6.1 OF THIS SWPPP FOR MORE INFORMATION ON INSPECTION RESPONSIBILITIES- TO BE COMPLETED BY CONTRACTOR):

COMPANY/ORGANIZATION NAME:  
CONTACT NAME:  
ADDRESS:  
CITY, STATE, ZIP CODE:  
TELEPHONE NUMBER:  
FAX/EMAIL:

#### GROUND DISTURBING SUBCONTRACTOR(S):

COMPANY/ORGANIZATION NAME:  
CONTACT NAME:  
ADDRESS:  
CITY, STATE, ZIP CODE:  
TELEPHONE NUMBER:  
FAX/EMAIL:

THE GENERAL CONTRACTOR SHALL PROVIDE A CHAIN OF RESPONSIBILITY WITH ALL OPERATORS ON THE SITE TO ENSURE THAT THE SWPPP WILL BE IMPLEMENTED AND STAY IN EFFECT UNTIL THE CONSTRUCTION PROJECT IS COMPLETE AND THE NOT SUBMITTED.

#### THIS SWPPP WAS PREPARED BY:

COMPANY/ORGANIZATION NAME: SAMBATEK INC.  
CONTACT NAME: JOSH BALZER  
ADDRESS: 12800 WHITEWATER DRIVE  
CITY, STATE, ZIP CODE: MINNETONKA, MN 55343  
TELEPHONE NUMBER: 763-476-6010  
FAX/EMAIL: JBALZER@SAMBATEK.COM

### 1.3 NATURE OF CONSTRUCTION ACTIVITY

#### NATURE OF CONSTRUCTION:

THIS SWPPP HAS BEEN PREPARED FOR MAJOR ACTIVITIES ASSOCIATED WITH CONSTRUCTION OF A NEWLY CONSTRUCTED 3-STORY BUILDING WITH AN APPROXIMATELY 40,509 SF FOOTPRINT, LOCATED AT 101 AMERICAN BOULEVARD WEST IN BLOOMINGTON, MN. THE PROJECT PROPOSES TO DEMOLISH AN EXISTING BUILDING AND PARKING LOT AND CONSTRUCT A STORAGE BUILDING AND A NEW PARKING LOT SPACE AROUND THE BUILDING.

#### ANTICIPATED APPROXIMATE TIMELINES:

ESTIMATED PROJECT START DATE: 07/01/2018  
ESTIMATED PROJECT COMPLETION DATE: 07/01/2019

### 1.4 SOILS, SLOPES, VEGETATION, AND CURRENT DRAINAGE PATTERNS

#### SOIL TYPE(S):

THE SOILS ON SITE ARE LARGELY FOUND TO BE SILTY SAND, CLAYEY SAND, OR SANDY LEAN CLAY.

#### SLOPES:

EXISTING TOPOGRAPHY ON THE SITE INCLUDES RELATIVELY FLAT SLOPES RANGING FROM 0.5% TO 5%.

#### DRAINAGE PATTERNS:

THE EXISTING DRAINAGE PATTERN ON THE SITE IS SUCH THAT THE BUILDING IS THE HIGH POINT AND RUNOFF IS ROUTED VIA STORM SEWERS THAT ARE LOCATED ON THE EAST AND WEST SIDE OF THE BUILDING. INFILTRATION BASINS WILL BE INSTALLED ON ALL FOUR LOT CORNERS.

#### VEGETATION:

THE EXISTING SITE IS LARGELY IMPERVIOUS. THE PROPOSED CONSTRUCTION IS TO OCCUR OVER AN EXISTING PARKING LOT AND BUILDING. THERE ARE MINIMAL IMPACTS TO VEGETATION.

#### RAINFALL INFORMATION:

RAINFALL INFORMATION - THE AVERAGE TOTAL ANNUAL PRECIPITATION IS ABOUT 28.32 INCHES. OF THIS ABOUT 17.31 INCHES, OR 61 PERCENT, USUALLY FALLS IN MAY THROUGH SEPTEMBER. THE AVERAGE ANNUAL SNOWFALL IS 57.3 INCHES.

### 1.5 CONSTRUCTION SITE ESTIMATES

#### PROJECT AREA SUMMARY:

TOTAL PROJECT AREA: 2.72 ACRES  
CONSTRUCTION SITE AREA TO BE DISTURBED: 2.72 ACRES

#### IMPERVIOUS AREAS:

IMPERVIOUS AREA BEFORE CONSTRUCTION (ACRES): 2.02  
IMPERVIOUS AREA AFTER CONSTRUCTION (ACRES): 1.87

### 1.6 RECEIVING WATERS

#### CONSTRUCTION PHASE STORM WATER SYSTEM DESCRIPTION:

THE SITE WILL DRAIN INTO PROPOSED ON SITE INFILTRATION BASINS AND OVERFLOW WILL BE ROUTED INTO THE EXISTING CITY STORM SEWER NETWORK THAT HEADS EAST ALONG AMERICAN BOULEVARD WEST. CONTRACTOR SHALL FOLLOW THE EROSION AND SEDIMENT CONTROL PLANS TO ENSURE STORMWATER IS FILTERED DURING THE CONSTRUCTION PHASE.

#### DESCRIPTION OF RECEIVING WATERS:

THERE ARE NO MN DEFINED SPECIAL/IMPAIRED WATER WITHIN 1 MILE OF THE SITE.

### 1.7 SITE FEATURES AND SENSITIVE AREAS TO BE PROTECTED

CONTRACTOR TO ADHERE TO THE LIMITS OF DISTURBANCE INDICATED ON THE PLANS

### 1.8 POTENTIAL SOURCES OF POLLUTION

#### POTENTIAL SOURCES OF SEDIMENT AND OTHER POLLUTANTS TO STORMWATER RUNOFF:

CONSTRUCTION PHASE POLLUTANT SOURCES ANTICIPATED AT THE SITE ARE DISTURBED (BARE) SOIL, VEHICLE FUELS AND LUBRICANTS, CHEMICALS ASSOCIATED WITH BUILDING CONSTRUCTION, AND BUILDING MATERIALS. WITHOUT ADEQUATE CONTROL THERE IS THE POTENTIAL FOR EACH TYPE OF POLLUTANT TO BE TRANSPORTED BY STORM WATER.

### 1.9 ENDANGERED/THREATENED SPECIES

THERE ARE NO KNOWN THREATENED OR ENDANGERED SPECIES ARE PRESENT ON SITE.

### 1.10 HISTORIC PRESERVATION

THERE ARE NO KNOWN HISTORIC SITES ON OR NEAR THE CONSTRUCTION SITE.

### 1.11 APPLICABLE FEDERAL, TRIBAL, STATE OR LOCAL PROGRAMS

#### LOCAL GOVERNING UNIT (LGU) REQUIREMENTS:

THE CITY OF BLOOMINGTON AND NMCWD REQUIRE POST DEVELOPMENT RUNOFF RATES NOT EXCEED EXISTING DEVELOPMENT RATES FOR THE 1-, 2-, 10-, AND 100-YEAR ATLAS 14 RAINFALL EVENTS. PER THE NMCWD, THE REDEVELOPED SITE MUST PROVIDE FOR AT LEAST 60 PERCENT OF ANNUAL REMOVAL EFFICIENCY FOR TOTAL PHOSPHORUS AND AT LEAST 90 PERCENT ANNUAL REMOVAL EFFICIENCY FOR TOTAL SUSPENDED SOLIDS FROM SITE RUNOFF. PER THE NMCWD, THE FIRST 1 INCH OF RUNOFF FROM THE RECONSTRUCTED IMPERVIOUS SURFACE IS REQUIRED TO BE INFILTRATED ON SITE.

### 1.12 MITIGATION MEASURES FROM ENVIRONMENTAL REVIEWS/TMDLS/IMPAIRED WATERS

### 1.13 MAPS

#### EROSION AND SEDIMENT CONTROL PLANS:

THE FOLLOWING SITE DEVELOPMENT PLAN SHEETS ARE AN INTEGRAL PART OF THIS SWPPP:

C-5.01 - PHASE I EROSION AND SEDIMENTATION CONTROL PLAN/"SITE MAP"  
C-5.02 - PHASE II EROSION AND SEDIMENTATION CONTROL PLAN/"SITE MAP"  
C-5.03 - EROSION AND SEDIMENTATION CONTROL DETAILS AND NOTES  
C-5.04 - SWPPP NARRATIVE  
C-5.05 - SWPPP NARRATIVE

## SECTION 2: EROSION AND SEDIMENT CONTROL BMPS

#### EROSION CONTROL BMPS:

THE PURPOSE OF EROSION CONTROL IS TO PREVENT SOIL PARTICLES FROM BECOMING SUSPENDED IN WATER AND BEING TRANSPORTED TO EITHER DOWNSTREAM SURFACE WATER OR DOWNSTREAM PROPERTIES.

APPROPRIATE CONSTRUCTION PHASING, VEGETATIVE BUFFER STRIPS, HORIZONTAL SLOPE GRADINGS, AND OTHER CONSTRUCTION PRACTICES THAT MINIMIZE EROSION MUST BE PLANNED FOR AND IMPLEMENTED.

IN THE NATURAL CONDITION, SOIL IS STABILIZED BY NATIVE VEGETATION. THE PRIMARY TECHNIQUE TO BE USED AT THIS PROJECT FOR FINAL STABILIZATION OF SITE SOIL WILL BE TO PROVIDE A PROTECTIVE COVER OF VEGETATION, PAVEMENT, OR BUILDING.

ALL EXPOSED AREAS MUST BE STABILIZED AS SOON AS POSSIBLE (BUT NO LATER THAN THE NEXT WORK DAY) TO LIMIT SOIL EROSION, BUT IN NO CASE LATER THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. TEMPORARY SOIL STOCKPILES WITHOUT SIGNIFICANT SILT, CLAY OR ORGANIC COMPONENTS (E.G. CLEAN AGGREGATED STOCKPILES, DEMOLITION CONCRETE STOCKPILES, SAND STOCKPILES) AND THE CONSTRUCTED BASE COMPONENTS OF ROADS, PARKING LOTS AND SIMILAR SURFACES ARE EXEMPT FROM THIS REQUIREMENT, BUT MUST COMPLY WITH SECTION 2.7 OF THIS SWPPP (PART IV.C.5 OF THE GENERAL PERMIT).

#### SEDIMENT CONTROL BMPS:

THE PURPOSE OF SEDIMENT CONTROL IS TO PREVENT SOIL PARTICLES THAT HAVE BEEN SUSPENDED IN WATER FROM ENTERING SURFACE WATERS, INCLUDING CURB AND GUTTER SYSTEMS AND STORM SEWER INLETS. SEDIMENT CONTROL BMPS HAVE BEEN DESIGNED AS PART OF THIS SWPPP.

IF THE DOWN GRADIENT TREATMENT SYSTEM IS OVERLOADED, THE CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTING ADDITIONAL UP GRADIENT SEDIMENT CONTROL PRACTICES OR REDUNDANT BMPS TO ELIMINATE THE OVERLOADING AND MUST AMEND THE SWPPP TO IDENTIFY THE ADDITIONAL PRACTICES.

SEDIMENT CONTROL PRACTICES MUST ALWAYS BE ESTABLISHED ON ALL DOWN GRADIENT PERIMETERS AND BE LOCATED UPGRADIENT OF ANY BUFFER ZONES. THE PERIMETER SEDIMENT CONTROL PRACTICES MUST BE IN PLACE BEFORE ANY UP GRADIENT LAND DISTURBING ACTIVITIES BEGIN. THESE PRACTICES MUST REMAIN IN PLACE UNTIL FINAL STABILIZATION IS ACHIEVED (SEE SECTION 8 OF THIS SWPPP).

THE TIMING OF THE INSTALLATION OF SEDIMENT CONTROL PRACTICES MAY BE ADJUSTED TO ACCOMMODATE SHORT-TERM ACTIVITIES SUCH AS CLEARING OR GRUBBING, OR PASSAGE OF VEHICLES. ANY SHORT TERM ACTIVITY MUST BE COMPLETED AS QUICKLY AS POSSIBLE AND THE SEDIMENT CONTROL PRACTICES MUST BE RE-INSTALLED IMMEDIATELY AFTER THE ACTIVITY IS COMPLETED. SEDIMENT CONTROL PRACTICES MUST BE INSTALLED BEFORE THE NEXT RAIN EVENT EVEN IF THE ACTIVITY IS NOT COMPLETE.

### 2.1 MINIMIZE DISTURBED AREA AND PROTECT NATURAL FEATURES AND SOIL

CONTRACTOR SHALL FOLLOW THE SEQUENCE OF CONSTRUCTION.

PROTECT AREAS NOT TO BE DISTURBED

### 2.2 PRESERVE 50 FOOT NATURAL BUFFER

THE CONTRACTOR MUST PRESERVE A 50 FOOT NATURAL BUFFER (OR IF A BUFFER IS INFEASIBLE ON THE SITE PROVIDE REDUNDANT SEDIMENT CONTROLS) WHEN A SURFACE WATER IS LOCATED WITHIN 50 FEET OF THE PROJECTS EARTH DISTURBANCES AND STORMWATER FLOWS TO THE SURFACE WATER. THE CONTRACTOR IS NOT REQUIRED TO ENHANCE THE QUALITY OF THE VEGETATION THAT ALREADY EXISTS IN THE BUFFER OR PROVIDE VEGETATION IF NONE EXISTS.

### 2.3 CONTROL STORMWATER FLOWING ONTO AND THROUGH THE PROJECT

MEASURES SHOULD BE TAKEN TO ENSURE THAT "CLEAN" RUNOFF FROM OFF SITE IS DIVERTED AROUND DISTURBED AREAS ON SITE. CARE SHOULD BE TAKEN THAT RE-ROUTING OFF SITE RUNOFF DOES NOT RESULT IN FLOODING OR OTHER ISSUES ON ADJACENT PROPERTIES.

#### BMP DESCRIPTION: TEMPORARY DIVERSION DITCH

**INSTALLATION SCHEDULE:** INSTALL TEMPORARY DIVERSION DITCHES AS SHOWN ON THE SWPPP PLAN SHEETS, AND AS NEEDED THROUGHOUT CONSTRUCTION, PRIOR TO UP GRADIENT GROUND DISTURBING ACTIVITIES

**MAINTENANCE AND INSPECTION REQUIREMENTS:** THE WETTED PERIMETER OF ANY TEMPORARY OR PERMANENT DRAINAGE DITCH MUST BE STABILIZED WITHIN 200 LINEAL FEET FROM THE PROPERLY EDGE OR FROM THE POINT OF DISCHARGE INTO ANY SURFACE WATER. THIS STABILIZATION MUST BE COMPLETED WITHIN 24 HOURS OF CONNECTING TO A SURFACE WATER. THE REMAINDER OF THE DITCH MUST BE STABILIZED WITHIN 14 DAYS OF CONNECTING TO A SURFACE WATER AND AFTER CONSTRUCTION HAS CEASED.

TEMPORARY OR PERMANENT DITCHES THAT ARE BEING USED AS A SEDIMENT CONTAINMENT SYSTEM DO NOT NEED TO BE STABILIZED, BUT MUST BE STABILIZED WITHIN 24 HOURS AFTER NO LONGER BEING USED AS A SEDIMENT CONTAINMENT SYSTEM.

DITCHES MUST BE INSPECTED EVERY 7 DAYS, AND WITHIN 24 HOURS AFTER A 0.5" 24-HOUR RAIN EVENT. ANY SEDIMENT DEPOSITED IN DIVERSION DITCHES MUST BE REMOVED AND ANY EXPOSED SOILS STABILIZED WITHIN 7 DAYS OF DISCOVERY UNLESS PRECLUDED BY LEGAL, REGULATORY, OR PHYSICAL ACCESS CONSTRAINTS. IF PRECLUDED, NOTE REASON FOR DELAY ON MAINTENANCE LOG.

RESPONSIBLE STAFF (CONTRACTOR TO COMPLETE):

### 2.4 STABILIZE SOILS

1. **TEMPORARY SEEDING** - DISTURBED AREAS THAT ARE NOT YET AT FINAL GRADE BUT THAT WILL NOT BE ACTIVELY WORKED FOR 14 DAYS OR MORE MUST BE TEMPORARILY STABILIZED. TEMPORARY STABILIZATION MUST BE INITIATED IMMEDIATELY WHERE WORK HAS TEMPORARILY CEASED AND MUST BE COMPLETED NO LATER THAN 14 CALENDAR DAYS AFTER WORK IN THAT PORTION OF THE SITE HAS TEMPORARILY CEASED. TEMPORARY SEEDING SHALL BE IN ACCORDANCE WITH MN/DOT SEED MIXTURE NUMBER 21-111 OR 21-112 DEPENDING ON THE SEASON OF PLANTING (SEE MN/DOT SPECIFICATION SECTION 2575.3). SEEDING METHOD AND APPLICATION RATE SHALL CONFORM TO MN/DOT SPECIFICATION SECTION 2575.3. TEMPORARY MULCH SHALL BE APPLIED IN ACCORDANCE WITH MN/DOT SPECIFICATION SECTION 2575.3C. ALTERNATIVELY, HYDRAULIC SOIL STABILIZER IN ACCORDANCE WITH MN/DOT SPECIFICATION SECTION 2575.3E MAY BE USED IN PLACE OF TEMPORARY MULCH.

2. **PERMANENT STABILIZATION** - ALL AREAS AT FINAL GRADE MUST BE STABILIZED WITHIN 14 DAYS AFTER COMPLETION OF THE MAJOR CONSTRUCTION ACTIVITY. PERMANENT STABILIZATION MUST BE INITIATED IMMEDIATELY WERE WORK HAS PERMANENTLY CEASED AND MUST BE COMPLETED NO LATER THAN 14 CALENDAR DAYS AFTER CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS PERMANENTLY CEASED. SEEDED AREAS SHALL BE PROTECTED WITH MULCH. PERMANENT MULCH SHALL CONFORM TO MN/DOT SPECIFICATION 3882, TYPE 3 AT 2 TONS/ACRE AND SHALL BE DISK ANCHORED. HYDRAULIC SOIL STABILIZER MAY BE USED IN PLACE OF MULCH IF APPROVED BY CIVIL ENGINEER. IF HYDRAULIC SOIL STABILIZER IS USED, IT SHALL BE MN/DOT TYPE 6.

### 2.5 PROTECT SLOPES

**STEEP SLOPE AREAS** - THE CONTRACTOR MUST MINIMIZE THE NEED FOR DISTURBANCE OF PORTIONS OF THE PROJECT THAT HAVE STEEP SLOPES (3:1 OR STEEPER). FOR THOSE SLOPED AREAS WHICH MUST BE DISTURBED, THE CONTRACTOR MUST USE TECHNIQUES SUCH AS PHASING AND STABILIZATION PRACTICES DESIGNED FOR STEEP SLOPES, SUCH AS DRAINING AND TERRACING. SLOPES STEEPER THAN 3:1 MUST BE PROTECTED BY EROSION CONTROL BLANKETS.

#### BMP DESCRIPTION: EROSION CONTROL BLANKET

**INSTALLATION SCHEDULE:** INSTALL EROSION CONTROL BLANKETS AS SHOWN ON THE SWPPP PLAN SHEETS, AND AS NEEDED THROUGHOUT CONSTRUCTION, WITHIN THE TIMEFRAME ALLOWED FOR STABILIZATION AFTER WORK HAS CEASED IN AN AREA, DEPENDING ON THE LOCATION (I.E. 24 HOURS, 7 DAYS, 14 DAYS)

**MAINTENANCE AND INSPECTION REQUIREMENTS:** TO FUNCTION PROPERLY, EROSION CONTROL BLANKETS MUST BE IN CONTACT WITH THE SOIL BENEATH THE BLANKET. BLANKETS MUST BE SECURED PER THE CONSTRUCTION DETAIL PROVIDED WITH THE SWPPP PLAN SHEETS. INSPECT BLANKETS EVERY 7 DAYS OR WITHIN 24 HOURS AFTER A 0.5" 24-HOUR RAIN EVENT. REPAIR OR REPLACE NON-FUNCTIONAL BLANKETS WITHIN 24 HOURS AFTER DISCOVERY.

RESPONSIBLE STAFF (CONTRACTOR TO COMPLETE):

### 2.6 PROTECT STORM DRAIN INLETS

ALL STORM DRAIN INLETS MUST BE PROTECTED BY APPROPRIATE MEANS DURING CONSTRUCTION UNTIL ALL SOURCES WITH POTENTIAL FOR DISCHARGING TO THE INLET HAVE BEEN STABILIZED. INLET PROTECTION MAY BE REMOVED FOR A PARTICULAR INLET IF A SPECIFIC SAFETY CONCERN (STREET FLOODING/FREEZING) HAS BEEN IDENTIFIED AND PERMITEE(S) HAVE RECEIVED WRITTEN CORRESPONDENCE FROM THE JURISDICTIONAL AUTHORITY (E.G. CITY/COUNTY/TOWNSHIP/MNDOT/ETC.) VERIFYING THE NEED FOR REMOVAL. THE WRITTEN CORRESPONDENCE MUST BE DOCUMENTED IN THIS SWPPP.

#### BMP DESCRIPTION: SILT FENCE INLET PROTECTION

**INSTALLATION SCHEDULE:** INSTALL INLET PROTECTION IN EXISTING STRUCTURES AS DIRECTED ON THE SWPPP PLAN SHEETS, AND AS NEEDED THROUGHOUT CONSTRUCTION, PRIOR TO BEGINNING GROUND DISTURBING ACTIVITIES UP GRADIENT OF THE INLET. INSTALL INLET PROTECTION ON NEW STRUCTURES AS SOON AS THE STRUCTURES ARE PUT INTO USE.

**MAINTENANCE AND INSPECTION REQUIREMENTS:** INSPECT SILT FENCE EVERY 7 DAYS OR WITHIN 24 HOURS AFTER A 0.5" 24-HOUR RAIN EVENT. SEDIMENT ACCUMULATIONS SHOULD

BE REMOVED WHEN SEDIMENT BUILD-UP REACHES 1/2 THE HEIGHT OF THE SILT FENCE. THIS MAINTENANCE MUST BE COMPLETED WITHIN 24 HOURS OF DISCOVERY.

RESPONSIBLE STAFF (CONTRACTOR TO COMPLETE):

#### BMP DESCRIPTION: INLET PROTECTION (INLET INSERT DEVICE)

**INSTALLATION SCHEDULE:** INSTALL INLET PROTECTION IN EXISTING STRUCTURES AS DIRECTED ON THE SWPPP PLAN SHEETS, AND AS NEEDED THROUGHOUT CONSTRUCTION, PRIOR TO BEGINNING GROUND DISTURBING ACTIVITIES UP GRADIENT OF THE INLET. INSTALL INLET PROTECTION ON NEW STRUCTURES AS SOON AS THE STRUCTURES ARE PUT INTO USE.

**MAINTENANCE AND INSPECTION REQUIREMENTS:** INSPECT INLET PROTECTION EVERY 7 DAYS OR WITHIN 24 HOURS AFTER A 0.5" 24-HOUR RAIN EVENT. SEDIMENT ACCUMULATIONS SHOULD BE REMOVED WHEN SEDIMENT BUILD-UP REACHES 1/2 THE CAPACITY OF THE DEVICE, OR, IF MORE STRINGENT, IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS. THIS MAINTENANCE MUST BE COMPLETED WITHIN 24 HOURS OF DISCOVERY.

RESPONSIBLE STAFF (CONTRACTOR TO COMPLETE):

### 2.7 ESTABLISH PERIMETER CONTROLS AND SEDIMENT BARRIERS

ALL STRUCTURAL SEDIMENT CONTROLS INTENDED TO RECEIVE AND TREAT CONSTRUCTION RUNOFF MUST BE IN PLACE BEFORE ANY UP GRADIENT LAND ALTERATION CAN BEGIN AND MUST STAY IN OPERATION UNTIL FINAL STABILIZATION OF THE SITE HAS BEEN ACHIEVED.

TEMPORARY SOIL STOCKPILES MUST HAVE SILT FENCE OR OTHER EFFECTIVE SEDIMENT CONTROLS, AND CANNOT BE PLACED IN ANY NATURAL BUFFERS OR SURFACE WATERS, INCLUDING STORMWATER CONVEYANCES SUCH AS CURB AND GUTTER SYSTEMS, OR CONDUITS AND DITCHES UNLESS THERE IS A BYPASS IN PLACE FOR THE STORMWATER.

#### BMP DESCRIPTION: SILT FENCE

**INSTALLATION SCHEDULE:** INSTALL SILT FENCE AS DIRECTED ON THE SWPPP PLAN SHEETS, AND AS NEEDED THROUGHOUT CONSTRUCTION, PRIOR TO COMMENCING UP GRADIENT LAND DISTURBING ACTIVITIES.

**MAINTENANCE AND INSPECTION REQUIREMENTS:** INSPECT SILT FENCE EVERY 7 DAYS OR WITHIN 24 HOURS AFTER A 0.5" 24-HOUR RAIN EVENT. SEDIMENT ACCUMULATIONS SHOULD BE REMOVED WHEN SEDIMENT BUILD-UP REACHES 1/2 THE HEIGHT OF THE SILT FENCE. THIS MAINTENANCE MUST BE COMPLETED WITHIN 24 HOURS OF DISCOVERY.

RESPONSIBLE STAFF (CONTRACTOR TO COMPLETE):

#### BMP DESCRIPTION: BIOLOGS

**INSTALLATION SCHEDULE:** INSTALL BIOLOGS AS DIRECTED ON THE SWPPP PLAN SHEETS, AND AS NEEDED THROUGHOUT CONSTRUCTION, PRIOR TO COMMENCING UP GRADIENT LAND DISTURBING ACTIVITIES.

**MAINTENANCE AND INSPECTION REQUIREMENTS:** INSPECT BIOLOGS EVERY 7 DAYS OR WITHIN 24 HOURS AFTER A 0.5" 24-HOUR RAIN EVENT. SEDIMENT ACCUMULATIONS SHOULD BE REMOVED WHEN SEDIMENT BUILD-UP REACHES 1/2 THE HEIGHT OF THE BIOLOG. THIS MAINTENANCE MUST BE COMPLETED WITHIN 24 HOURS OF DISCOVERY.

RESPONSIBLE STAFF (CONTRACTOR TO COMPLETE):

### 2.8 RETAIN SEDIMENT ON-SITE

ANY OFF-SITE ACCUMULATIONS OF SEDIMENT MUST BE REMOVED IN A MANNER AND AT A FREQUENCY SUFFICIENT TO MINIMIZE OFF-SITE IMPACT (E.G. FUGITIVE SEDIMENT IN STREETS COULD BE WASHED INTO STORM SEWERS BY THE NEXT RAIN AND/OR POSE A SAFETY HAZARD TO USERS OF PUBLIC STREETS.

### 2.9 ESTABLISH STABILIZED CONSTRUCTION EXITS

ROCK CONSTRUCTION EXITS HAVE BEEN DESIGNED TO PREVENT SEDIMENT TRACK OFF. IF THERE IS EVIDENCE OF SEDIMENT TRACKING FROM VEHICLES IN PAVED AREAS, THE SEDIMENT MUST BE REMOVED BY STREET SWEEPING OR OTHER METHOD AS SOON AS FEASIBLY POSSIBLE, BUT NO LONGER THAN 24 HOURS AFTER DISCOVERY.

#### BMP DESCRIPTION: ROCK EXIT DRIVE

**INSTALLATION SCHEDULE:** INSTALL ROCK EXITS AS SHOWN ON THE SWPPP PLAN SHEETS AS SOON AS POSSIBLE AT THE BEGINNING OF CONSTRUCTION ACTIVITIES. INSTALL ADDITIONAL ROCK EXIT DRIVES AS NEEDED THROUGHOUT CONSTRUCTION.

**MAINTENANCE AND INSPECTION REQUIREMENTS:** INSPECT ROCK EXIT DRIVES EVERY 7 DAYS OR WITHIN 24 HOURS AFTER A 0.5" 24-HOUR RAIN EVENT. ROCK EXIT DRIVES MUST BE PERIODICALLY "REFRESHED" TO ENSURE PROPER FUNCTIONALITY. MAINTENANCE SHOULD BE PERFORMED WHEN THE EXIT APPEARS SMOOTH AND COMPACTED OR WHEN THE ROCK EXIT DRIVE CEASES TO FUNCTION PROPERLY. EXIT LOCATIONS SHOULD BE INSPECTED FOR SIGNS OF OFF-SITE SEDIMENT TRACKING. TRACKED SEDIMENT MUST BE REMOVED FROM ALL PAVED SURFACES WITHIN 24 HOURS OF DISCOVERY. STREET SWEEPING MUST BE USED IF ROCK EXIT DRIVES ARE NOT ADEQUATE TO PREVENT SEDIMENT FROM BEING TRACKED ONTO THE STREET.

RESPONSIBLE STAFF (CONTRACTOR TO COMPLETE):

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## Client CASCADE STORAGE PARTNERS, LLC. 700 E. MOOREHEAD ST., SUITE 100B CHARLOTTE, NC 28202

## Project AMERICAN BOULEVARD STORAGE

## Location BLOOMINGTON, MN 101 AMERICAN BLVD W

## Certification

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 professional ENGINEER under the laws of the state of Minnesota.



Brady D. Busselman  
Registration No. 44579 Date: 09/26/2018

If applicable, contact us for a wet signed copy of this plan which is available upon request at Sambatek's, Minnetonka, MN office.

## Summary

Designed: BDB Drawn: JEB  
Approved: BDB Book / Page:  
Phase: CONSTRUCTION Initial Issue: 09/26/2018

## Revision History

No.	Date	By	Submittal / Revision
A	10/04/18	JEB	REVISE WATERMAIN

## Sheet Title SWPPP NARRATIVE

## Sheet No. Revision C5.04 A

Project No. 21012

## 2.10 CONTROL STORMWATER DISCHARGE POINTS

- PIPE OR OTHER TEMPORARY OR PERMANENT OUTLETS MUST BE STABILIZED WITH TEMPORARY OR PERMANENT ENERGY DISSIPATION WITHIN 24 HOURS AFTER CONNECTION TO A SURFACE WATER.
- STABILIZE THE NORMAL WETTED PERIMETER OF A DRAINAGE DITCH OR SWALE WITHIN 200 FEET OF THE PROPERTY EDGE WITHIN 24 HOURS OF CONNECTION TO A SURFACE WATER. THE REMAINDER OF THE DITCH MUST BE STABILIZED WITHIN 14 DAYS OF CONNECTION.

**BMP DESCRIPTION:** RIPRAP

**INSTALLATION SCHEDULE:** INSTALL RIPRAP AS SHOWN ON SWPPP PLANS AND/OR GRADING PLANS. INSTALLATION MUST BE COMPLETED WITHIN 24 HOURS OF CONNECTING TO A SURFACE WATER.

**MAINTENANCE AND INSPECTION REQUIREMENTS:** INSPECT OUTLETS EVERY 7 DAYS OR WITHIN 24 HOURS AFTER A 0.5" 24-HOUR RAIN EVENT. REPAIR, REPLACE OR SUPPLEMENT NON-FUNCTIONING RIPRAP ENERGY DISSIPATION WITHIN 24 HOURS OF DISCOVERY. ANY OFF SITE ACCUMULATION OF SEDIMENT MUST BE REMOVED IN MANNER AND AT A FREQUENCY TO MINIMIZE OFF-SITE IMPACTS.

**RESPONSIBLE STAFF (CONTRACTOR TO COMPLETE):**

## 2.11 CHEMICAL EROSION AND SEDIMENT CONTROL BMPS

POLYMERS, FLOCCULANTS, OR OTHER SEDIMENTATION TREATMENT CHEMICALS MUST BE APPLIED AFTER CONVENTIONAL EROSION AND SEDIMENT CONTROL DEVICES ARE UTILIZED. CHEMICALS MAY ONLY BE APPLIED WHERE TREATED STORMWATER IS DIRECTED TO A SEDIMENT CONTROL SYSTEM WHICH ALLOWS FOR FILTRATION OR SETTLEMENT OF THE FLOC PRIOR TO DISCHARGE. CONSIDERATION MUST BE GIVEN WHEN SELECTING CHEMICALS TO THE EXPECTED SOIL TYPES TO BE EXPOSED DURING CONSTRUCTION, AND TO THE EXPECTED TURBIDITY, PH AND FLOW RATE OF STORMWATER FLOWING INTO THE CHEMICAL TREATMENT SYSTEM OR AREA. IF CHEMICALS ARE PART OF THE EROSION CONTROL PLAN, THEY MUST BE USED IN ACCORDANCE WITH ACCEPTED ENGINEERING PRACTICES, AND WITH DOSING SPECIFICATION AND SEDIMENT REMOVAL DESIGN SPECIFICATIONS PROVIDED BY THE MANUFACTURER OR PROVIDER/SUPPLIER OF THE APPLICABLE CHEMICALS.

## SECTION 3: DEWATERING & BASIN DRAINING

### 3.1 DEWATERING AND BASIN DRAINING

ALLOWABLE NON-STORMWATER DISCHARGES, AS DEFINED BY THE GENERAL PERMIT, ARE LIMITED TO DEWATERING AND BASIN DRAINING. DEWATERING OR BASIN DRAINING THAT MAY HAVE TURBID OR SEDIMENT LADEN DISCHARGE WATER MUST BE DISCHARGED TO A TEMPORARY OR PERMANENT SEDIMENTATION BASIN ON THE PROJECT SITE WHENEVER POSSIBLE. IF THE WATER CANNOT BE DISCHARGED TO A SEDIMENTATION BASIN PRIOR TO ENTERING THE SURFACE WATER, IT MUST BE TREATED WITH THE APPROPRIATE BMPS, SUCH THAT THE DISCHARGE DOES NOT ADVERSELY AFFECT THE RECEIVING WATER OR DOWNSTREAM LANDOWNERS. THE CONTRACTOR MUST ENSURE THAT DISCHARGE POINTS ARE ADEQUATELY PROTECTED FROM EROSION AND SCOUR. THE DISCHARGE MUST BE DISPERSED OVER NATURAL ROCK RIPRAP, SAND BAGS, PLASTIC SHEETING OR OTHER ACCEPTED ENERGY DISSIPATION MEASURES. ADEQUATE SEDIMENTATION CONTROL MEASURES ARE REQUIRED FOR DISCHARGE WATER THAT CONTAINS SUSPENDED SOLIDS. ALL WATER FROM DEWATERING OR BASIN DRAINING MUST BE DISCHARGED IN A MANNER THAT DOES NOT CAUSE NUISANCE CONDITIONS, EROSION IN RECEIVING CHANNELS OR ON DOWNSLOPE PROPERTIES, OR INUNDATION IN WETLANDS CAUSING SIGNIFICANT ADVERSE IMPACT TO THE WETLAND. IF THE CONTRACTOR ELECTS TO UTILIZE FILTERS WITH BACKWASH WATER, THE CONTRACTOR MUST HAUL THE BACKWASH WATER AWAY FOR DISPOSAL, RETURN THE BACKWATER TO THE BEGINNING OF THE TREATMENT PROCESS, OR INCORPORATE THE BACKWASH WATER INTO THE SITE IN A MANNER THAT DOES NOT CAUSE EROSION. THE CONTRACTOR MUST REPLACE AND CLEAN THE FILTER MEDIA USED IN DEWATERING DEVICES WHEN REQUIRED TO RETAIN ADEQUATE FUNCTION. CONTRACTOR SHALL OBTAIN A WATER USE (APPROPRIATION) PERMIT FROM THE MINNESOTA DNR FOR DEWATERING ACTIVITIES THAT WILL WITHDRAW MORE THAN 10,000 GALLONS OF WATER PER DAY OR 1 MILLION GALLONS PER YEAR.

## SECTION 4: GOOD HOUSEKEEPING BMPS

### 4.1 MATERIAL HANDLING AND WASTE MANAGEMENT

- SOLID WASTE DISPOSAL** - NO SOLID MATERIALS, INCLUDING CONSTRUCTION AND DEMOLITION MATERIALS, COLLECTED SEDIMENT, ASPHALT AND CONCRETE MILLINGS, SHALL BE ALLOWED TO BE CARRIED FROM THE SITE WITH STORM WATER. ALL SOLID WASTE, INCLUDING DISPOSABLE MATERIALS INCIDENTAL TO THE MAJOR CONSTRUCTION ACTIVITIES, MUST BE COLLECTED AND PLACED IN CONTAINERS. THE CONTAINERS WILL BE EMPTIED PERIODICALLY BY A CONTRACT TRASH DISPOSAL SERVICE AND HAULED AWAY FROM THE SITE. DISPOSAL OF SOLID WASTES MUST COMPLY WITH MPC A REQUIREMENTS.
- GROUNDWATER PROTECTION** - SUBSTANCES THAT HAVE THE POTENTIAL FOR POLLUTING SURFACE AND/OR GROUNDWATER MUST BE CONTROLLED BY WHATEVER MEANS NECESSARY IN ORDER TO ENSURE THAT THEY DO NOT DISCHARGE FROM THE SITE. AS AN EXAMPLE, SPECIAL CARE MUST BE EXERCISED DURING EQUIPMENT FUELING AND SERVICING OPERATIONS. IF A SPILL OCCURS, IT MUST BE CONTAINED AND DISPOSED OF SO THAT IT WILL NOT FLOW FROM THE SITE OR ENTER GROUNDWATER, EVEN IF THIS REQUIRES REMOVAL, TREATMENT, AND DISPOSAL OF SOIL. IN THIS REGARD, POTENTIALLY POLLUTING SUBSTANCES SHOULD BE HANDLED IN A MANNER CONSISTENT WITH THE IMPACT THEY REPRESENT
- SANITARY FACILITIES** - ALL PERSONNEL INVOLVED WITH CONSTRUCTION ACTIVITIES MUST COMPLY WITH STATE AND LOCAL SANITARY SEPTIC SYSTEM REGULATIONS. PORTABLE TOILETS MUST BE POSITIONED SO THAT THEY ARE SECURE AND WILL NOT BE TIPPED OR KNOCKED OVER. TEMPORARY SANITARY FACILITIES WILL BE PROVIDED AT THE SITE THROUGHOUT THE CONSTRUCTION PHASE WHERE REQUIRED BY STATE OR LOCAL REGULATIONS. THEY MUST BE UTILIZED BY ALL CONSTRUCTION PERSONNEL AND BE SERVICED BY A COMMERCIAL OPERATOR.

### 4.2 ESTABLISH PROPER STORAGE, HANDLING & DISPOSAL PRACTICES

HAZARDOUS MATERIALS & TOXIC WASTE (INCLUDING OIL, DIESEL FUEL, GASOLINE, HYDRAULIC FLUIDS, PAINT SOLVENTS, PETROLEUM-BASED PRODUCTS, WOOD PRESERVATIVES, ADDITIVES, CURING COMPOUNDS, AND ACIDS) MUST BE STORED IN WATERPROOF CONTAINERS WITH SECONDARY CONTAINMENT, AND THEIR LOCATION(S) MUST BE NOTED ON THE SWPPP MAP. EXCEPT DURING APPLICATION, THE CONTENTS MUST BE KEPT IN TRUCKS OR WITHIN STORAGE FACILITIES WITH RESTRICTED ACCESS TO PREVENT VANDALISM. STORAGE AND DISPOSAL OF HAZARDOUS WASTE MUST BE IN COMPLIANCE WITH MPC A REGULATIONS. RUNOFF CONTAINING SUCH MATERIAL MUST BE COLLECTED, REMOVED FROM THE SITE, TREATED, AND DISPOSED AT AN APPROVED SOLID WASTE OR CHEMICAL DISPOSAL FACILITY. BUILDING PRODUCTS THAT HAVE THE POTENTIAL TO LEACH POLLUTANTS AND PESTICIDES, HERBICIDES, INSECTICIDES, FERTILIZERS, TREATMENT CHEMICALS AND LANDSCAPE MATERIALS MUST BE UNDER COVER BY PLASTIC SHEETING OR TEMPORARY ROOFS TO PREVENT DISCHARGE, OR PROTECTED BY SIMILAR EFFECTIVE MEANS TO PREVENT CONTACT WITH STORMWATER.

### 4.3 DESIGNATE WASHOUT AREAS

THE CONTRACTOR SHALL DESIGNATE AREAS FOR CONCRETE AND OTHER (STUCCO, PAINT, FOR RELEASE OILS, CURING COMPOUNDS AND OTHER CONSTRUCTION MATERIALS RELATED TO THE CONSTRUCTION ACTIVITY) WASHOUTS, AND NOTE THE LOCATIONS ON THE SITE MAP. ALL LIQUID AND SOLID WASTES GENERATED BY WASHOUT OPERATIONS MUST BE CONTAINED IN A LEAK PROOF CONTAINMENT FACILITY OR IMPERMEABLE LAYER, A COMPACTED CLAY LINER IS NOT AN ACCEPTABLE IMPERMEABLE LAYER. THE LIQUID AND SOLID WASTES MUST

NOT CONTACT THE GROUND, AND THERE MUST NOT BE RUNOFF FROM THE WASHOUT OPERATIONS OR AREAS. LIQUID AND SOLID WASTE MUST BE DISPOSED OF PROPERLY AND IN COMPLIANCE WITH MPC A REGULATIONS. A SIGN MUST BE INSTALLED ADJACENT TO EACH WASHOUT FACILITY TO INFORM SITE WORKERS TO UTILIZE PROPER FACILITIES FOR DISPOSAL OF CONCRETE AND OTHER WASTES.

**BMP DESCRIPTION:** CONCRETE WASHOUT

**INSTALLATION SCHEDULE:** PRIOR TO CONCRETE WORK.

**MAINTENANCE AND INSPECTION REQUIREMENTS:** INSPECT CONCRETE WASHOUTS FOR EVIDENCE OF DISCHARGE EVERY 7 DAYS OR WITHIN 24 HOURS AFTER A 0.5" 24-HOUR RAIN EVENT. REPAIR, REPLACE OR SUPPLEMENT NON-FUNCTIONING CONCRETE WASHOUTS WITHIN 24 HOURS OR PRIOR TO NEXT USE.

**RESPONSIBLE STAFF (CONTRACTOR TO COMPLETE):**

### 4.4 ESTABLISH PROPER EQUIPMENT/VEHICLE FUELING AND MAINTENANCE PRACTICES

THE CONTRACTOR SHALL DESIGNATE AREAS FOR EQUIPMENT FUELING, CLEANING, MAINTENANCE AND REPAIR, AND NOTE THE LOCATION(S) ON THE SWPPP SITE MAPS. RUNOFF MUST BE CONTAINED WITHIN THE DESIGNATED AREAS (I.E. THROUGH USE OF A TEMPORARY BERM). THE AREAS MUST NOT BE LOCATED IN ANY SURFACE WATER. SPECIAL CARE MUST BE EXERCISED DURING EQUIPMENT FUELING AND SERVICING OPERATIONS. IF A SPILL OCCURS, IT MUST BE CONTAINED AND DISPOSED OF SO THAT IT WILL NOT FLOW FROM THE SITE OR ENTER GROUNDWATER, EVEN IF THIS REQUIRES REMOVAL, TREATMENT, AND DISPOSAL OF SOIL. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ADEQUATE SUPPLIES ARE AVAILABLE AT ALL TIMES TO CLEAN UP DISCHARGED MATERIALS AND THAT AN APPROPRIATE DISPOSAL METHOD IS AVAILABLE FOR RECOVERED SPILLED MATERIALS. NO ENGINE DEGREASING IS ALLOWED ON SITE.

### 4.5 CONTROL EQUIPMENT/VEHICLE WASHING

THE CONTRACTOR SHALL DESIGNATE LOCATION(S) FOR VEHICLE WASHING, AND NOTE THE LOCATION(S) ON THE SWPPP SITE MAP. RUNOFF FROM THE WASHING AREA MUST BE CONTAINED IN A SEDIMENT BASIN OR OTHER SIMILARLY EFFECTIVE CONTROLS AND WASTE FROM THE WASHING ACTIVITY MUST BE PROPERLY DISPOSED OF. THE CONTRACTOR MUST PROPERLY USE AND STORE SOAPS, DETERGENTS AND SOLVENTS. ENGINE DEGREASING OF TRUCKS AND OTHER CONSTRUCTION VEHICLES IS ALSO PROHIBITED.

### 4.6 SPILL PREVENTION AND CONTROL PLAN

- ACCIDENTAL SPILL** - DISCHARGE OF OIL OR OTHER HAZARDOUS SUBSTANCES IS SUBJECT TO REPORTING AND CLEAN UP REQUIREMENTS. IN CASE OF AN ACCIDENTAL SPILL, THE MINNESOTA POLLUTION CONTROL AGENCY IS TO BE NOTIFIED AT THEIR **24-HOUR TELEPHONE NUMBER: 651-649-5451**. REFER TO SECTION V, ITEM C OF THE GENERAL PERMIT.
- GROUNDWATER PROTECTION** - SUBSTANCES THAT HAVE THE POTENTIAL FOR POLLUTING SURFACE AND/OR GROUNDWATER MUST BE CONTROLLED BY WHATEVER MEANS NECESSARY IN ORDER TO ENSURE THAT THEY DO NOT DISCHARGE FROM THE SITE. AS AN EXAMPLE, SPECIAL CARE MUST BE EXERCISED DURING EQUIPMENT FUELING AND SERVICING OPERATIONS. IF A SPILL OCCURS, IT MUST BE CONTAINED AND DISPOSED OF SO THAT IT WILL NOT FLOW FROM THE SITE OR ENTER GROUNDWATER, EVEN IF THIS REQUIRES REMOVAL, TREATMENT, AND DISPOSAL OF SOIL. IN THIS REGARD, POTENTIALLY POLLUTING SUBSTANCES SHOULD BE HANDLED IN A MANNER CONSISTENT WITH THE IMPACT THEY REPRESENT

## SECTION 5: POST-CONSTRUCTION BMPS

THE PROPOSED SITE WILL DRAIN STORMWATER RUNOFF TO 4 INFILTRATION BASINS LOCATED AT EACH LOT CORNER. STORMWATER RUNOFF WILL THEN BE ROUTED TO THE NORTH WHERE IT WILL BE CONVEYED INTO THE CITY STORM SEWER SYSTEM.

**BMP DESCRIPTION:** RAIN GUARDIAN

**INSTALLATION SCHEDULE:** ALONG WITH STORM SEWER NETWORK

**MAINTENANCE AND INSPECTION REQUIREMENTS:** PRACTICE SHOULD BE INSPECTED (AND CLEANED OUT IF DEEMED NECESSARY) SEMI-ANNUALLY TO ENSURE THAT SEDIMENT IS NOT BEGINNING TO WASH OUT DURING STORM EVENTS. DEVICES SHOULD BE CLEANED OUT AT LEAST ONCE PER YEAR OR AS NEEDED.

**RESPONSIBLE STAFF (CONTRACTOR TO COMPLETE):**

**BMP DESCRIPTION:** INFILTRATION BASIN

**INSTALLATION SCHEDULE:** AFTER SITE IS STABILIZED

**MAINTENANCE AND INSPECTION REQUIREMENTS:** NO HEAVY EQUIPMENT TO BE PLACED IN THESE AREAS, MINIMIZING THE COMPACTION. PERIODIC CHECK OF FLOW CONDITIONS TO TRACK DRAWDOWN OF THE WATER IN THE BASIN.

THE DEVICE WILL BE INSPECTED AND CLEARED OF SEDIMENT BUILD UP TWICE PER YEAR AND AS NEEDED. PLANTED VEGETATION ALSO NEEDS TO BE INSPECTED PERIODICALLY AND REPLACED AS NECESSARY. INSPECTION WILL ALSO INCLUDE CHECKING FOR ANY PROBLEMATIC EROSION TAKING PLACE ON THE SLOPES OF THE BASIN. EROSION ISSUES WILL BE REPAIRED AS THEY ARE FOUND.

**RESPONSIBLE STAFF (CONTRACTOR TO COMPLETE):**

## SECTION 6: INSPECTIONS

### 6.1 INSPECTIONS

#### 1. INSPECTION FREQUENCY AND RESPONSIBILITY

BETWEEN THE TIME THIS SWPPP IS IMPLEMENTED AND FINAL SITE STABILIZATION IS ACHIEVED AND THE NOTICE OF TERMINATION FILED WITH THE MPC A, ALL DISTURBED AREAS AND POLLUTANT CONTROLS MUST BE INSPECTED AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS FOLLOWING A RAINFALL OF 0.5 INCHES OR GREATER. THE PURPOSE OF SITE INSPECTIONS IS TO ASSESS PERFORMANCE OF POLLUTANT CONTROLS. THE INSPECTIONS WILL BE CONDUCTED BY THE CONTRACTOR'S DESIGNATED REPRESENTATIVE. BASED ON THESE INSPECTIONS, THE CONTRACTOR WILL DECIDE WHETHER IT IS NECESSARY TO MODIFY THIS SWPPP, ADD OR RELOCATE STRUCTURAL BMPS, OR WHATEVER ELSE MAY BE NEEDED IN ORDER TO PREVENT POLLUTANTS FROM LEAVING THE SITE VIA STORM WATER RUNOFF. IF THE SWPPP REQUIRES MODIFICATION, THOSE CHANGES TO THE SWPPP MUST BE DOCUMENTED. THE CONTRACTOR HAS THE DUTY TO CAUSE POLLUTANT CONTROL MEASURES TO BE REPAIRED, MODIFIED, MAINTAINED, SUPPLEMENTED, OR WHATEVER ELSE IS NECESSARY IN ORDER TO ACHIEVE EFFECTIVE POLLUTANT CONTROL.

- INSPECTION PROCEDURES** - EXAMPLES OF PARTICULAR ITEMS TO EVALUATE DURING SITE INSPECTIONS ARE LISTED BELOW. THIS LIST IS NOT INTENDED TO BE COMPREHENSIVE. DURING EACH INSPECTION THE INSPECTOR MUST EVALUATE OVERALL POLLUTANT CONTROL SYSTEM PERFORMANCE AS WELL AS PARTICULAR DETAILS OF INDIVIDUAL SYSTEM COMPONENTS. ADDITIONAL FACTORS SHOULD BE CONSIDERED AS APPROPRIATE TO THE CIRCUMSTANCES.
  - PRE-INSPECTION PREPARATION:
    - INSPECTORS SHOULD BE FAMILIAR WITH THE SWPPP, INCLUDING THE EROSION AND SEDIMENT CONTROL PLANS, PAST INSPECTION REPORTS, AND MAINTENANCE LOGS.
  - SITE ENTRY:
    - BEFORE ENTERING THE SITE, OBSERVE THE SURROUNDINGS AND VARIOUS STAGES OF CONSTRUCTION. NOTE AREAS FOR IN-DEPTH REVIEW AND ANY POTENTIAL ISSUES.
    - THIS IS A GOOD TIME TO VIEW CONSTRUCTION SITE VEHICLE EXIT LOCATIONS AND PERIMETER CONTROLS.
  - RECORDS REVIEW:

- VERIFY THAT A COPY OF THE SWPPP AND APPLICATION FOR THE NPDES STORM WATER PERMIT, AND COPIES OF ALL CONSTRUCTION SITE INSPECTIONS ARE ON SITE.

- VERIFY THAT THE TIMING FOR INSTALLATION OF ALL EROSION PREVENTION AND SEDIMENT CONTROL BMPS, AS WELL AS CONSTRUCTION PHASING, IS GENERALLY BEING FOLLOWED.

- SWPPPS ARE INTENDED TO BE DYNAMIC DOCUMENTS, VERIFY THAT AMENDMENTS OR CHANGES TO THE SWPPP ARE BEING MADE WHEN:

- A CHANGE IN DESIGN, CONSTRUCTION, OPERATION, MAINTENANCE, WEATHER OR SEASONAL CONDITIONS HAVE A SIGNIFICANT EFFECT ON STORM WATER DISCHARGES
- INSPECTIONS INDICATE THE SWPPP IS NOT EFFECTIVE
- THE SWPPP IS NOT CONSISTENT WITH THE TERMS OF THE GENERAL PERMIT
- SITE INSPECTION (NOTE: TIMELINES FOR MAINTENANCE INCLUDED IN INSPECTION/MAINTENANCE REPORT)
  - INSPECT DISCHARGE POINTS DOWNSTREAM AND OFF-SITE AREAS FOR SIGNS OF IMPACT.
  - INSPECT PERIMETER CONTROLS:
    - HAVE PERIMETER CONTROLS BEEN PROPERLY INSTALLED AND MAINTAINED?
    - ARE CONSTRUCTION ENTRANCES/EXITS FUNCTIONING PROPERLY? ARE ADDITIONAL ENTRANCES/EXITS BEING USED THAT ARE NOT STABILIZED?
    - ALL STORM DRAINS MUST BE PROTECTED AND TEMPORARY STOCKPILES MUST HAVE SEDIMENT CONTROLS INSTALLED.
    - ALL EXPOSED SOILS MUST HAVE TEMPORARY OR PERMANENT EROSION PROTECTION WITHIN 14 DAYS OF INACTIVITY.
  - COMPARE BMPS IN THE SWPPP WITH CONSTRUCTION SITE CONDITIONS: ARE REQUIRED BMPS IN PLACE; ARE ADDITIONAL BMPS NEEDED; ARE BMPS IN PLACE PROPERLY INSTALLED AND MAINTAINED?
  - INSPECT AREAS THAT HAVE BEEN DISTURBED AND ARE NOT CURRENTLY BEING WORKED. ANY UNSEEDD OR UNMULCHED BARE AREAS THAT HAVE BEEN IDLE FOR 2 WEEKS SHOULD BE NOTED.
  - INSPECT AREAS WITH FINAL STABILIZATION. IN ORDER FOR FINAL STABILIZATION TO BE ACHIEVED, AREAS MUST HAVE A UNIFORM COVER WITH A DENSITY OF 70% OVER ENTIRE AREA. TEMPORARY BMPS SHOULD BE REMOVED AND AREAS DISTURBED BY REMOVAL SEEDD AS NECESSARY.

- EXIT INTERVIEW:
  - DEBRIEF THE PERSON IN CHARGE. EXPLAIN THE IDENTIFIED DEFICIENCIES AND ANY AREAS OF CONCERN.
  - A COPY OF THE COMPLETED INSPECTION REPORT MUST BE KEPT WITH THE SWPPP ON SITE.

- THE INSPECTION REPORT USED SHOULD INCLUDE, AT A MINIMUM, THE FOLLOWING:
  - DATE & TIME OF INSPECTION
  - NAME OF INSPECTOR(S)
  - FINDINGS OF INSPECTIONS AND RECOMMENDATIONS FOR CORRECTIVE ACTIONS
  - CORRECTIVE ACTIONS TAKEN, INCLUDING DATES, TIMES AND NAMES OF PARTY COMPLETING MAINTENANCE
  - DATE & AMOUNT OF RAINFALL
  - RECORD OF ALL POINTS OF DISCHARGE FROM THE PROPERTY AND DESCRIPTION OF DISCHARGE
  - NOTE TO UPDATE THE SWPPP

- COMPARE BMPS IN THE SWPPP WITH CONSTRUCTION SITE CONDITIONS: ARE REQUIRED BMPS IN PLACE; ARE ADDITIONAL BMPS NEEDED; ARE BMPS IN PLACE PROPERLY INSTALLED AND MAINTAINED?
- INSPECT AREAS THAT HAVE BEEN DISTURBED AND ARE NOT CURRENTLY BEING WORKED. ANY UNSEEDD OR UNMULCHED BARE AREAS THAT HAVE BEEN IDLE FOR 2 WEEKS SHOULD BE NOTED.
- INSPECT AREAS WITH FINAL STABILIZATION. IN ORDER FOR FINAL STABILIZATION TO BE ACHIEVED, AREAS MUST HAVE A UNIFORM COVER WITH A DENSITY OF 70% OVER ENTIRE AREA. TEMPORARY BMPS SHOULD BE REMOVED AND AREAS DISTURBED BY REMOVAL SEEDD AS NECESSARY.

## SECTION 8: FINAL STABILIZATION

FINAL STABILIZATION - TO ACHIEVE FINAL STABILIZATION OF THE SITE, THE CONTRACTOR WILL IMPLEMENT THE FOLLOWING MEASURES AFTER ALL SOIL DISTURBING ACTIVITIES AT THE SITE HAVE BEEN COMPLETED.

- ALL SOILS MUST BE STABILIZED BY A UNIFORM PERENNIAL VEGETATIVE COVER WITH A DENSITY OF 70 PERCENT OVER THE ENTIRE PERVIOUS SURFACE AREA, OR BY OTHER EQUIVALENT MEANS NECESSARY TO PREVENT SOIL FAILURE UNDER EROSION CONDITIONS. REFER TO LANDSCAPING PLANS/SPECIFICATIONS FOR TYPE OF VEGETATIVE COVER.

- THE PERMANENT STORMWATER MANAGEMENT SYSTEM IS CONSTRUCTED, MEETS ALL REQUIREMENTS IN PART III.D. OF THE GENERAL PERMIT AND IS OPERATING AS DESIGNED.
- ALL TEMPORARY EROSION PREVENTION AND SEDIMENT CONTROL BMPS MUST BE REMOVED.
- FOR CONSTRUCTION PROJECTS ON LAND USED FOR AGRICULTURAL PURPOSES FINAL STABILIZATION MAY BE ACCOMPLISHED BY RETURNING THE DISTURBED LAND TO ITS PRECONSTRUCTION AGRICULTURAL USE.
- FOR RESIDENTIAL CONSTRUCTION ONLY, INDIVIDUAL LOTS ARE CONSIDERED FINALLY STABILIZED IF THE STRUCTURE(S) ARE FINISHED AND TEMPORARY EROSION PROTECTION AND DOWNGRADE PERMETER CONTROL HAS BEEN COMPLETED AND THE RESIDENCE HAS BEEN SOLD TO THE HOMEOWNER. ADDITIONALLY, THE PERMITTEE HAS DISTRIBUTED THE MPC A'S "HOMEOWNER FACT SHEET" TO THE HOMEOWNER TO INFORM THE HOMEOWNER OF THE NEED FOR, AND BENEFITS OF, PERMANENT COVER.

## 6.2 DELEGATION OF AUTHORITY

**DULY AUTHORIZED REPRESENTATIVE(S) OR POSITION(S):**

COMPANY OR ORGANIZATION NAME:  
NAME:  
POSITION:  
ADDRESS:  
CITY, STATE, ZIP CODE:  
TELEPHONE NUMBER:  
FAX/EMAIL:

### 6.3 CORRECTIVE ACTION LOG

THE INSPECTION/MAINTENANCE FORM, AVAILABLE UPON REQUEST, INCORPORATES BOTH INSPECTION AND MAINTENANCE REPORTING INTO A SINGLE FORM. THIS FORM ALSO SPECIFIES THE TIME ALLOWED FOR CORRECTIONS TO BE PERFORMED. IF THE PARTY PERFORMING INSPECTIONS CHOOSES TO USE ANOTHER INSPECTION FORM, A SEPARATE CORRECTIVE ACTION LOG MUST BE PROVIDED.

## SECTION 7: RECORD KEEPING AND TRAINING

### 7.1 RECORDKEEPING

**RECORD RETENTION** - THE OWNER MUST KEEP THE SWPPP INCLUDING ALL CHANGES MADE TO IT DURING CONSTRUCTION (SEE SECTION 7.2), ALONG WITH THE FOLLOWING ADDITIONAL RECORDS ON FILE FOR THREE YEARS AFTER COMPLETION OF THE CONSTRUCTION PROJECT (FINAL STABILIZATION AND NOTICE OF TERMINATION):

- ANY OTHER STORMWATER RELATED PERMITS REQUIRED FOR THE PROJECT
- RECORDS OF ALL INSPECTIONS AND MAINTENANCE CONDUCTED DURING CONSTRUCTION
- ALL PERMANENT OPERATION AND MAINTENANCE AGREEMENTS THAT HAVE BEEN IMPLEMENTED, INCLUDING ALL RIGHT OF WAY, CONTRACTS, COVENANTS AND OTHER BINDING REQUIREMENTS REGARDING PERPETUAL MAINTENANCE
- ALL REQUIRED CALCULATIONS FOR DESIGN OF THE TEMPORARY AND PERMANENT STORM WATER MANAGEMENT SYSTEMS

### 7.2 RECORD KEEPING

THE CONTRACTOR SHALL KEEP A RECORD LOG OF ALL MODIFICATIONS TO THE SWPPP. AN EXAMPLE OF A SWPPP UPDATE LOG FORM CAN BE PROVIDED UPON REQUEST.

**MODIFICATIONS TO THE SWPPP** - THIS SWPPP INTENDS TO CONTROL WATER-BORNE AND LIQUID POLLUTANT DISCHARGES BY SOME COMBINATION OF INTERCEPTION, FILTRATION, AND CONTAINMENT. THE GENERAL CONTRACTOR AND SUBCONTRACTORS IMPLEMENTING THIS SWPPP MUST REMAIN ALERT TO THE NEED TO PERIODICALLY REFINE AND UPDATE THE SWPPP IN ORDER TO ACCOMPLISH THE INTENDED GOALS. THIS SWPPP MUST BE AMENDED AS NECESSARY DURING THE COURSE OF CONSTRUCTION IN ORDER TO KEEP IT CURRENT WITH THE POLLUTANT CONTROL MEASURES UTILIZED AT THE SITE. AMENDING THE SWPPP DOES NOT MEAN THAT IT HAS TO BE REPRINTED. IT IS ACCEPTABLE TO ADD APPENDAS, SKETCHES, NEW SECTIONS, AND/OR REVISED DRAWINGS. THIS SWPPP MUST BE UPDATED AS NECESSARY TO INCLUDE ADDITIONAL REQUIREMENTS, SUCH AS ADDITIONAL OR MODIFIED BMPS, DESIGNED TO CORRECT PROBLEMS IDENTIFIED OR ADDRESS SITUATIONS WHENEVER:

- THERE IS A CHANGE IN DESIGN, CONSTRUCTION, OPERATION, MAINTENANCE, WEATHER OR SEASONAL CONDITIONS THAT HAS A SIGNIFICANT EFFECT ON THE DISCHARGE OF POLLUTANTS TO SURFACE WATERS OR UNDERGROUND WATERS.
- INSPECTIONS OR INVESTIGATIONS BY SITE OPERATORS, LOCAL, STATE OR FEDERAL OFFICIALS INDICATE THE SWPPP IS NOT EFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING THE DISCHARGE OF POLLUTANTS TO SURFACE WATERS OR UNDERGROUND WATERS OR THAT THE DISCHARGES ARE CAUSING WATER QUALITY STANDARD EXCEEDANCES.
- THE SWPPP IS NOT ACHIEVING THE GENERAL OBJECTIVES OF CONTROLLING POLLUTANTS IN STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY, OR THE SWPPP IS NOT CONSISTENT WITH THE TERMS AND CONDITIONS OF THE GENERAL PERMIT.

PL201700265  
PL2017-265

 www.sambatek.com

12800 Whitewater Drive, Suite 300

Minnetonka, MN 55343

763.476.6010 telephone  
763.476.8532 facsimile

Engineering | Surveying | Planning | Environmental

Client  
**CASCADE  
STORAGE  
PARTNERS, LLC.**  
700 E. MOOREHEAD ST., SUITE 100B  
CHARLOTTE, NC 28202

Project  
**AMERICAN  
BOULEVARD  
STORAGE**

Location  
**BLOOMINGTON,  
MN**  
101 AMERICAN BLVD W

Certification  
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 professional ENGINEER under the laws of the state of Minnesota.



Brady D. Busselman  
Registration No. 44579 Date: 09/26/2018

If applicable, contact us for a wet signed copy of this plan which is available upon request at Sambatek's, Minnetonka, MN office.

## Summary

Designed: BDB Drawn: JEB  
Approved: BDB Book / Page:  
Phase: CONSTRUCTION/Initial Issue: 09/26/2018

Revision History  
No. Date By Submittal / Revision  
A 10/04/18 JEB REVISE WATERMAIN

## UNIVERSITY OF MINNESOTA

Examine your card carefully. To report errors and request a corrected card, contact the Erosion and Stormwater Management Program at (612) 625-9733, or write: Erosion and Stormwater Management Program, 1390 Eckles Avenue, St Paul MN 55108.

UNIVERSITY OF MINNESOTA

Joshua Balzer

Joshua Balzer  
Sambatek, Inc.  
12800 Whitewater Drive Suite 300  
Minnetonka, MN 55343

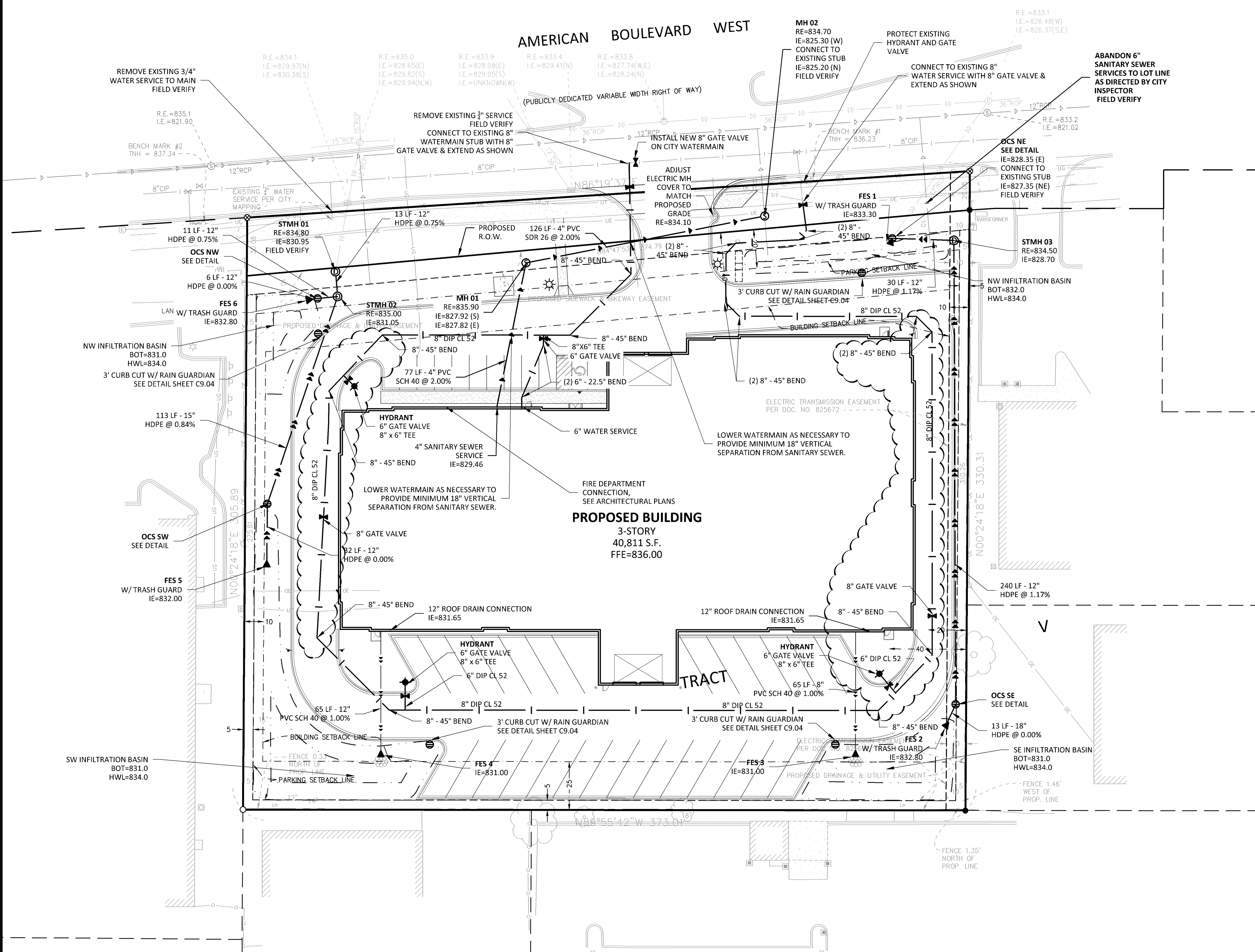
Design of Construction SWPPP (May 31 2019)

See reverse side for important information.

Sheet Title  
**SWPPP  
NARRATIVE**

Sheet No. Revision  
**C5.05 A**

Project No. 21012



**LEGEND**

	PROPOSED	EXISTING
CURB & GUTTER		
STORM SEWER		
SANITARY SEWER		
FORCEMAIN (SAN.)		
WATERMAIN		
EASEMENT		
DRAINILE		
GAS LINE		
ELECTRIC		
TELEPHONE		

**UTILITY CONSTRUCTION NOTES**

- THE UTILITY IMPROVEMENTS FOR THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE "STANDARD UTILITIES SPECIFICATIONS" AS PUBLISHED BY THE CITY ENGINEERS ASSOCIATION OF MINNESOTA (CEAM), EXCEPT AS MODIFIED HEREIN. CONTRACTOR SHALL OBTAIN A COPY OF THESE SPECIFICATIONS.
  - ALL UTILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY REQUIREMENTS.
  - CONTRACTOR SHALL NOT OPEN, TURN OFF, INTERFERE WITH, OR ATTACH ANY PIPE OR HOSE TO OR TRAP WATERMAIN BELONGING TO THE CITY UNLESS DULY AUTHORIZED TO DO SO BY THE CITY. ANY ADVERSE CONSEQUENCES OF ANY SCHEDULED OR UNSCHEDULED DISRUPTIONS OF SERVICE TO THE PUBLIC ARE THE LIABILITY OF CONTRACTOR.
  - A MINIMUM VERTICAL SEPARATION OF 18 INCHES AND HORIZONTAL SEPARATION OF 10-FEET BETWEEN OUTSIDE PIPE DIAMETERS IS REQUIRED AT ALL WATERMAIN AND SEWER MAIN (BUILDING, STORM AND SANITARY) CROSSINGS.
    - ALL MATERIALS SHALL BE AS SPECIFIED IN CEAM SPECIFICATIONS EXCEPT AS MODIFIED HEREIN.
    - ALL SANITARY SEWER TO BE PVC SDR-26, UNLESS NOTED OTHERWISE.
      - ALL SANITARY SEWER SERVICES TO BUILDING SHALL BE PVC SCH 40 CONFORMING TO ASTM D2665.
      - ALL WATERMAIN TO BE DUCTILE IRON - CLASS 52 WITH 8 MIL POLY WRAP, UNLESS NOTED OTHERWISE.
        - ALL WATERMAIN TO HAVE 8 TO 10-FEET OF COVER OVER TOP OF WATERMAIN.
        - PROVIDE THRUST BLOCKING AND MECHANICAL JOINT RESTRAINTS ON ALL WATERMAIN JOINTS PER CITY STANDARDS.
      - ALL STORM SEWER PIPE TO BE SMOOTH INTERIOR DUAL WALL HDPE PIPE WITH WATER TIGHT GASKETS, UNLESS NOTED OTHERWISE.
      - ALL STORM SEWER PIPE FOR ROOF DRAIN SERVICES TO BUILDING SHALL BE PVC SCH 40 CONFORMING TO ASTM D2665.
    - RIP RAP SHALL BE Mn/DOT CLASS 3.
  - COORDINATE ALL BUILDING SERVICE CONNECTION LOCATIONS AND INVERT ELEVATIONS WITH MECHANICAL CONTRACTOR PRIOR TO CONSTRUCTION.
  - ALL BUILDING SERVICE CONNECTIONS (STORM, SANITARY, WATER) ARE TO BE INSULATED TO AN EQUIVALENT OF 8" OF PROTECTION FROM FREEZING FROM BUILDING OR TO POINT WHERE 8-FEET OF COVER IS ACHIEVED.
  - CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID PROPERTY DAMAGE TO ADJACENT PROPERTIES DURING THE CONSTRUCTION PHASES OF THIS PROJECT. CONTRACTOR WILL BE HELD SOLELY RESPONSIBLE FOR ANY DAMAGES TO THE ADJACENT PROPERTIES OCCURRING DURING THE CONSTRUCTION PHASES OF THIS PROJECT.
  - SAFETY NOTICE TO CONTRACTORS: IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS ON THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE DUTY OF THE ENGINEER OR THE DEVELOPER TO CONDUCT CONSTRUCTION REVIEW OF CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF CONTRACTOR'S SAFETY MEASURES IN, ON OR NEAR THE CONSTRUCTION SITE.
  - ALL AREAS OUTSIDE THE PROPERTY BOUNDARIES THAT ARE DISTURBED BY UTILITY CONSTRUCTION SHALL BE RESTORED IN KIND. SODDED AREAS SHALL BE RESTORED WITH 6 INCHES OF TOPSOIL PLACED BENEATH THE SOD.
  - CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND MAINTAINING TRAFFIC CONTROL DEVICES SUCH AS BARRICADES, WARNING SIGNS, DIRECTIONAL SIGNS, FLAGMEN AND LIGHTS TO CONTROL THE MOVEMENT OF TRAFFIC WHERE NECESSARY. TRAFFIC CONTROL DEVICES SHALL CONFORM TO APPROPRIATE MINNESOTA DEPARTMENT OF TRANSPORTATION STANDARDS.
  - ALL SOILS TESTING SHALL BE COMPLETED BY AN INDEPENDENT SOILS ENGINEER. EXCAVATION FOR THE PURPOSE OF REMOVING UNSTABLE OR UNSUITABLE SOILS SHALL BE COMPLETED AS REQUIRED BY THE SOILS ENGINEER. THE UTILITY BACKFILL CONSTRUCTION SHALL COMPLY WITH THE REQUIREMENTS OF THE SOILS ENGINEER. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED SOILS TESTS AND SOIL INSPECTIONS WITH THE SOILS ENGINEER.
- A GEOTECHNICAL ENGINEERING REPORT HAS BEEN COMPLETED BY:
 

COMPANY: PROFESSIONAL SERVICE INDUSTRIES, INC.  
ADDRESS: 2915 WATERS ROAD, SUITE 112 EAGAN, MN 55121  
PHONE: 651-646-8148  
DATED: NOVEMBER 28, 2017

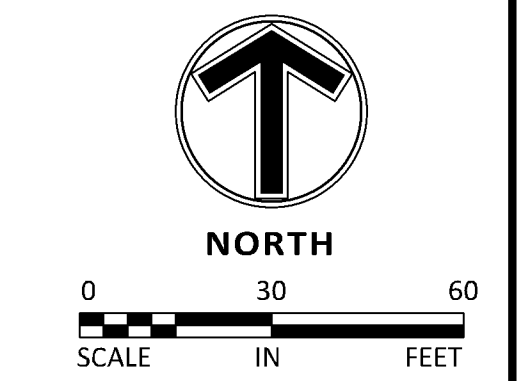
CONTRACTOR SHALL OBTAIN A COPY OF THIS SOILS REPORT.
- CONTRACTOR SHALL SUBMIT 2 COPIES OF SHOP DRAWINGS FOR MANHOLE AND CATCH BASIN STRUCTURES TO SAMBATEK. CONTRACTOR SHALL ALLOW 5 WORKING DAYS FOR SHOP DRAWING REVIEW.
- CONTRACTOR AND MATERIAL SUPPLIER SHALL DETERMINE THE MINIMUM DIAMETER REQUIRED FOR EACH STORM SEWER STRUCTURE.
- TAPS OF LIVE WATER MAINS ARE DONE BY CITY FORCES AND PAID FOR AND COORDINATED WITH THE CONTRACTOR.
- UTILITY AND MECHANICAL CONTRACTORS MUST COORDINATE THE INSTALLATION OF ALL WATER AND SEWER SERVICE PIPES INTO THE BUILDING TO ACCOMMODATE CITY INSPECTION AND TESTING.
- CONTRACTOR SHALL PROVIDE UTILITY AS-BUILTS TO CITY PRIOR TO CERTIFICATE OF OCCUPANCY.
- STORM SEWER PIPE LENGTHS INCLUDE FES.

THE SUBSURFACE UTILITY INFORMATION SHOWN ON THESE PLANS IS A UTILITY QUALITY LEVEL D. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF ASCE/CES 38-02, TITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA." THE CONTRACTOR AND/OR SUBCONTRACTORS SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. BY CONTACTING THE NOTIFICATION CENTER (GOPHER STATE ONE) FOR MINNESOTA, THE CONTRACTOR AND/OR SUBCONTRACTOR AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES, WHICH MIGHT BE OCCASIONED BY HIS OR HER FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UTILITIES (UNDERGROUND AND OVERHEAD).

IF THE CONTRACTOR ENCOUNTERS ANY DRAIN TILE WITHIN THE SITE, HE OR SHE SHALL NOTIFY THE ENGINEER WITH THE LOCATION, SIZE, INVERT AND IF THE TILE LINE IS ACTIVE. NO DRAIN TILE SHALL BE BACKFILLED WITHOUT APPROVAL FROM THE PROJECT ENGINEER.

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

**ENGINEERING DIVISION**  
Approved By: Julie Long, PE  
10/08/2018 10:38:29 AM



**Client**  
**CASCADE STORAGE PARTNERS, LLC.**  
700 E. MOOREHEAD ST., SUITE 100B  
CHARLOTTE, NC 28202

**Project**  
**AMERICAN BOULEVARD STORAGE**

**Location**  
**BLOOMINGTON, MN**  
101 AMERICAN BLVD W

**Certification**  
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 professional ENGINEER under the laws of the state of Minnesota.  
*Brady D. Busselman*  
Brady D. Busselman  
Registration No. 44579 Date: 09/26/2018

If applicable, contact us for a wet signed copy of this plan which is available upon request at Sambatek's, Minnetonka, MN office.

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Approved: BDB Book / Page:  
Phase: CONSTRUCTION/Initial Issue: 09/26/2018

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A 10/04/18 JEB REVISE WATERMAIN

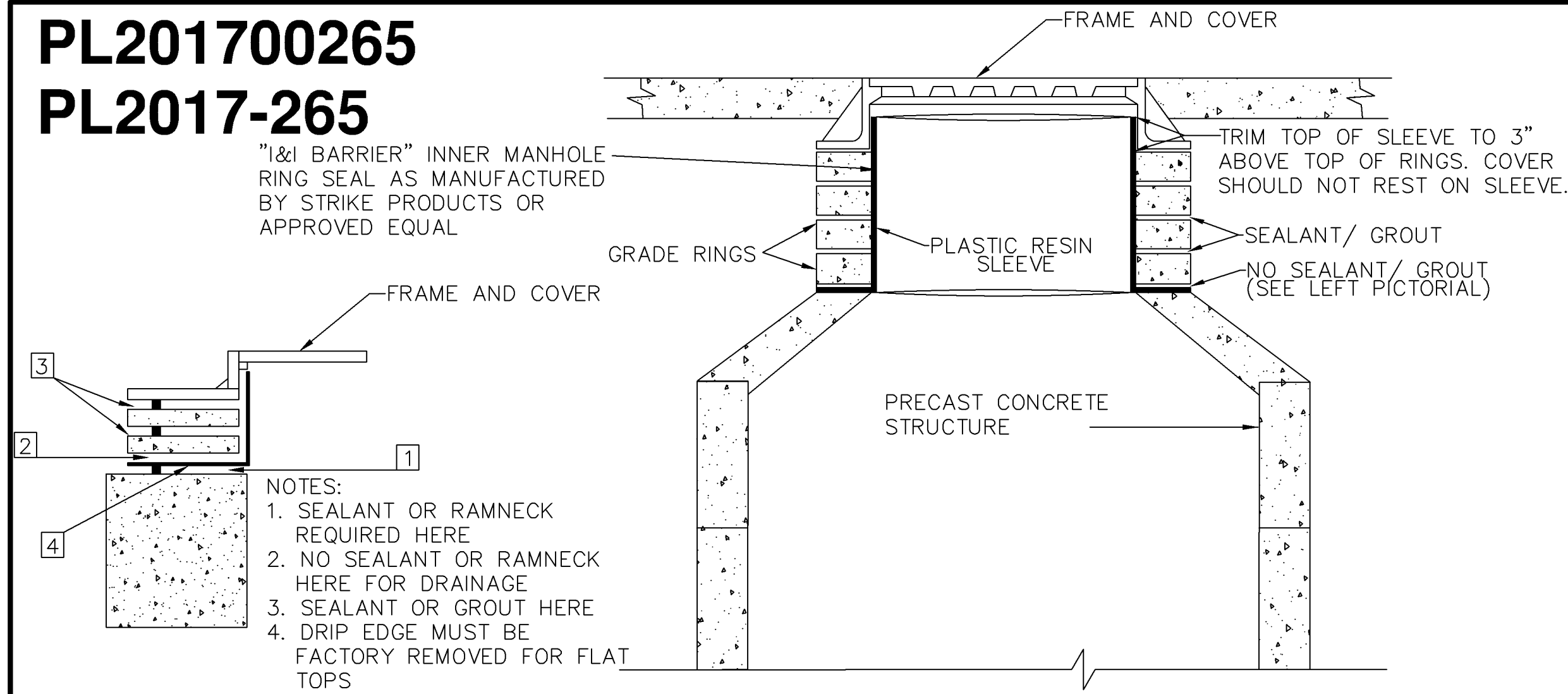
**Sheet Title**  
**UTILITY PLAN**

**Sheet No. Revision**  
**C6.01 A**

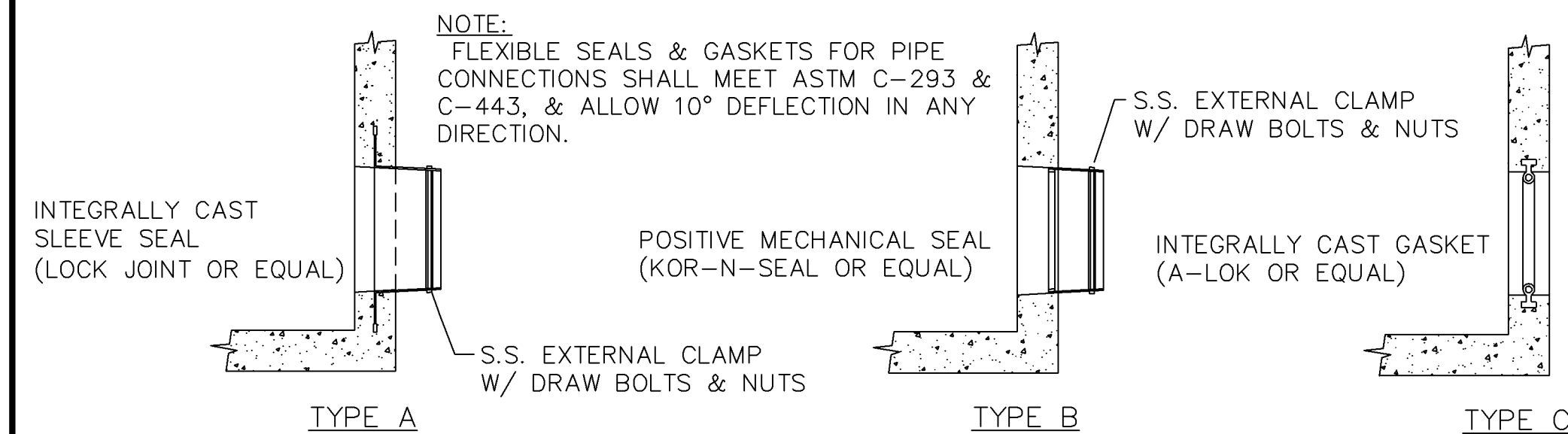
**Project No.** 21012

**PL201700265**  
**PL2017-265**

"1&I BARRIER" INNER MANHOLE RING SEAL AS MANUFACTURED BY STRIKE PRODUCTS OR APPROVED EQUAL

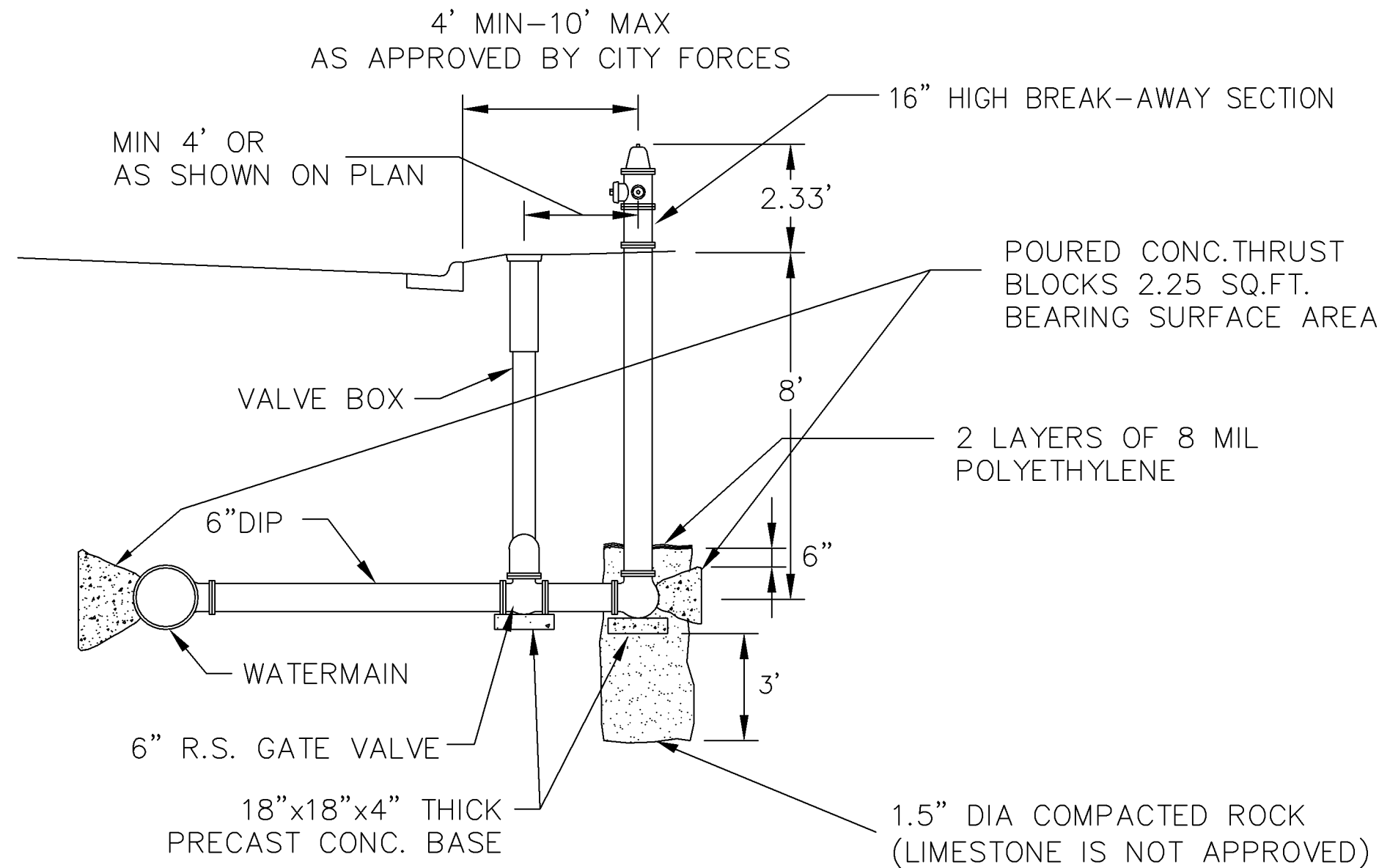


**INTERNAL CHIMNEY SEAL**  
Internal Chimney Seal.dwg 1/2015



**WATER TIGHT PIPE CONNECTIONS**  
MH\_PIPE\_CON.dwg 4/2009

- 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.

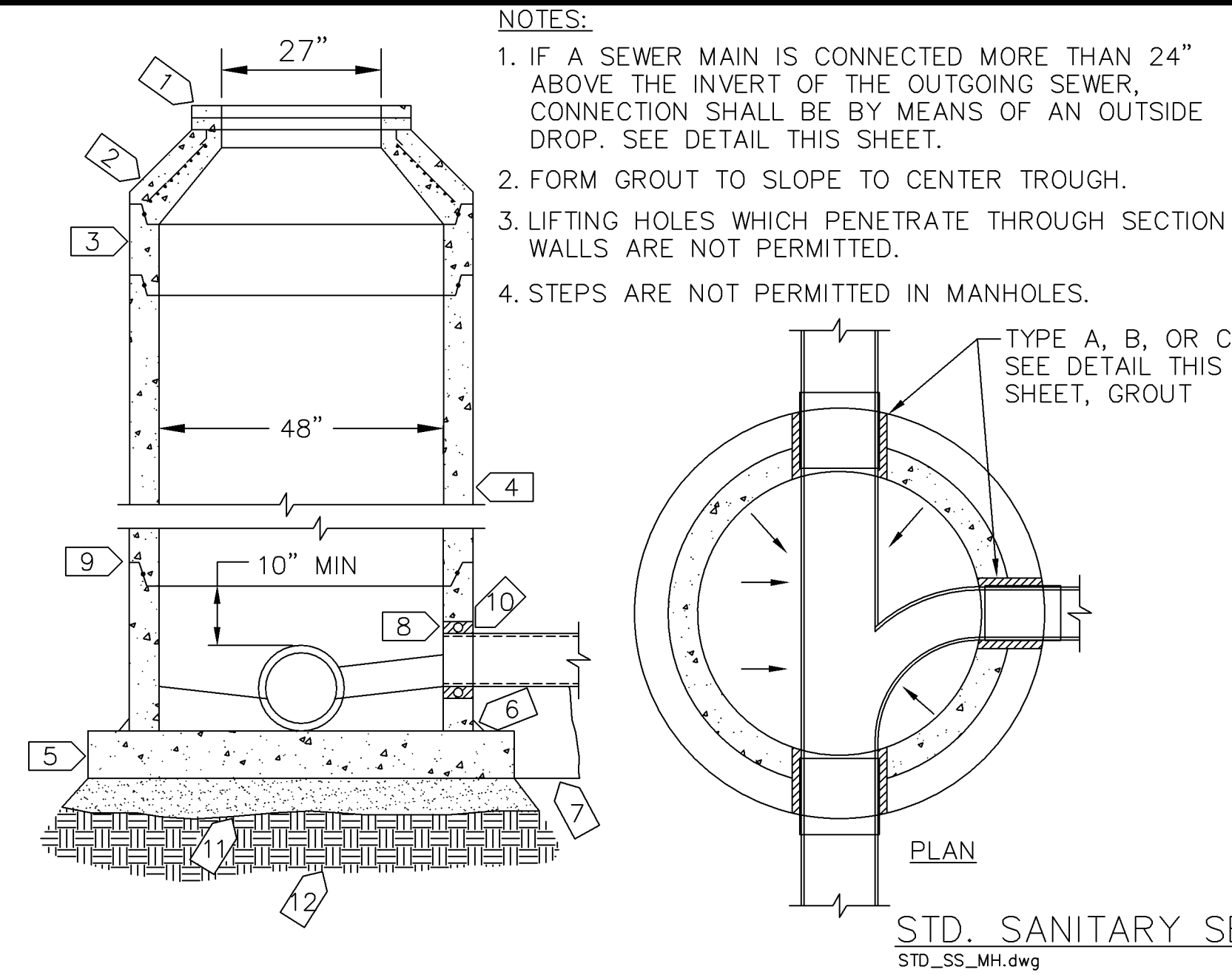


**TYPICAL HYDRANT INSTALLATION**

Hyd\_instl.dwg 1/2015

**NOTES:**

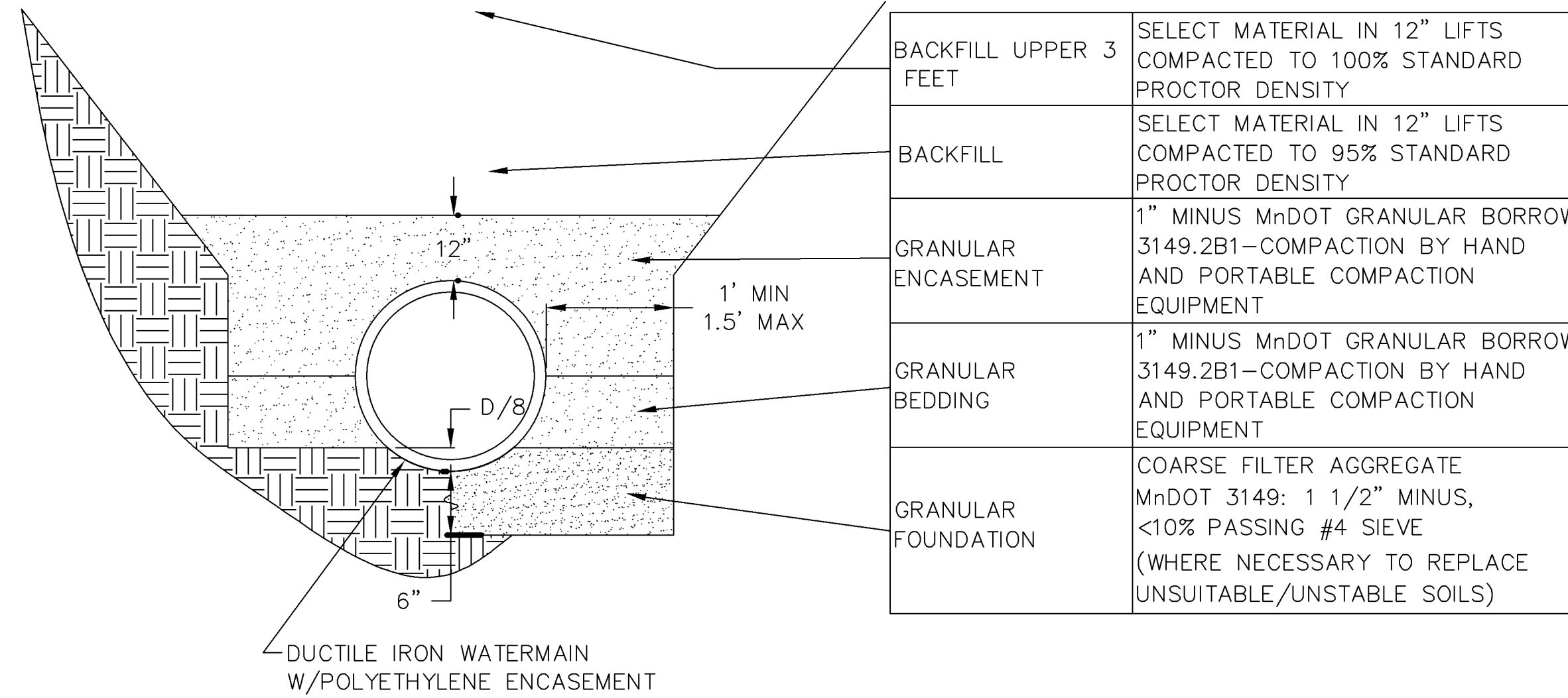
- IF A SEWER MAIN IS CONNECTED MORE THAN 24" ABOVE THE INVERT OF THE OUTGOING SEWER, CONNECTION SHALL BE BY MEANS OF AN OUTSIDE DROP. SEE DETAIL THIS SHEET.
- FORM GROUT TO SLOPE TO CENTER TROUGH.
- LIFTING HOLES WHICH PENETRATE THROUGH SECTION WALLS ARE NOT PERMITTED.
- STEPS ARE NOT PERMITTED IN MANHOLES.



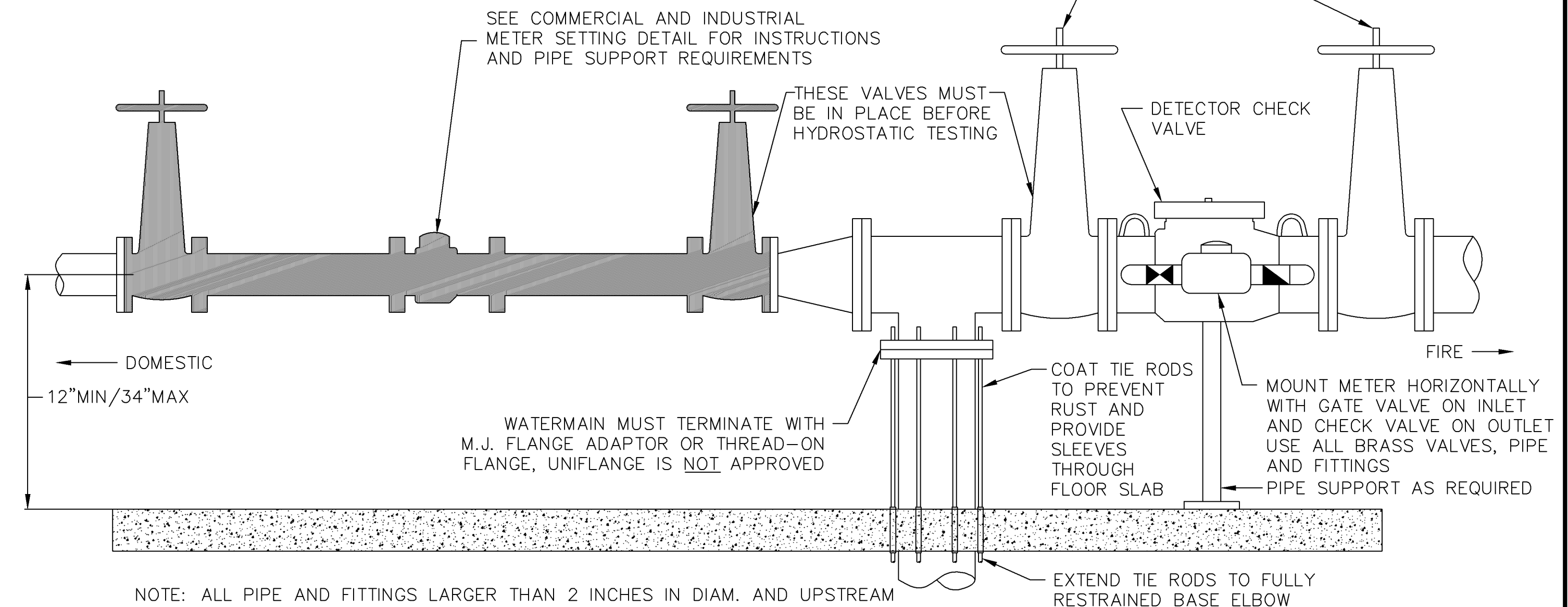
**STD. SANITARY SEWER MH**  
STD\_SS\_MH.dwg 1/2013

**KEY NOTES:**

- MN/DOT S.P.4010 2" ADJUSTING RINGS AS NEEDED [6" MIN. TO 12" MAX.]. SET EACH RING IN FULL BED OF MORTAR.
- MN/DOT S.P.4010 STD. SHORT CONE SECTION.
- 12" TOP SECTION REQUIRED.
- USE ONLY PRECAST SECTIONS. NO BRICK OR BLOCK
- 8" CAST IN-PLACE CONCRETE OR 6" PRECAST REINFORCED CONCRETE (64" MINIMUM OD)
- CEMENT MORTAR ALL AROUND
- LEAN CONCRETE TO BEAR AGAINST FIRM UNDISTURBED SOIL
- PROVIDE WATER TIGHT PIPE CONNECTIONS SEE DETAIL THIS SHEET
- O-RING GASKET
- FOR CONNECTION TO EXISTING MH'S, CORE DRILL OPENING AND PROVIDE TYPE B WATER TIGHT CONNECTOR
- 6" SAND OR FOUNDATION MATERIAL
- UNDISTURBED SOIL OR COMPACTED SUBGRADE



**TYPICAL WATER MAIN INSTALLATION DETAIL**  
WATERMAIN\_INST.DWG 11/2012



NOTE: ALL PIPE AND FITTINGS LARGER THAN 2 INCHES IN DIAM. AND UPSTREAM OF WATER METERS SHALL BE EPOXY OR CEMENT MORTAR LINED IN ACCORDANCE WITH AWWA C104 OR AWWA C116

**TYPICAL DOMESTIC AND FIRE SERVICE**  
FIRE-DOMEST SERV.dwg 1/2015



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763.476.8532 facsimile

Engineering | Surveying | Planning | Environmental

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CHARLOTTE, NC 28202

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101 AMERICAN BLVD W

**Certification**  
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 professional ENGINEER under the laws of the state of Minnesota.

*Brady D. Busselman*  
Brady D. Busselman  
Registration No. 44579 Date: 09/26/2018

If applicable, contact us for a wet signed copy of this plan which is available upon request at Sambatek's, Minnetonka, MN office.

**Summary**  
Designed: BDB Drawn: JEB  
Approved: BDB Book / Page:  
Phase: CONSTRUCTION Initial Issue: 09/26/2018

**Revision History**  
No. Date By Submittal / Revision  
A 10/04/18 JEB REVISE WATERMAIN

**Sheet Title**  
**DETAILS**

**Sheet No. Revision**  
**C9.01 A**

**Project No.** 21012

5 1/4" DROP LID COVER MARKED "WATER"

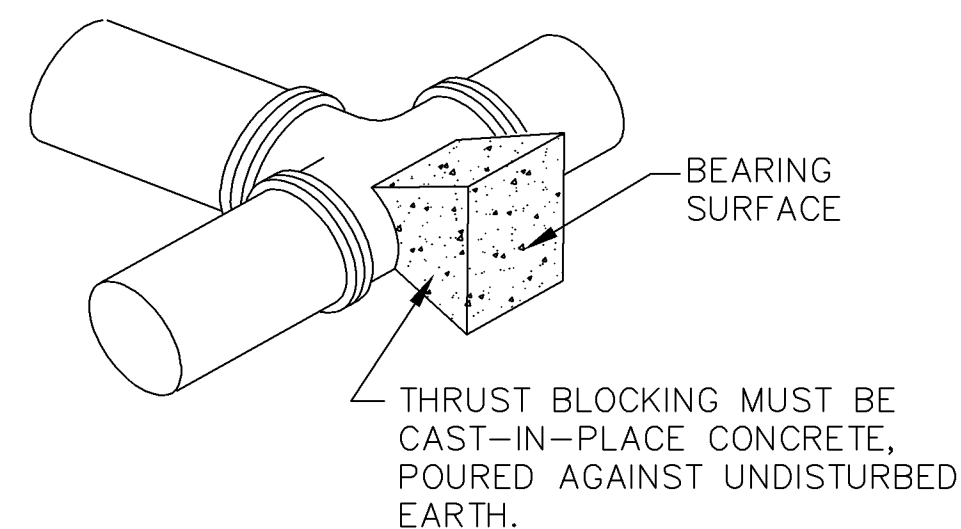
R.S. GATE VALVE TYLER SERIES 6860 VALVE BOX AND # 6 BELL (OR APPROVED EQUAL)

CENTERING ADAPTOR WITH 3/4" RUBBER PAD (ADAPTOR INC, POWERSEAL OR APPROVED EQUAL)

18"X 18" PRECAST CONC. BASE MIN. 4" THICK

TYPICAL VALVE INSTALLATION  
VALVE.dwg 1/2015

VALVE BOX TO BE VERTICAL AND STRAIGHT ALLOWING A 4" PVC PIPE TO SLIDE FROM THE TOP DOWN AND OVER THE OPERATING NUT. ADD OPERATING STEM EXTENSION WHERE NECESSARY TO BRING OPERATING NUT TO 5 TO 9 FEET BELOW GRADE. ATTACH WITH A MINIMUM OF TWO 1/2" SET BOLTS



PIPE SIZE	BEARING AREA
6"	2.25 SF
8"	4 SF

NOTES:

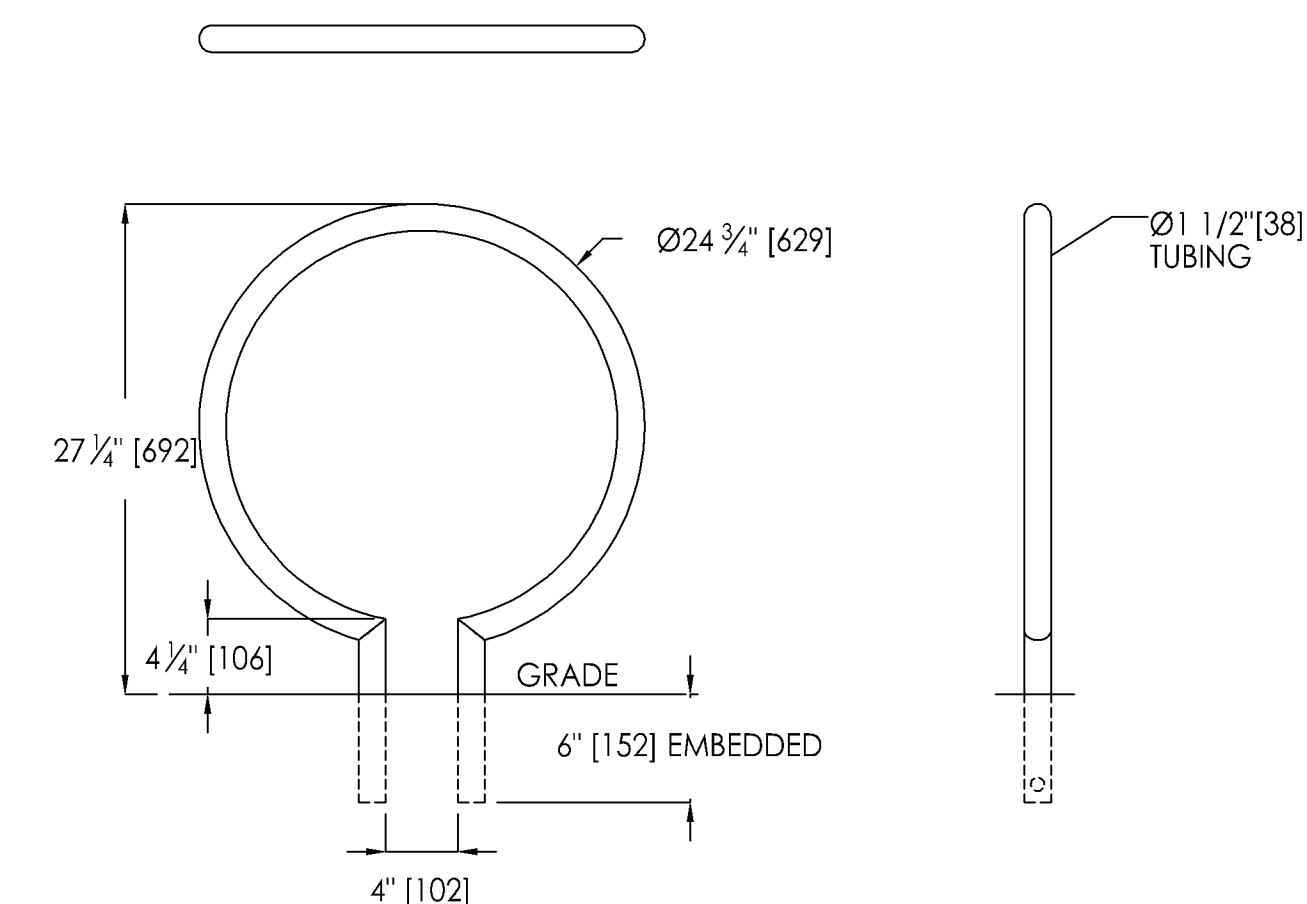
1. THRUST BLOCKS TO BE USED FOR BENDS 22 1/2° AND OVER, INCLUDING HYDRANTS AND HYDRANT TEES.
2. THRUST BLOCKS ARE REQUIRED REGARDLESS OF ANY OTHER RESTRAINT METHODS USED ON WATERMAIN LESS THAN 12" IN DIA.
3. RESTRAINT METHODS ON WATERMAIN LARGER THAN 12" SHALL BE MEGALUGS, LOCKING GASKETS OR OTHER APPROVED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

TYPICAL THRUST BLOCK  
thrst\_bk\_STDK.dwg 4/2009

Ring® Bike Rack, Embedded  
Product Drawing

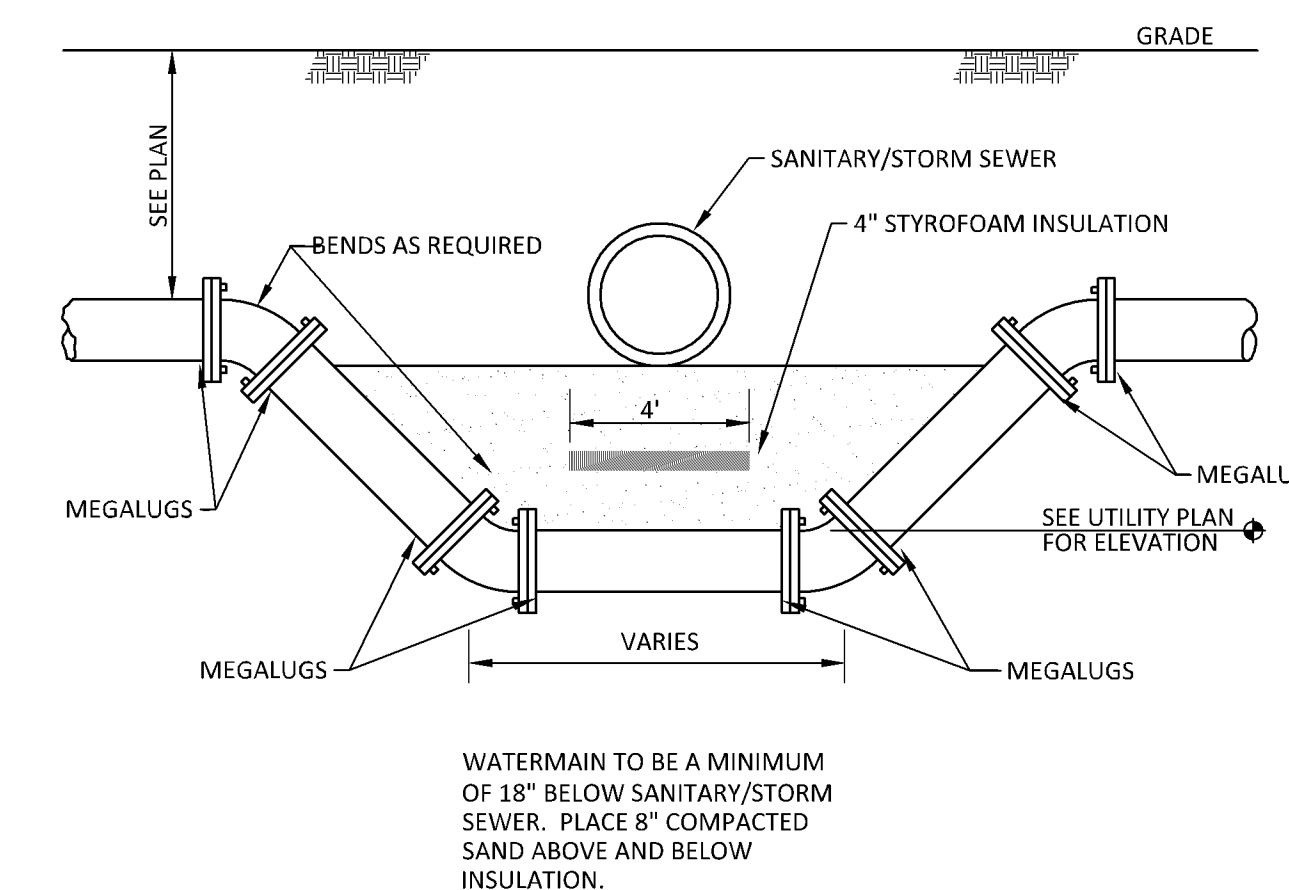
www.landscapeforms.com

Date: 8/6/2010  
Ph: 800.521.2546



landscapeforms Drawing: RG663-01  
Dimensions are in inches [mm]

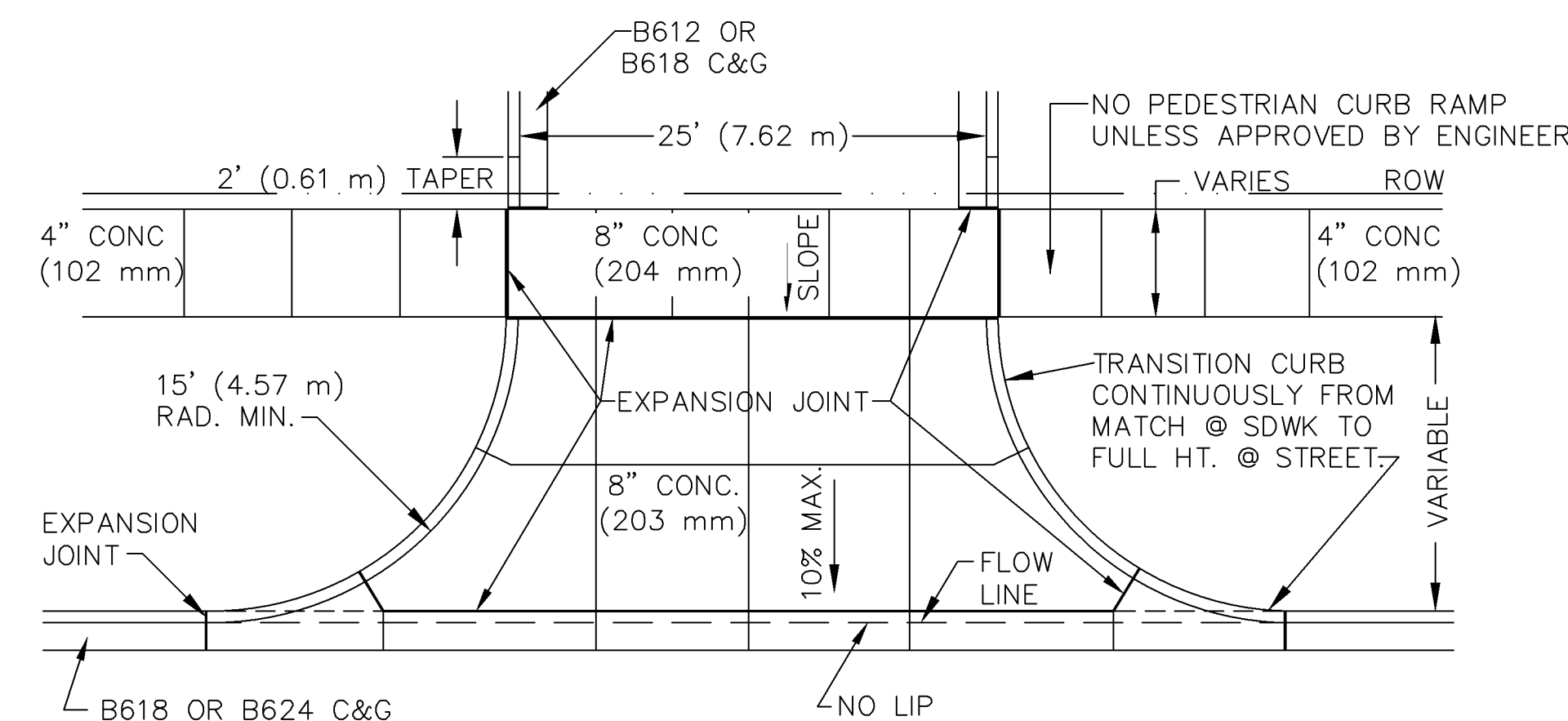
BIKE RACK



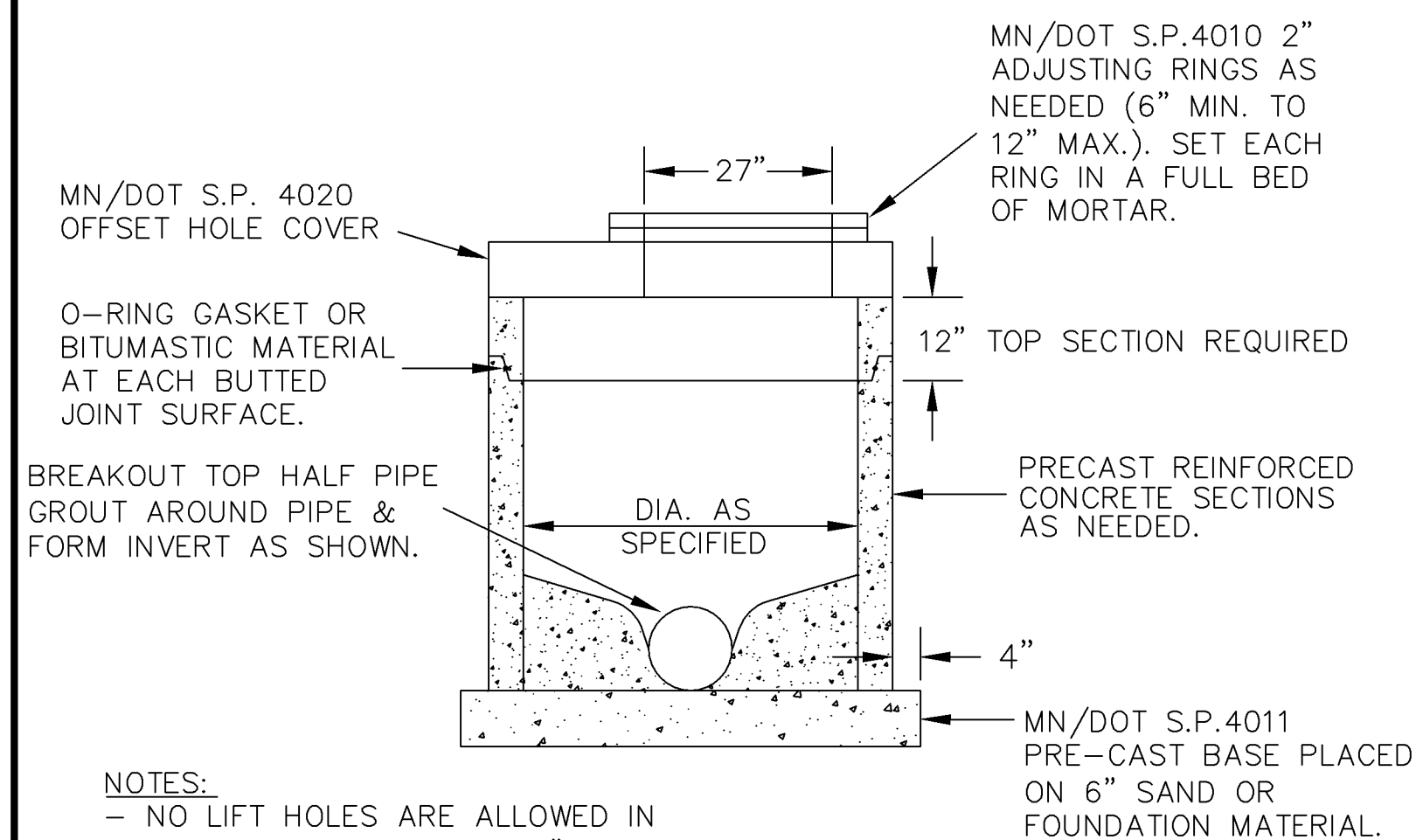
INSULATION FOR WATERMAIN  
N.T.S. INSTALLED UNDER SANITARY/  
STORM SEWER PIPE

NOTE:

- EACH DRIVEWAY PANEL NOT TO EXCEED 100 SF (9.29 m2).
- REINFORCEMENT BARS OR WELDED WIRE FABRIC (STEEL MESH) ARE NOT ALLOWED IN THE RIGHT-OF-WAY
- CLASS 5 AGGREGATE BASE REQUIRED UNDER CURB AND GUTTER.
- IF PRESENT, STREET LIGHT, SIGNAL AND INTERCONNECT CONDUIT OR DIRECT BURIED STREET LIGHT WIRING MUST BE EXPOSED FOR INSPECTION PRIOR TO POUR



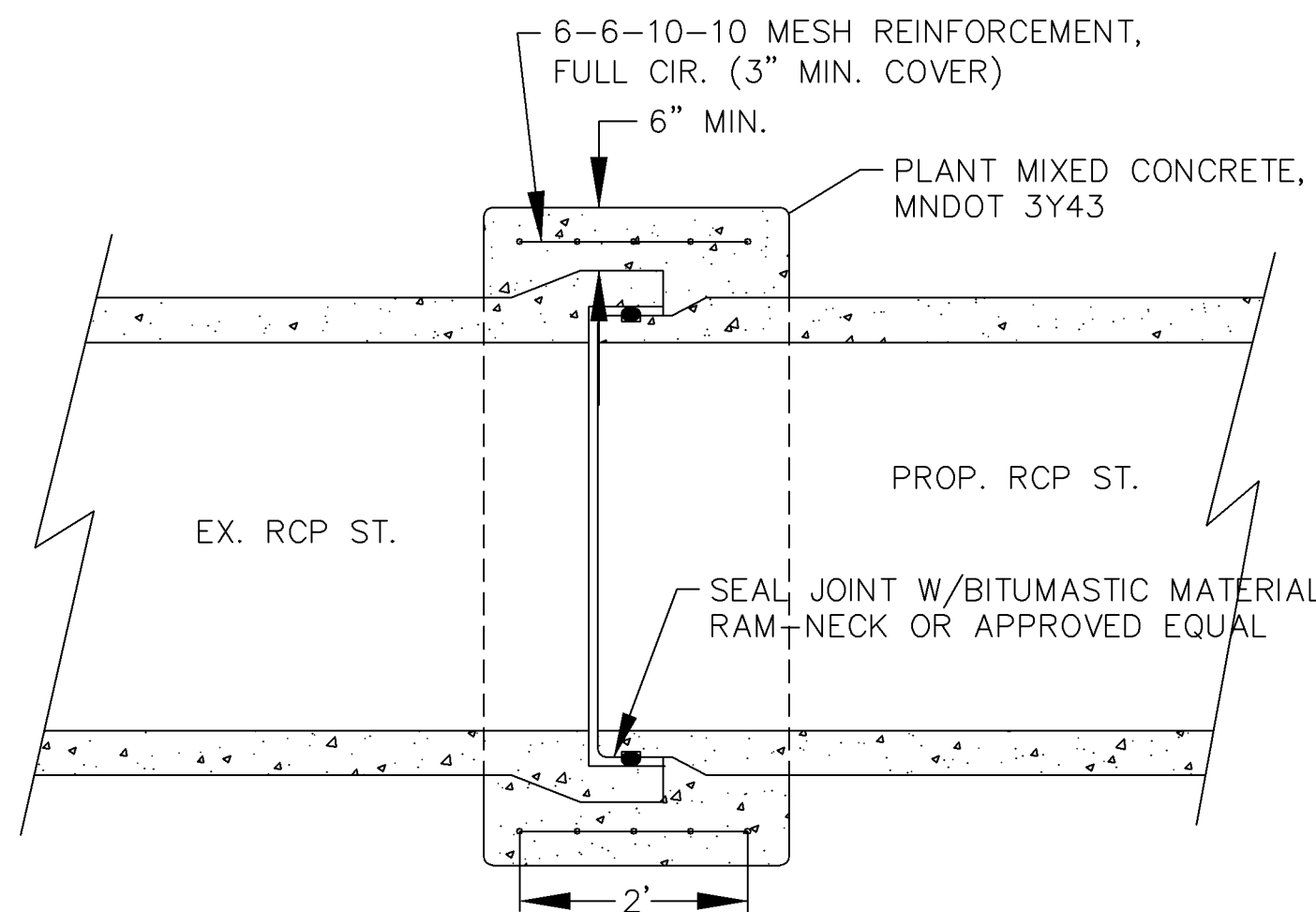
NONRESIDENTIAL DRIVEWAY APPROACH  
WITH BOULEVARD SIDEWALK  
DRWY\_COM.dwg 4/2009



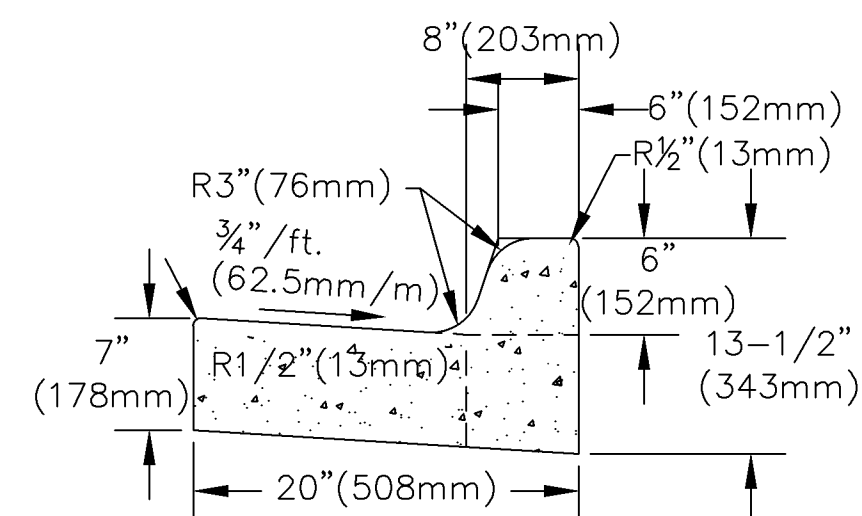
NOTES:

- NO LIFT HOLES ARE ALLOWED IN MANHOLES LESS THAN 60" IN DIA.
- FOR MH'S IN DRIVE LANES, ROTATE COVER SO THAT CASTING IS OUT OF WHEEL PATH, AS APPROVED.

STANDARD MANHOLE  
DESIGN SPEC X, X & X  
STD\_MH.DWG 1/2013



STANDARD CONSTRUCTION JOINT  
STD\_CONST\_JOINT.DWG 4/2009



B612 STANDARD CURB & GUTTER  
B612\_C&G.dwg 4/2009

PL201700265  
PL2017-265

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763.476.8532 facsimile

Engineering | Surveying | Planning | Environmental

**Client**  
**CASCADE STORAGE PARTNERS, LLC.**  
700 E. MOOREHEAD ST., SUITE 100B  
CHARLOTTE, NC 28202

**Project**  
**AMERICAN BOULEVARD STORAGE**

**Location**  
**BLOOMINGTON, MN**  
101 AMERICAN BLVD W

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*Brady D. Busselman*

Brady D. Busselman  
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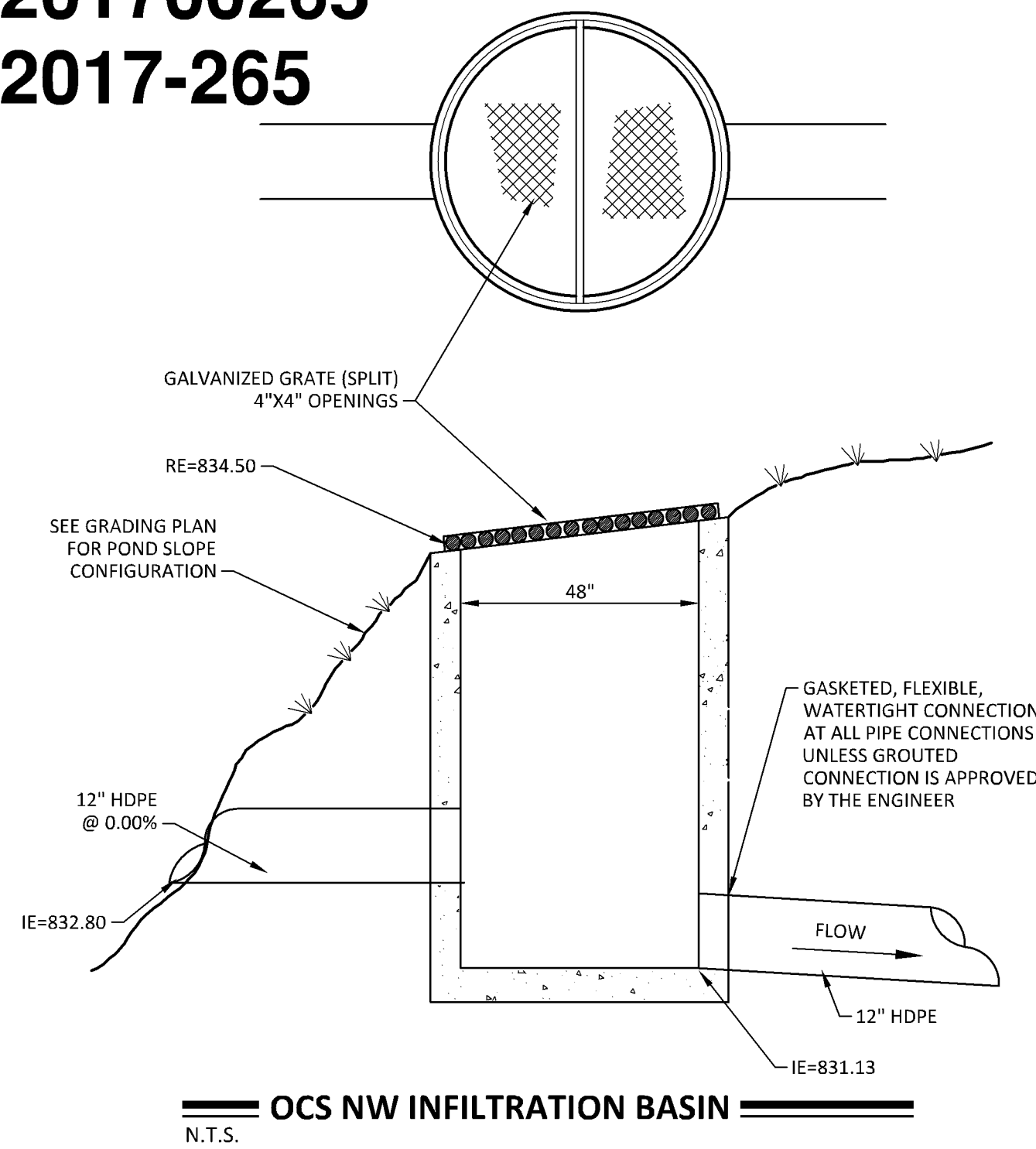
**Sheet Title DETAILS**

**Sheet No. Revision**  
**C9.02 A**

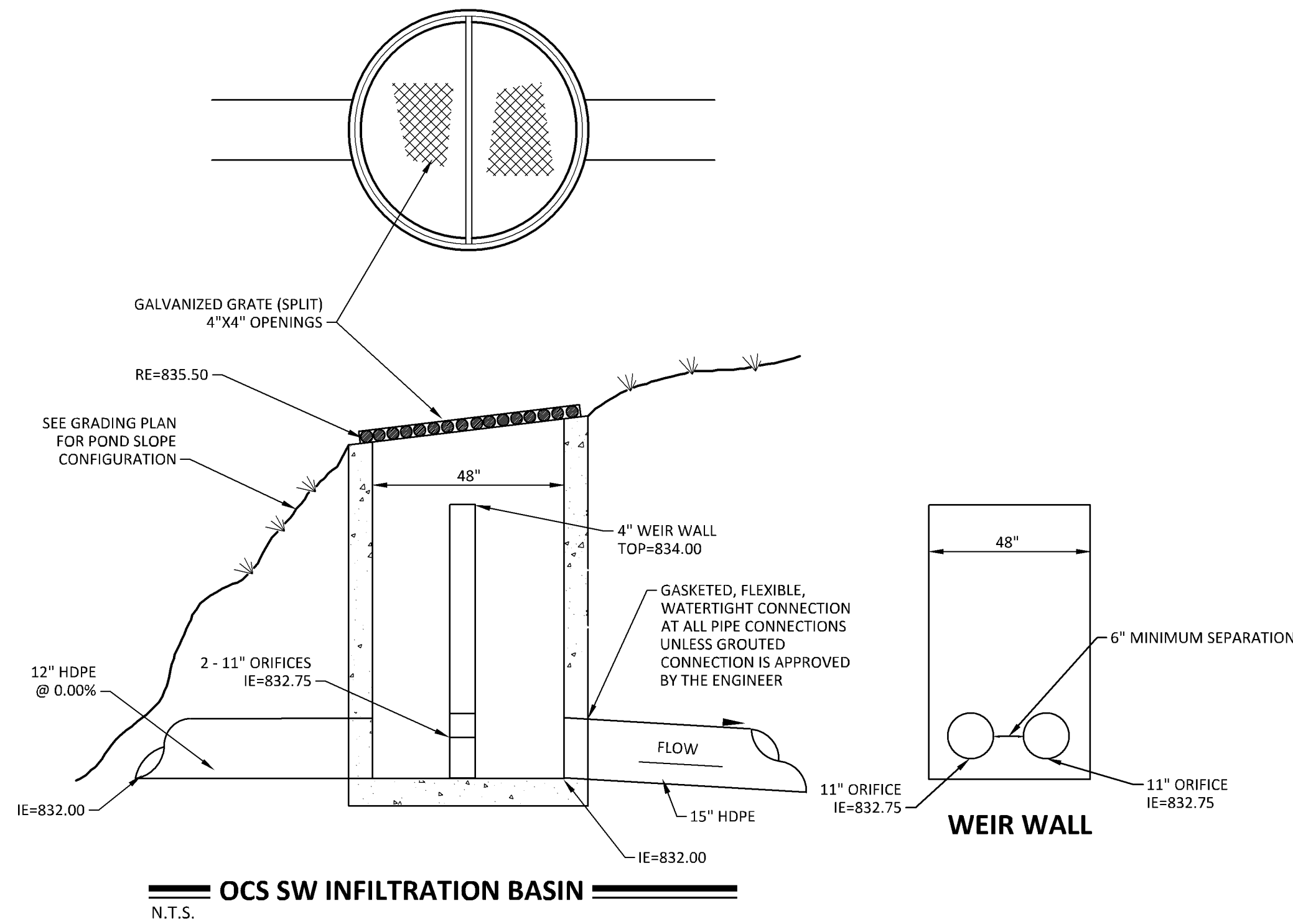
**Project No. 21012**



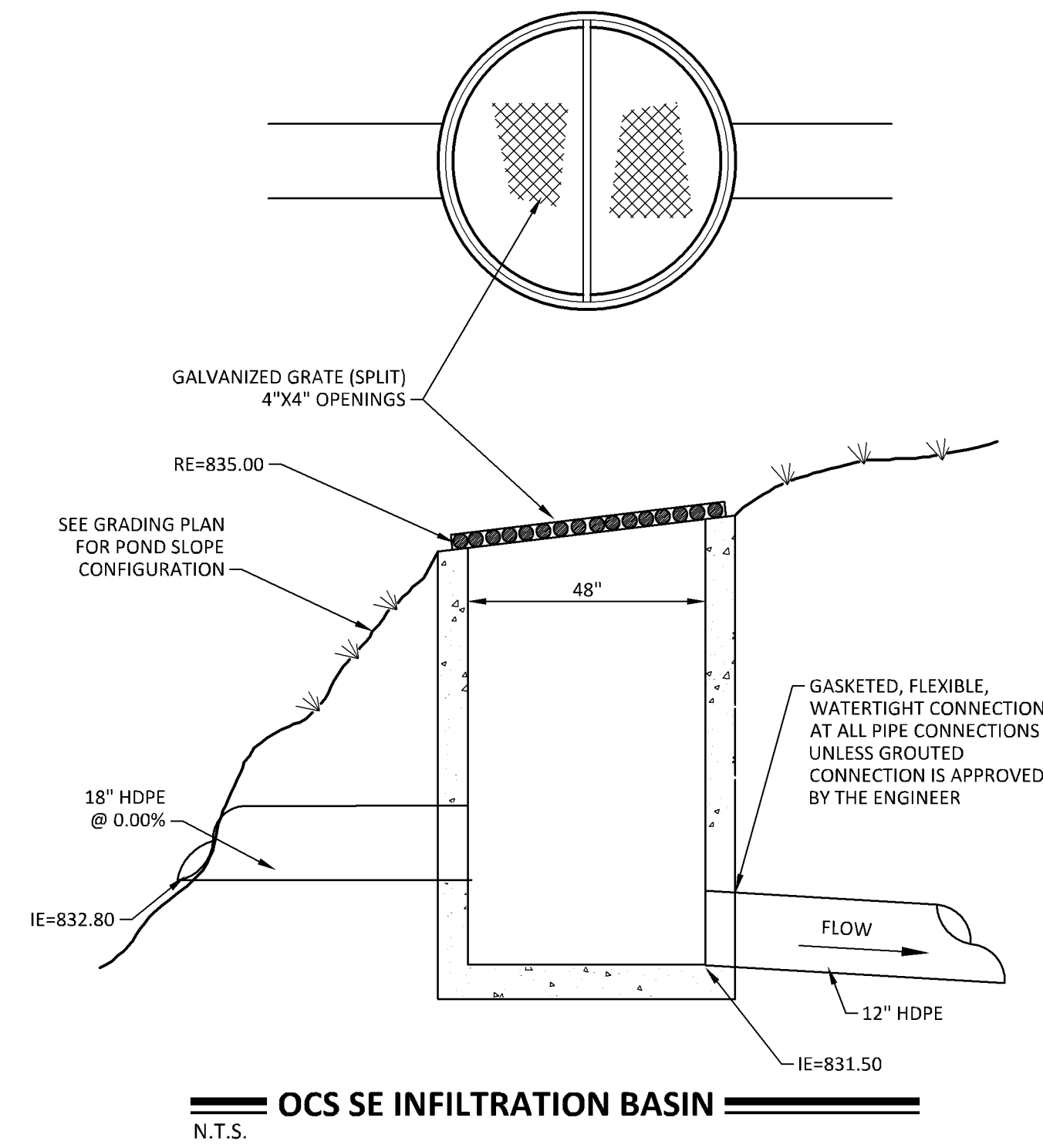
PL201700265  
PL2017-265



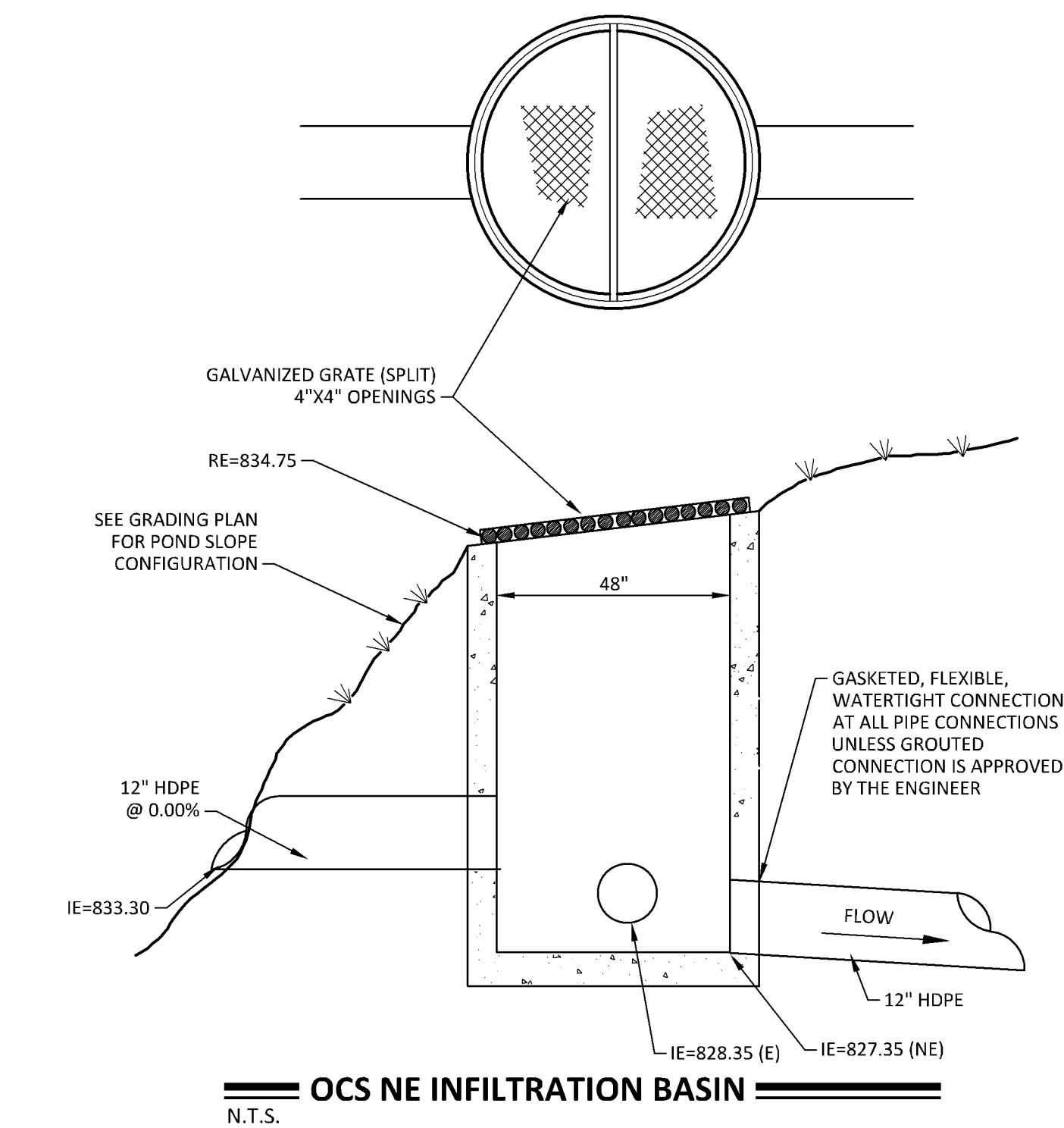
**OCS NW INFILTRATION BASIN**  
N.T.S.



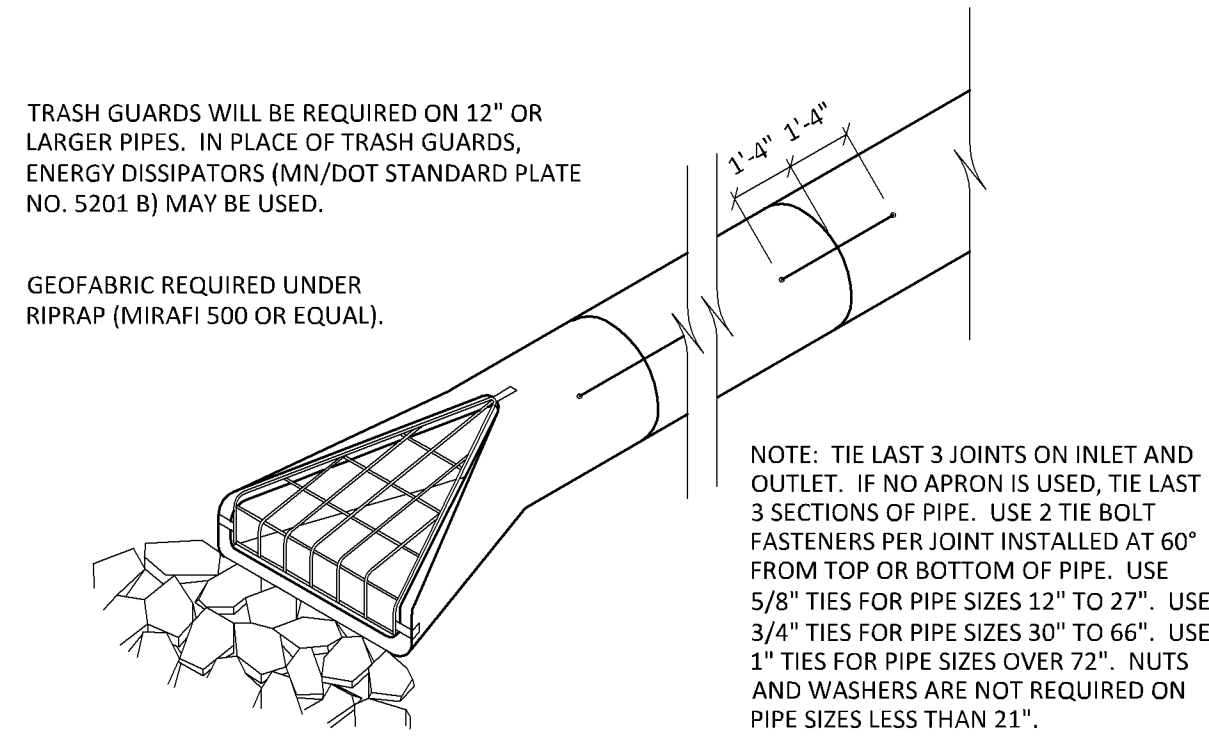
**OCS SW INFILTRATION BASIN**  
N.T.S.



**OCS SE INFILTRATION BASIN**  
N.T.S.



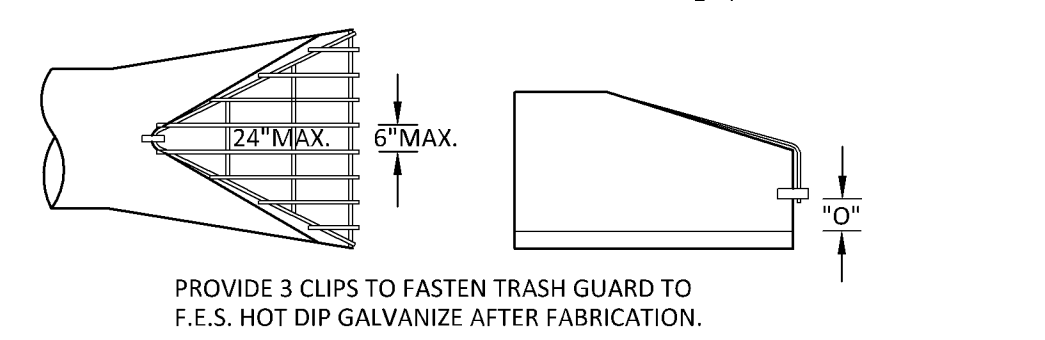
**OCS NE INFILTRATION BASIN**  
N.T.S.



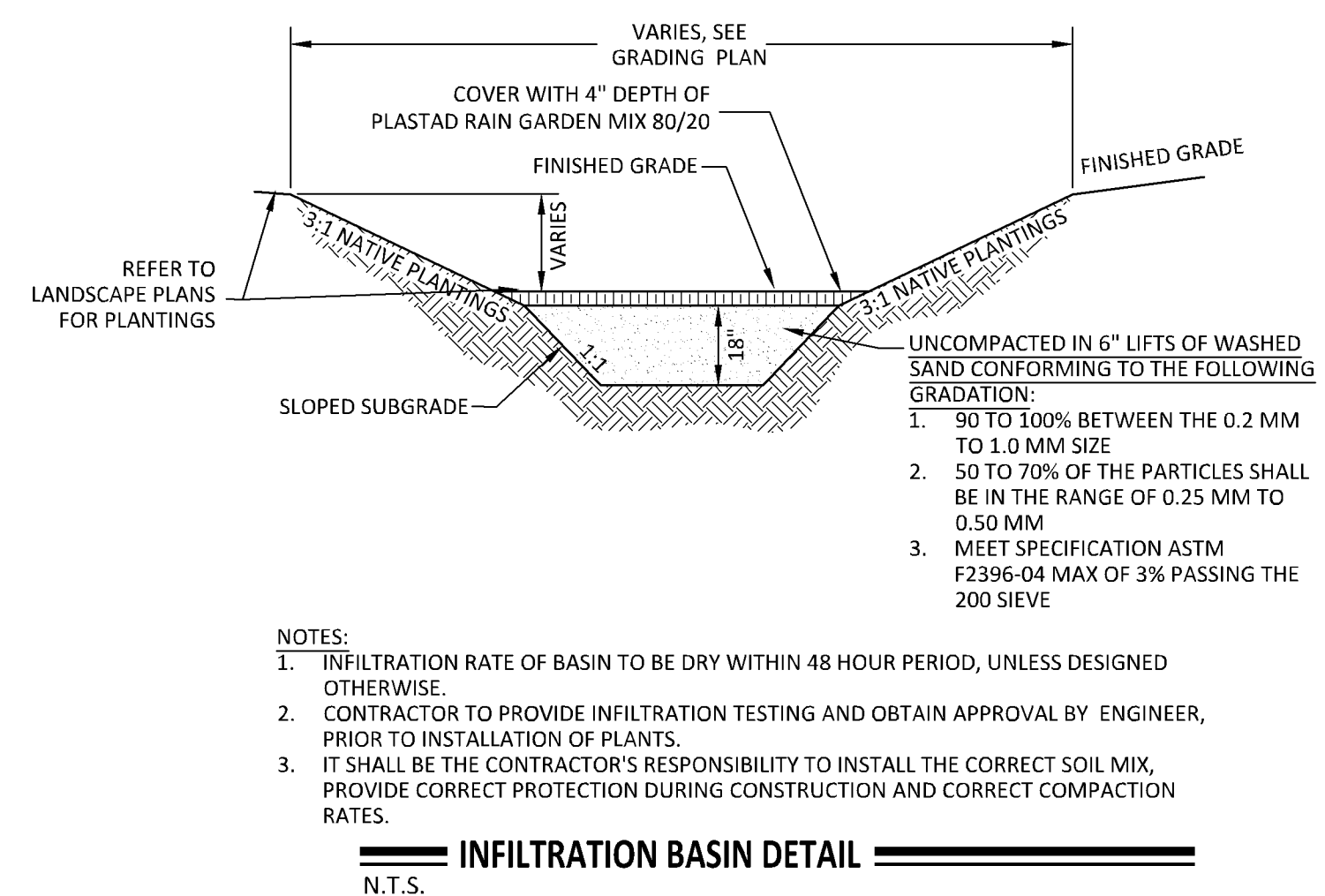
INDIVIDUAL STONES, EXCEPT THOSE USED FOR CHINKING, SHALL NOT WEIGHT LESS THAN 50 LBS. EACH.  
PLACE RIPRAP AROUND SIDES AND OVER TOP OF FLARED END SECTIONS.

SIZE OF PIPE	RIPPRAP REQUIRED
54" & Over	20-24 CU. YD.
36" to 48"	10-13 CU. YD.
27" to 33"	6-8 CU. YD.
24" & Less	4-6 CU. YD.

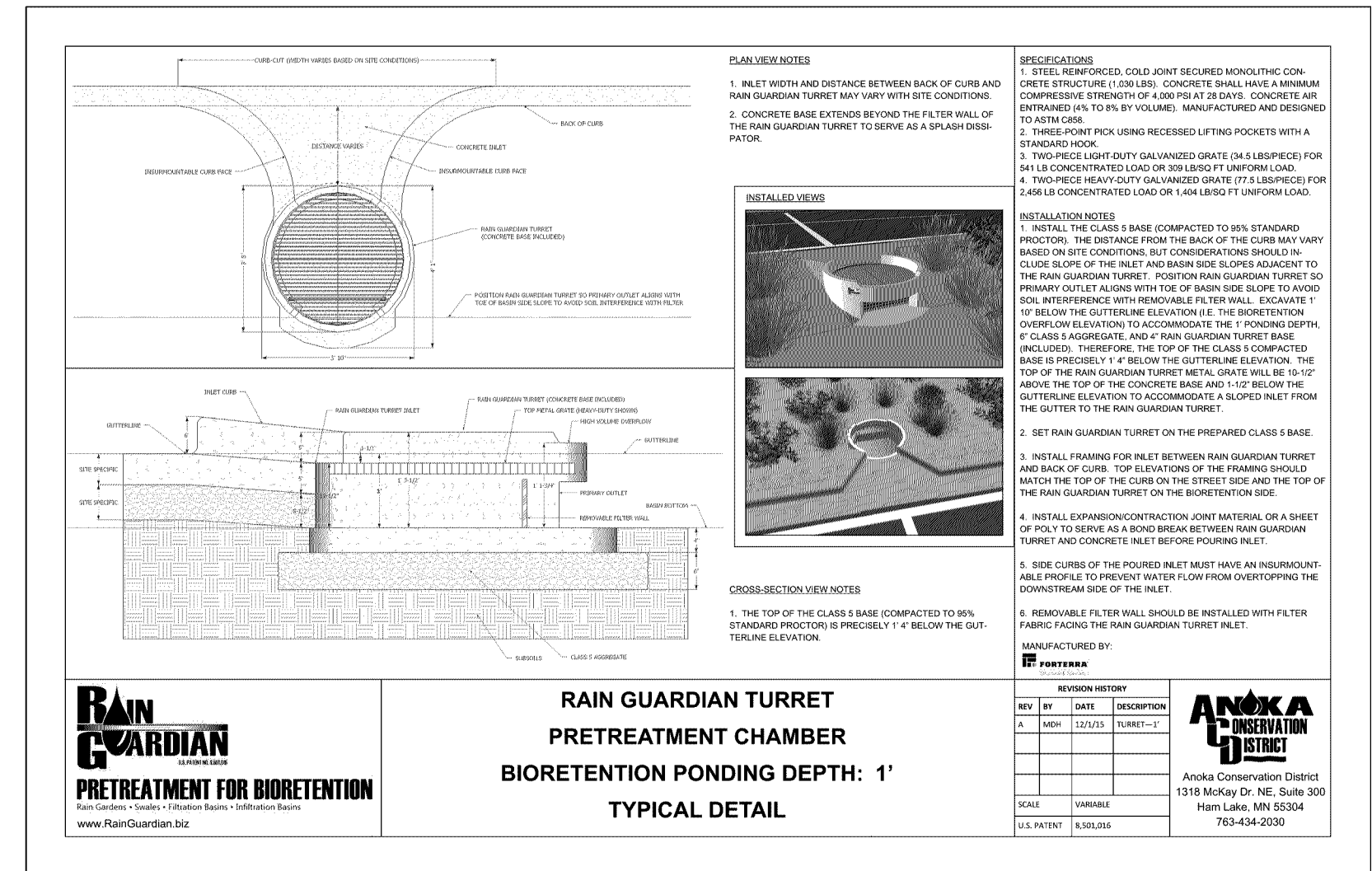
NOTE: ONE CU. YD. IS APPROXIMATELY 1.4 TONS.



**FLARED END SECTION**  
N.T.S.



**INFILTRATION BASIN DETAIL**  
N.T.S.



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Brady D. Busselman  
Registration No. 44579 Date: 09/26/2018

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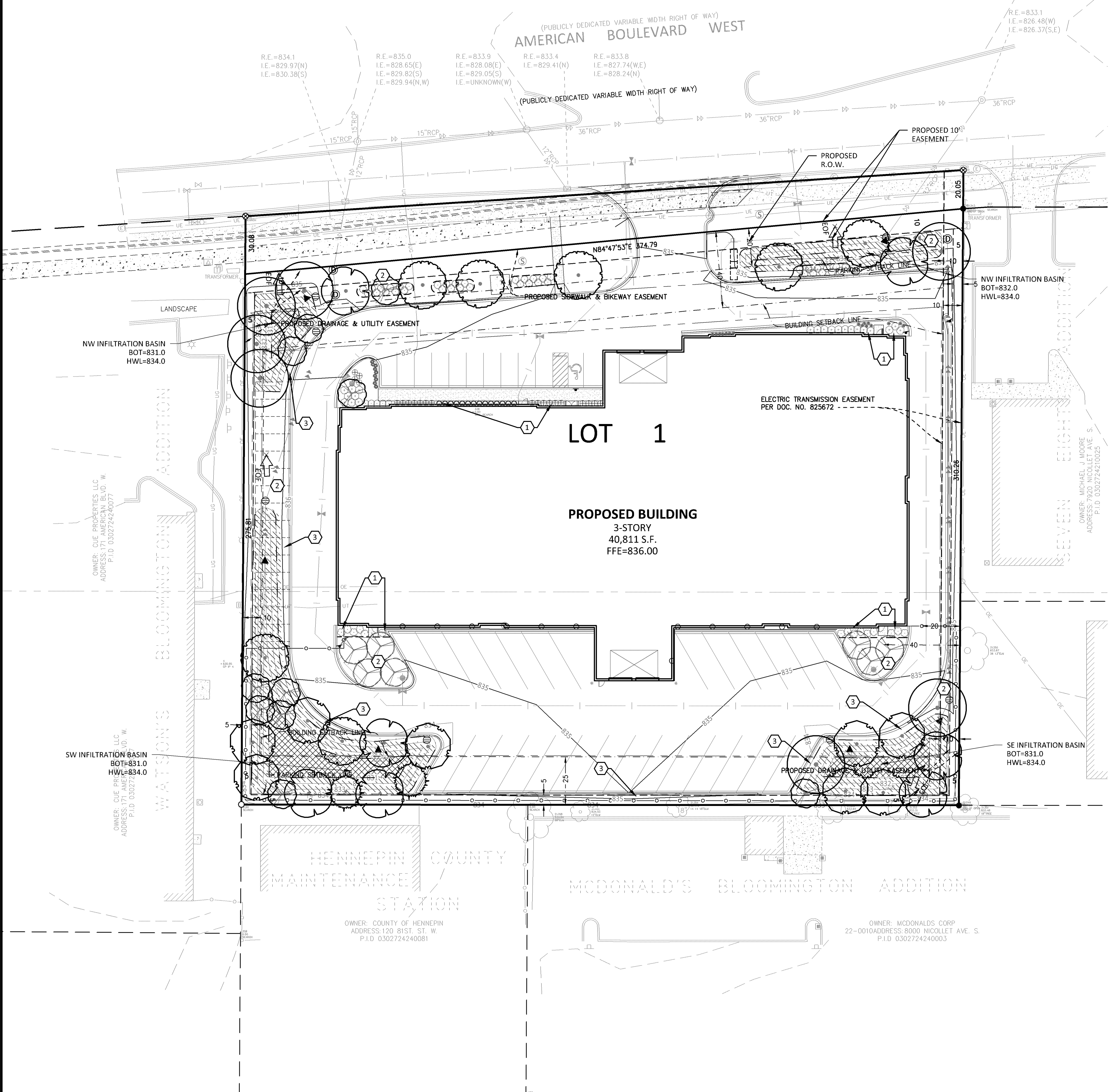
**Revision History**  
No. Date By Submittal / Revision  
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**Sheet Title**  
**DETAILS**

**Sheet No. Revision**  
**C9.04 A**

**Project No.** 21012

PL201700265  
PL2017-265



PLANT SCHEDULE							
TREES	CODE	BOTANICAL NAME / COMMON NAME	CONT	CAL	SIZE	QTY	
	SG	Acer freemanii 'Sienna Glen' / Sienna Glen Maple	B & B	2.5'Cal		7	
	HB	Celtis occidentalis / Common Hackberry	B & B	2.5'Cal		7	
	HL	Gleditsia triacanthos 'Skyline' / Skyline Honey Locust	B & B	2.5'Cal		7	
	BL	Tilia americana 'Boulevard' / Boulevard Linden	B & B	2.5'Cal		8	
CONIFERS	CODE	BOTANICAL NAME / COMMON NAME	CONT	CAL	SIZE	QTY	
	NS	Picea abies / Norway Spruce	B & B		6'	2	
ORN. TREES	CODE	BOTANICAL NAME / COMMON NAME	CONT	CAL	SIZE	QTY	
	SB	Amelanchier canadensis 'Autumn Brilliance' / Autumn Brilliance Serviceberry	B & B	2'Cal		10	
	JL	Syringa reticulata / Japanese Tree Lilac	B & B	2'Cal		7	
SHRUBS	CODE	BOTANICAL NAME / COMMON NAME	CONT	H' X W'	QTY		
	BX	Buxus x 'Chicagoland Green' TM / Glencoe Boxwood	10 gal		14		
	CD	Cornus sericea 'Allema's Compact' / Dwarf Red Twig Dogwood	5 gal		21		
	BH	Oenothera lonicera / Dwarf Bush Honeysuckle	5 gal		21		
	LH	Hydrangea paniculata 'Jani' / Little Lime Hydrangea	5 gal		5		
	AJ	Juniperus horizontalis 'Compacta' / Andorra Compact Juniper	5 gal		39		
	GL	Rhus aromatica 'Gro-Low' / Gro-Low Fragrant Sumac	5 gal		15		
GRASSES	CODE	BOTANICAL NAME / COMMON NAME	CONT	H' X W'	QTY		
	KFG	Calamagrostis x acutiflora 'Karl Foerster' / Feather Reed Grass	1 gal		9		
PERENNIALS	CODE	BOTANICAL NAME / COMMON NAME	CONT	H' X W'	QTY		
	BDL	Hemerocallis x 'Baja' / Baja Daylily	1 gal		16		
GROUND COVERS	BOTANICAL NAME / COMMON NAME	QTY					
	Turf Seed MN 33-261 / Stormwater Pond Edge Mix	7,229 sf					
	Turf Seed MN 33-361 / Stormwater Basin Seed Mix	1,652 sf					

**BLOOMINGTON LANDSCAPE CODE**

- SUBMITTED LANDSCAPE PLAN REQUIREMENTS PER PRE-APPLICATION DRC:
- 3' SCREEN TO PARKING
  - 48 TREES AND 119 SHRUBS, 50% OF BUILDING FRONTAGE TO HAVE FOUNDATION PLANTINGS
  - 20' LANDSCAPED YARD ALONG ALL STREET FRONTAGES

**LANDSCAPE LEGEND**

- 3" DEPTH ROCK MULCH - 1.5" RIVER ROCK OVER COMMERCIAL WEED BARRIER
- SOD - PATCH IN WHERE ABUTTING EXISTING TURF
- SOD - 3' MOW STRIP FROM BACK OF CURB

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*William Delaney*  
William Delaney  
Registration No. 40252 Date: 9-26-18  
This certification is not valid unless wet signed in blue ink. If applicable, contact us for a wet signed copy of this survey which is available upon request at Sambatek, Minnetonka, MN office.

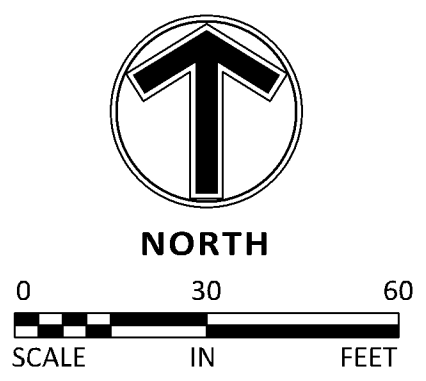
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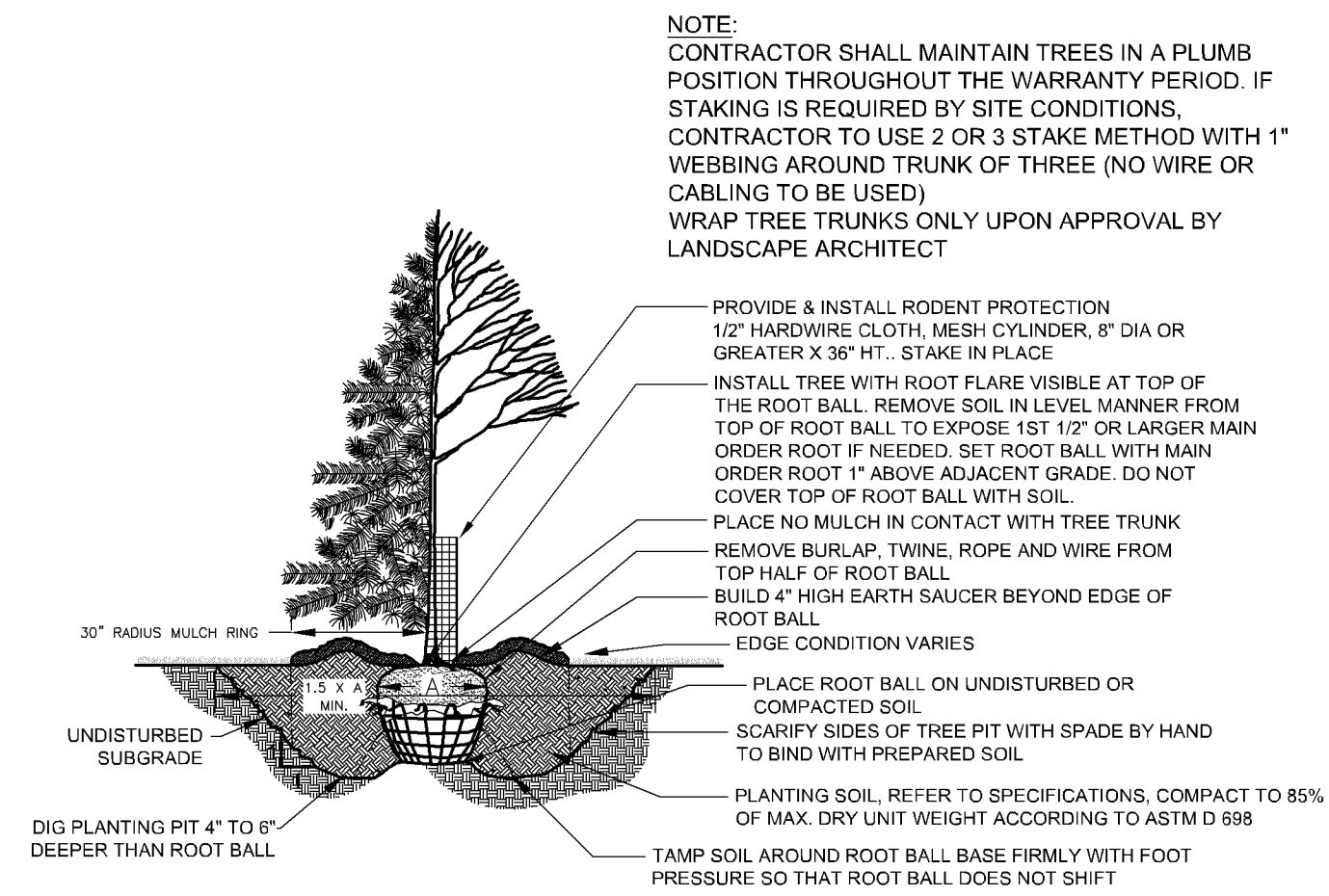
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**LANDSCAPE PLAN**

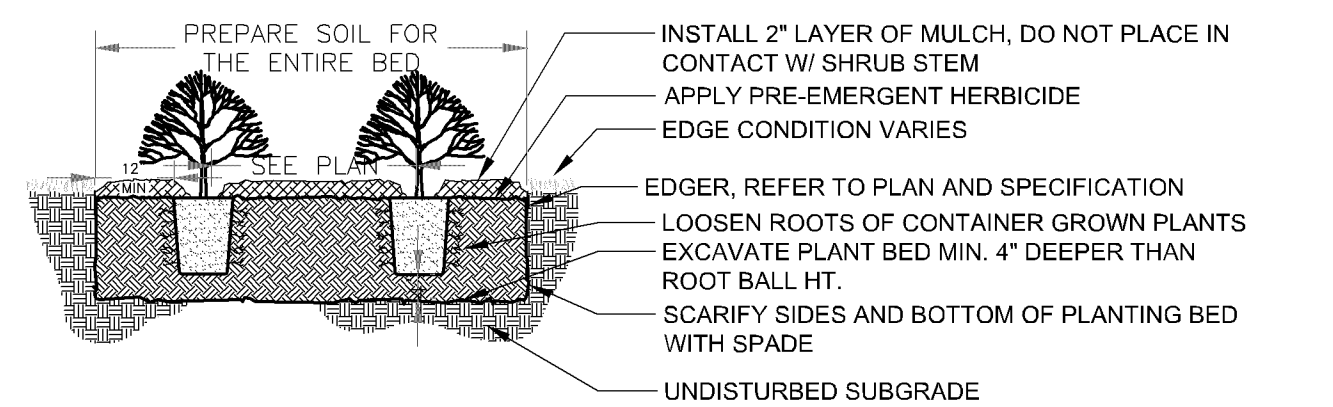
**Sheet No. Revision**  
**L1.01 A**

**Project No.** 21012

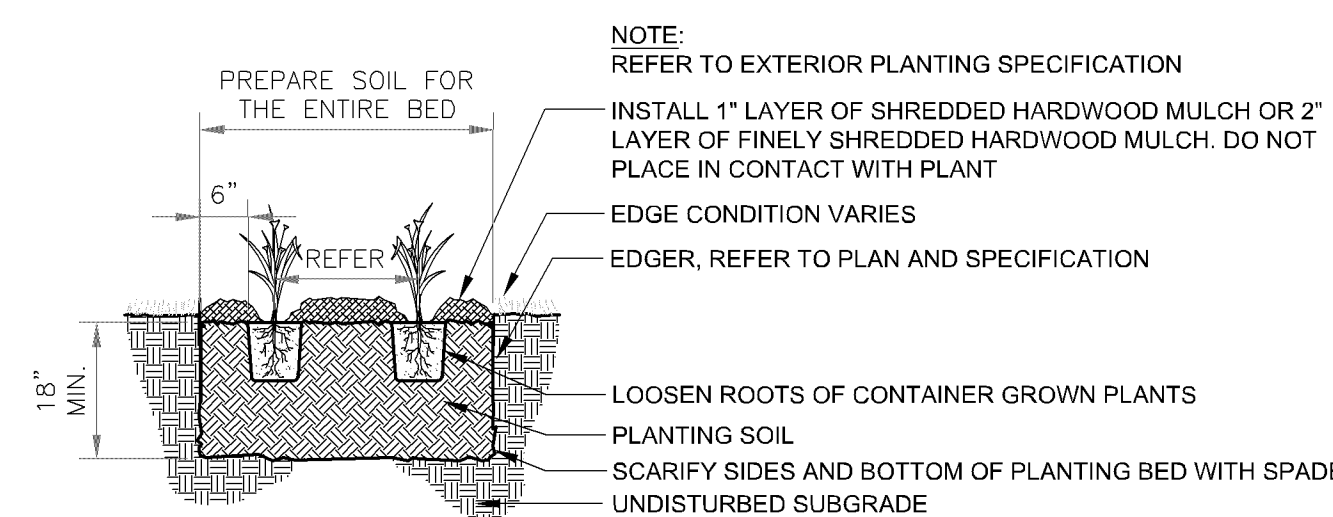




**1 TREE PLANTING DETAIL** NTS



**2 SHRUB PLANTING DETAIL 2** NTS



**3 PERENNIAL PLANTING DETAIL** NTS

**NOTES**

**GENERAL NOTES:**

1. THE CONTRACTOR SHALL INSPECT THE SITE AND BECOME FAMILIAR WITH THE EXISTING CONDITIONS RELATING TO THE NATURE AND SCOPE OF THE WORK.
2. THE CONTRACTOR SHALL VERIFY PLAN LAYOUT AND BRING TO THE ATTENTION OF THE LANDSCAPE ARCHITECT DISCREPANCIES WHICH MAY COMPROMISE THE DESIGN OR INTENT OF THE LAYOUT.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL APPLICABLE CODES, REGULATIONS, AND PERMITS GOVERNING THE WORK.
4. THE CONTRACTOR SHALL PROTECT EXISTING ROADS, CURBS/GUTTERS, TRAILS, TREES, LAWNS AND SITE ELEMENTS DURING CONSTRUCTION. DAMAGE TO SAME SHALL BE REPAIRED AND/OR REPLACED AT NO ADDITIONAL COST TO THE OWNER.
5. LOCATE AND VERIFY ALL UTILITIES, INCLUDING IRRIGATION LINES, WITH THE OWNER FOR PROPRIETARY UTILITIES AND GOPHER STATE ONE CALL 48 HOURS BEFORE DIGGING. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION AND REPAIR OF ANY DAMAGES TO SAME. NOTIFY THE LANDSCAPE ARCHITECT OF ANY CONFLICTS TO FACILITATE PLANT RELOCATION.
6. **THE LANDSCAPE CONTRACTOR SHALL COORDINATE THE PHASES OF CONSTRUCTION AND PLANTING INSTALLATION WITH OTHER CONTRACTORS WORKING ON SITE.**
7. THE CONTRACTOR SHALL REVIEW THE SITE FOR DEFICIENCIES IN SITE CONDITIONS WHICH MIGHT NEGATIVELY AFFECT PLANT ESTABLISHMENT, SURVIVAL OR WARRANTY. UNDESIRABLE SITE CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT PRIOR TO BEGINNING OF WORK.
8. THE PLAN TAKES PRECEDENCE OVER THE LANDSCAPE LEGEND IF DISCREPANCIES EXIST. QUANTITIES SHOWN IN THE PLANTING SCHEDULE ARE FOR THE CONTRACTOR'S CONVENIENCE. CONTRACTOR TO VERIFY QUANTITIES SHOWN ON THE PLAN.
9. THE SPECIFICATIONS TAKE PRECEDENCE OVER THE PLANTING NOTES AND GENERAL NOTES.
10. EXISTING TREES AND SHRUBS TO REMAIN SHALL BE PROTECTED TO THE DRIP LINE FROM ALL CONSTRUCTION TRAFFIC, STORAGE OF MATERIALS ETC. WITH 4' HT. ORANGE PLASTIC SAFETY FENCING ADEQUATELY SUPPORTED BY STEEL FENCE POSTS 6' O.C. MAXIMUM SPACING.
11. LONG-TERM STORAGE OF MATERIALS OR SUPPLIES ON-SITE WILL NOT BE ALLOWED.
12. CONTRACTOR SHALL REQUEST IN WRITING, A FINAL ACCEPTANCE INSPECTION.

**PLANTING NOTES:**

1. NO PLANTS SHALL BE INSTALLED UNTIL FINAL GRADING AND CONSTRUCTION HAS BEEN COMPLETED IN THE IMMEDIATE AREA.
2. A GRANULAR PRE-EMERGENT HERBICIDE SHALL BE APPLIED TO ALL PLANT BEDS AT THE MANUFACTURERS RECOMMENDED RATE PRIOR TO PLANT INSTALLATION.
3. ALL PLANTING STOCK SHALL CONFORM TO THE "AMERICAN STANDARD FOR NURSERY STOCK," ANSI-Z60, LATEST EDITION, OF THE AMERICAN ASSOCIATION OF NURSERYMEN, INC. AND SHALL CONSTITUTE MINIMUM QUALITY REQUIREMENTS FOR PLANT MATERIALS.
4. OVERSTORY TREES SHALL BEGIN BRANCHING NO LOWER THAN 6' ABOVE PAVED SURFACES.
5. ALL PLANTS MUST BE HEALTHY, VIGOROUS MATERIAL, FREE OF PESTS AND DISEASE AND BE CONTAINER GROWN OR BALLED AND BURLAPPED AS INDICATED IN THE LANDSCAPE LEGEND.
6. PLANT MATERIALS TO BE INSTALLED PER PLANTING DETAILS.
7. ALL TREES MUST BE STRAIGHT TRUNKED AND FULL HEADED AND MEET ALL REQUIREMENTS SPECIFIED.
8. THE LANDSCAPE ARCHITECT RESERVES THE RIGHT TO REJECT ANY PLANTS WHICH ARE DEEMED UNSATISFACTORY BEFORE, DURING, OR AFTER INSTALLATION.
9. NO SUBSTITUTIONS OF PLANT MATERIAL SHALL BE ACCEPTED UNLESS APPROVED IN WRITING BY THE LANDSCAPE ARCHITECT.
10. ALL PLANT MATERIAL QUANTITIES, SHAPES OF BEDS AND LOCATIONS SHOWN ARE APPROXIMATE. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETE COVERAGE OF ALL PLANTING BEDS AT SPACING SHOWN AND ADJUSTED TO CONFORM TO THE EXACT CONDITIONS OF THE SITE. THE LANDSCAPE ARCHITECT SHALL APPROVE THE STAKING LOCATION OF ALL PLANT MATERIALS PRIOR TO INSTALLATION.
11. ALL PLANTING AREAS MUST BE COMPLETELY MULCHED AS SPECIFIED.
12. MULCH: SHREDDED HARDWOOD MULCH, CLEAN AND FREE OF NOXIOUS WEEDS OR OTHER DELETERIOUS MATERIAL, IN ALL MASS PLANTING BEDS AND FOR TREES, UNLESS INDICATED AS ROCK MULCH ON DRAWINGS. SUBMIT SAMPLE TO LANDSCAPE ARCHITECT PRIOR TO DELIVERY ON-SITE FOR APPROVAL. DELIVER MULCH ON DAY OF INSTALLATION. USE 4" FOR SHRUB BEDS, AND 3" FOR PERENNIAL/GROUND COVER BEDS, UNLESS OTHERWISE DIRECTED.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MULCHES AND PLANTING SOIL QUANTITIES TO COMPLETE THE WORK SHOWN ON THE PLAN.
14. USE ANTI-DESICCANT (WILT-PROOF OR APPROVED EQUAL) ON DECIDUOUS PLANTS MOVED IN LEAF AND FOR EVERGREENS MOVED ANYTIME. APPLY AS PER MANUFACTURER'S INSTRUCTION. ALL EVERGREENS SHALL BE SPRAYED IN THE LATE FALL FOR WINTER PROTECTION DURING WARRANTY PERIOD.
15. PLANTING SOIL FOR TREES, SHRUBS AND GROUND COVERS: FERTILE FRIABLE LOAM CONTAINING A LIBERAL AMOUNT (4% MIN.) OF HUMUS AND CAPABLE OF SUSTAINING VIGOROUS PLANT GROWTH. IT SHALL COMPLY WITH MNDOT SPECIFICATION 3877 TYPE B SELECT TOPSOIL. MIXTURE SHALL BE FREE FROM HARDPACK SUBSOIL, STONES, CHEMICALS, NOXIOUS WEEDS, ETC. SOIL MIXTURE SHALL HAVE A PH BETWEEN 6.1 AND 7.5

- AND 10-0-10 FERTILIZER AT THE RATE OF 3 POUNDS PER CUBIC YARD. IN PLANTING BEDS INCORPORATE THIS MIXTURE THROUGHOUT THE ENTIRE BED IN A 6" LAYER AND ROTO-TILLING IT INTO THE TOP 12" OF SOIL AT A 1:1 RATIO. ANY PLANT STOCK NOT PLANTED ON DAY OF DELIVERY SHALL BE HEELED IN AND WATERED UNTIL INSTALLATION. PLANTS NOT MAINTAINED IN THIS MANNER WILL BE REJECTED.
15. ALL PLANTS SHALL BE GUARANTEED FOR TWO COMPLETE GROWING SEASONS (APRIL 1 - NOVEMBER 1), UNLESS OTHERWISE SPECIFIED. THE GUARANTEE SHALL COVER THE FULL COST OF REPLACEMENT INCLUDING LABOR AND PLANTS.
  16. CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT AT LEAST 3 DAYS PRIOR TO PLANNED DELIVERY. THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT AT LEAST 24 HOURS IN ADVANCE OF BEGINNING PLANT INSTALLATION.
  17. SEASONS/TIME OF PLANTING AND SEEDING: NOTE: THE CONTRACTOR MAY ELECT TO PLANT IN OFF-SEASONS ENTIRELY AT HIS/HER RISK. DECIDUOUS
 

17.1. POTTED PLANTS:	4/1 - 6/1; 9/21 - 11/1
17.2. DECIDUOUS /B&B:	4/1 - 6/1; 9/21 - 11/1
17.3. EVERGREEN POTTED PLANTS:	4/1 - 6/1; 9/21 - 11/1
17.4. EVERGREEN B&B:	4/1 - 5/1; 9/21 - 11/1
17.5. TURF/LAWN SEEDING:	4/1 - 6/1; 7/20 - 9/20
17.6. NATIVE MIX SEEDING:	4/1 - 7/20; 9/20-10/20
  18. MAINTENANCE SHALL BEGIN IMMEDIATELY AFTER EACH PORTION OF THE WORK IS IN PLACE. PLANT MATERIAL SHALL BE PROTECTED AND MAINTAINED UNTIL THE INSTALLATION OF THE PLANTS IS COMPLETE. INSPECTION HAS BEEN MADE, AND PLANTINGS ARE ACCEPTED EXCLUSIVE OF THE GUARANTEE. MAINTENANCE SHALL INCLUDE WATERING, CULTIVATING, MULCHING, REMOVAL OF DEAD MATERIALS, RE-SETTING PLANTS TO PROPER GRADE AND KEEPING PLANTS IN A PLUMB POSITION. AFTER ACCEPTANCE, THE OWNER SHALL ASSUME MAINTENANCE RESPONSIBILITIES. HOWEVER, THE CONTRACTOR SHALL CONTINUE TO BE RESPONSIBLE FOR KEEPING THE TREES PLUMB THROUGHOUT THE GUARANTEE PERIOD.
  19. ANY PLANT MATERIAL WHICH DIES, TURNS BROWN, OR DEFOOLIATES (PRIOR TO TOTAL ACCEPTANCE OF THE WORK) SHALL BE PROMPTLY REMOVED FROM THE SITE AND REPLACED WITH MATERIAL OF THE SAME SPECIES, QUANTITY, AND SIZE AND MEETING ALL LANDSCAPE LEGEND SPECIFICATIONS.
  20. WATERING: MAINTAIN A WATERING SCHEDULE WHICH WILL THOROUGHLY WATER ALL PLANTS ONCE A WEEK. IN EXTREMELY HOT, DRY WEATHER, WATER MORE OFTEN AS REQUIRED BY INDICATIONS OF HEAT STRESS SUCH AS WILTING LEAVES. CHECK MOISTURE UNDER MULCH PRIOR TO WATERING TO DETERMINE NEED. CONTRACTOR SHALL MAKE THE NECESSARY ARRANGEMENTS FOR WATER.

**TURF NOTES:**

- TURF ESTABLISHMENT SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE PROVISIONS OF THE MNDOT 2105 AND 2575 EXCEPT AS MODIFIED BELOW:
1. ALL AREAS TO RECEIVE SOD SHALL ALSO RECEIVE 4" OF TOPSOIL PRIOR TO INSTALLING SOD. TOPSOIL SHALL BE FREE OF TREE ROOTS, STUMPS, BUILDING MATERIAL, AND TRASH, AND SHALL BE FREE OF STONES LARGER THAN 1 1/2" INCHES IN ANY DIMENSION.
  2. WHERE SOD ABUTS PAVED SURFACES, FINISHED GRADE OF SOD/SEED SHALL BE HELD 1" BELOW SURFACE ELEVATION OF TRAIL, SLAB, CURB, ETC.
  3. SOD SHALL BE LAID PARALLEL TO THE CONTOURS AND SHALL HAVE STAGGERED JOINTS. ON SLOPES STEEPER THAN 3:1 OR IN DRAINAGE SWALES, SOD SHALL BE STAKED SECURELY.
  4. ALL DISTURBED AREAS TO BE TURF SEEDED, ARE TO RECEIVE 4" TOP SOIL, SEED, MULCH, AND WATER UNTIL A HEALTHY STAND OF GRASS IS OBTAINED. FOR SLOPES STEEPER THAN 3:1 OR IN DRAINAGE SWALES INSTALL EROSION CONTROL BLANKET.
  5. ALL DISTURBED AREAS TO RECEIVE NATIVE SEED, ARE TO RECEIVE PLANTING SOIL, SEED, MULCH, AND WATER UNTIL A HEALTHY STAND OF GRASS IS OBTAINED. FOR SLOPES STEEPER THAN 3:1 OR IN DRAINAGE SWALES INSTALL EROSION CONTROL BLANKET.

**IRRIGATION NOTES:**

1. IRRIGATION SYSTEM TO BE DESIGN/BUILD. CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR APPROVAL OF SYSTEM LAYOUT PRIOR TO INSTALLATION.
2. ALL SOD TO RECEIVE SPRAY OR ROTOR IRRIGATION HEADS WITH MINIMUM DESIGN OF 1" IRRIGATION PER WEEK.
3. ALL PLANT BEDS TO RECEIVE DRIP LINE IRRIGATION, WITH A MINIMUM DESIGN OF .25" IRRIGATION PER WEEK.
4. CONTRACTOR TO INSTALL A TOTAL OF 4 QUICK COUPLERS AT THE CORNERS OF THE PROPERTY. A 2.5" TYPE K SOURCE PIPE IS PROVIDED BY MECHANICAL.

