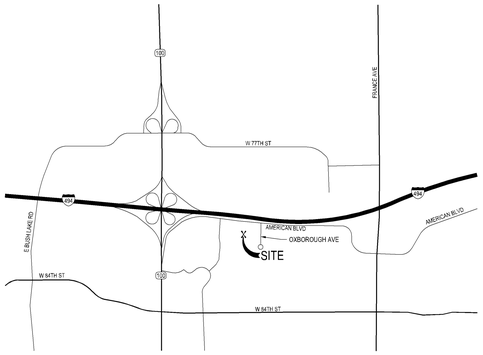
PL202300187

AREA LOCATION MAP

BLOOMINGTON, MN



LUTHER HYUNDAI

BLOOMINGTON, MINNESOTA

ABBREVIATIONS

D	Angle	LB.	Pound
℄	And	LGU	Local Government Unit
@	At	LB.	Pound
100 YR.	100 Year Flood Elevation	LB.	Longitudinal
A.B.	Anchor Bolt	LT.	Light / Lighting
A.D.	Area Drain	MAINT.	Maintenance
A/C	Air Conditioning Unit	MAS.	Masonry
ADD.	Addendum	MATL.	Material
ADDL.	Additional	MAX.	Maximum
ADJ.	Adjacent / Adjust	MECH	Mechanical
AHU	Air Handling Unit	MED.	Medium
ALT.	Alternate	MFR.	Manufacturer
ALUM.	Aluminum	MH	Manhole
ANOD.	Anodized	MIN.	Minimum / Minute
APPROX.	Approximate	MISC.	Miscellaneous
ARCH	Architect / Architectural	MNDOT	Minnesota Department Of Transportation
AUTO.	Automatic	MOD.	Module / Modular
AVG.	Average	MUL.	Mullion
B.C.	Back of Curb	N.	North
B/W	Bottom of Wall	N.I.C.	Not In Contract
BFE	Basement Floor Elevation	NO. OR #	Number
BIT.	Bituminous (Asphaltic)	NOM	Nominal
BLDG.	Building	NTS	Not to Scale
BM	Benchmark	NWE	Normal Water Elevation
BSMT.	Basement	NWL	Normal Water Level
C.F.	Cubic Feet	O.F.	On Center
C.F.S.	Cubic Feet Per Second	O.G.	Outside Dimension
C.G.	Corner Guard	O.H.	Overhead Electric
C.J.	Control Joint	OH	Overhead
C.L.	Centerline	OHWL	Ordinary High Water Level
C.M.U.	Concrete Masonry Unit	OPNG.	Opening
C.O.	Cleanout	ORIG.	Original
C.O.E.	U.S. Army Corps Of Engineers	P.C.	Point of Curvature
C.Y.	Cubic Yards	P.I.	Point of Intersection
CB	Catch Basin	PIV	Post Indicator Valve
CBMH	Catch Basin Manhole	P.L. OR P/L	Property Line
CEM.	Cement	P.O.B.	Point of Beginning
CIP	Cast Iron Pipe	P.S.F.	Pounds Per Square Foot
CMP	Corrugated Metal Pipe	P.S.I.	Pounds Per Square Inch
CONC.	Concrete (Portland)	P.T.	Point of Tangency
CONN.	Connection	P.V.C.	Point of Vertical Curvature
CONST.	Construction	P.V.I.	Point of Vertical Intersection
CONT.	Continuous	P.V.T.	Point of Vertical Tangency
CONTR.	Contractor	PE	Polyethylene
COP.	Copper	PED.	Pedestal / Pedestrian
CU	Cubic	PERF.	Perforated
D.S.	Down Spout	PREP.	Preparation
DEG.	Degree	PROJ.	Project
DEMO.	Demolition / Demolish	PROP.	Proposed
DEPT.	Department	PVC	Poly-Vinyl-Chloride (Piping)
DET.	Detail	PVMT.	Pavement
DIA.	Diameter	QTR.	Quarter
DIAG.	Diagonal	QTY.	Quantity
DIM.	Dimension	R	Radius
DIP	Ductile Iron Pipe	RAD.	Radius
DN	Down	RE	Rim Elevation (Casting)
DWG.	Drawing	R.D.	Roof Drain
E.	East	R.E.	Remove Existing
E.J.	Expansion Joint	R.O.	Rough Opening
E.O.	Emergency Overflow	R.P.	Radius Point
E.O.S.	Emergency Overflow Swale	RC	Reinforced Concrete Pipe
E.W.	Each Way	R.S.	Rough Slab
EA.	Each El, Elevation	RSD	Roof Storm Drain
ELEC.	Electrical	RE	Regarding
ELEV.	Elevation	REINF.	Reinforced
EMER.	Emergency	REQ'D	Required
ENGR.	Engineer	REV.	Revision / Revised
ENTR.	Entrance	RGU	Regulatory Government Unit
EQ.	Equal	ROW OR R/W	Right of Way
EQUIP.	Equipment	S.	South
EQUIV.	Equivalent	S.F.	Square Feet
EXIST.	Existing	SAN.	Santary Sewer
EXP.	Expansion	SECT.	Section
F & I.	Furnish and Install	SE	Split Entry /Side Exit
F.B.O.	Furnished by Others	SEWO	Split Entry Walk Out /Side Exit Walk Out
F.C.	Face of Curb	SHT.	Sheet
F.D.	Floor Drain	SIM.	Similar
F.D.C.	Fire Department Connection	SLNT.	Sealant
F.V.	Field Verify	SPEC.	Specification
FB	Full Basement	SQ.	Square
FBWO	Full Basement Walk Out	SSD	Subsurface drain
FBLO	Full Basement Look Out	STMH	Storm Sewer Manhole
FDN.	Foundation	STD.	Standard
FES	Flared End Section	STRUCT.	Structural
FFE	Finished Floor Elevation	SYM.	Symmetrical
FLR.	Floor	T	Thickness
FT. OR (')	Foot	T.R.	Top of Rim
FUT.	Future	T/W	Top of Wall
G.B.	Grade Break	TEMP.	Temporary
G.C.	General Contractor	THK.	Thick / Thickness
GAL.	Gallon	T.J.	Tooled Joint
GALV.	Galvanized	TNH	Top Nut Hydrant
GFE	Garage Floor Elevation	TYP.	Typical
GL.	Glass	U.N.O.	Unless Noted Otherwise
GR.	Grade	V.B.	Vapor Barrier
H.	Height	V.C.	Vertical Curve
H.P.	High Point	V.I.F.	Verify In Field
HDPEP	High Density Polyethylene Pipe	VER.	Verify
HGT.	Height	VERT.	Vertical
HORIZ.	Horizontal	VEST.	Vestibule
HVAC	Heating, Ventilation, Air Conditioning	W	Width
HYD	Hydrant	W.P.T.	Working Point
I.D.	Inside Dimension OR Identification	W.W.F.	Welded Wire Fabric
I.E. or IE	Invert Elevation	W/	With
IN. OR (")	Inches	W/O	Without
INFO.	Information	WO	Walk Out
INL.	Inlet Elevation	WTR.	Wetland
INSUL.	Insulation	WP	Waterproof
INV.	Invert Elevation	WETL.	Weight
JT.	Joint	YD.	Yard
L.F.	Linear Feet	YR.	Year
L.P.	Low Point / Liquid Petroleum		

SYMBOLS

EXISTING	DESCRIPTION	NEW	DESCRIPTION
120	MAJOR CONTOUR	120	MAJOR CONTOUR
122	MINOR CONTOUR	123	MINOR CONTOUR
234.5	SPOT ELEVATION	123.45	SPOT ELEVATION
	BUILDING		BUILDING
	CANOPY / OVERHANG		CANOPY/OVERHANG
	CONCRETE		UNDERGROUND STRUCTURE
	BITUMINOUS		CONCRETE
	LANDSCAPING		CONCRETE CURB
	GRAVEL	BIT EDGE HEIGHT, TYPE	EDGE OF PAVEMENT
	PAVING BLOCK		FENCING
	PAVING BLOCK		GUARD RAIL
			CONCRETE RETAINING WALL
	STORM SEWER LINE		MODULAR RETAINING WALL
8"SAN	SANITARY SEWER LINE		FIELDSTONE RETAINING WALL
6"WTR	WATER MAIN		EXIT LOCATION
OE	OVERHEAD ELECTRIC		LIGHT STANDARD
UT	UNDERGROUND TELEPHONE		POWER POLE
FO	UNDERGROUND FIBER OPTIC	1.00 %	SLOPE DIRECTION
UE	UNDERGROUND ELECTRIC		CATCH BASIN
G	GAS LINE		MANHOLE
X HEIGHT, TYPE X	CONCRETE CURB		BOLLARD
	FENCING	STS FES RIPRAP	STORM SEWER
	RETAINING WALL	SAN	SANITARY SEWER-WASTE
	SET 1/2" X 14" IRON PIPE	FM	FORCE MAIN
	IRON MONUMENT FOUND	RD	ROOF DRAIN SYSTEM
	SURVEY DISK (BENCHMARK)	GATE VALVE WTR HYD	WATERMAIN
	POWERPOLE	FIRE	FIRE LINE (IF SEPARATE)
	GUY WIRE	BLDG.	FIRE DEPT. CONNECTION
	GUARD POST	C.O. X"SSD	SOIL SUBDRAIN
GM	GAS METER	GAS	GAS LINE-UNDERGROUND
T	TRANSFORMER	ELEC	ELECTRIC-UNDERGROUND
	WATER SHUT-OFF VALVE	TELE	TELEPHONE-UNDERGROUND
	TRAFFIC SIGN	CATV	UNDERGROUND CABLE/TV
LT	FLAG POLE	LSS	LAWN SPRINKLER SLEEVE
	LIGHT POLE		
	TREES		
	TREE LINE		
	MANHOLE		
	CATCH BASIN		
	FIRE HYDRANT		
	WATER VALVE		
	FLARED END SECTION		
MB	MAILBOX		
1	NOTE NUMBER		
(M)	MEASURED DISTANCE		
(P)	DISTANCE PER RECORDED PLAT		
B-X	SOIL BORING		

EROSION CONTROL SYMBOLS

SYMBOL	DESCRIPTION
	SILT FENCE
	COMPOST/BIO LOG
	INLET PROTECTION
	EROSION CONTROL BLANKET

DRAWING SYMBOLS

SYMBOL	DESCRIPTION
3	NOTE REFERENCE
12	PARKING STALL COUNT
C7.3 / 1	LARGE SHEET DETAIL
C21	COORDINATE POINT
1	REVISION - ADDENDUM, BULLETIN, ETC.
	REVISED AREA (THIS ISSUE)

LEGAL DESCRIPTION

Lot 2, Block 1, Sill Hunting Properties, Hennepin County, Minnesota

BENCHMARK

PROJECT BENCHMARK:
MNDOT GSID STATION #94891
STATION NAME: CAVALIA
IN BLOOMINGTON, 0.6 MILE WEST ALONG INTERSTATE HIGHWAY 494 FROM THE JUNCTION OF INTERSTATE HIGHWAY 494 AND FRANCE AVENUE IN BLOOMINGTON, AT INTERSTATE HIGHWAY 494 MILEPOINT 7.5, 41.2 FEET NORTH OF WESTBOUND INTERSTATE HIGHWAY 494, 23.5 FEET SOUTH OF A FENCE, 15.1 FEET SOUTHEAST OF UTILITY CABINET NUMBER SSE, 1.5 FEET SOUTH OF A WITNESS POST.
ELEVATION = 827.193 (NAVD 88)

SITE BENCHMARK:
TOP NUT OF FIRE HYDRANT
LOCATION: SOUTH OF AMERICAN BLVD ALONG THE NORTH PROPERTY LINE OF THE SITE, APPROXIMATELY 185 FEET EAST OF THE NW DRIVE ENTRANCE INTO THE SITE.

ELEVATION = 841.618 (NAVD 88)

OWNER

THE LUTHER COMPANY, LLLP
3701 ALABAMA AVE S
ST. LOUIS PARK, MN, 55416
TEL. (952) 258-8800
FAX (952) 258-8900
CONTACT: LINDA MCGINTY

PROJECT CONTACTS

CIVIL ENGINEER
LANDFORM
105 SOUTH FIFTH AVENUE, SUITE 513
MINNEAPOLIS, MN 55401
TEL 612-252-9070
CONTACT: STEVE SABRASKI

SURVEYOR
LANDFORM
105 SOUTH FIFTH AVENUE, SUITE 513
MINNEAPOLIS, MN 55401
TEL 612-252-9070
CONTACT: LARRY HUHN

LANDSCAPE ARCHITECT
LANDFORM
105 SOUTH FIFTH AVENUE, SUITE 513
MINNEAPOLIS, MN 55401
TEL 612-252-9070
CONTACT: JOSH POPEHN

ARCHITECT
BAKER ASSOCIATES, INC.
520 NICOLLET MALL, SUITE 305
MINNEAPOLIS, MN 55402
TEL (612) 330-0411
CONTACT: CRAIG JOHN

CIVIL / LANDSCAPE SHEET INDEX & REVISION MATRIX

SHEET NO.	DESCRIPTION	11.15.22	01.13.23	03.08.23	05.26.23	06.30.23	07.13.23	08.03.23	11.03.23
C0.1	CIVIL & LANDSCAPE TITLE SHEET	X	X	X	X	X	X	X	X
C1.1	EXISTING CONDITIONS & DEMOLITION	X	X	X	X	X	X	X	X
C2.1	SITE PLAN	X	X	X	X	X	X	X	X
C3.1	GRADING, DRAINAGE, PAVING & EROSION CONTROL	X	X	X	X	X	X	X	X
C3.2	SWPPP			X	X	X		X	
C4.1	UTILITIES		X	X	X	X	X	X	
C7.1	CIVIL CONSTRUCTION DETAILS		X	X	X	X	X	X	
C7.2	CIVIL CONSTRUCTION DETAILS		X	X	X	X	X	X	
L2.1	LANDSCAPE PLAN		X	X	X	X	X	X	
L4.1	PHOTOMETRICS PLAN - INSTALLED VALUES			X	X	X	X		X
L4.2	PHOTOMETRICS PLAN - MAINTAINED VALUES			X	X	X	X		X

CERTIFICATIONS

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. THIS CERTIFICATION IS FOR SHEET NUMBERS BEGINNING WITH "C".

STEVE SABRASKI, P.E.

LICENSE NUMBER: 47185 DATE: 11/03/2023

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 LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA. THIS CERTIFICATION IS FOR SHEET NUMBERS BEGINNING WITH "L".

JOSH POPEHN, RLA

LICENSE NUMBER: 44803 DATE: 11/03/2023

Know what's Below. Call before you dig.

DEVELOPER

THE LUTHER COMPANY, LLLP
3701 ALABAMA AVENUE SOUTH
ST. LOUIS PARK, MN
TEL (952)258-8800 - FAX (952) 258-8900

MUNICIPALITY

BLOOMINGTON

PROJECT

LUTHER HYUNDAI
BLOOMINGTON, MN

ISSUE / REVISION HISTORY

CONTACT ENGINEER FOR ANY PRIOR HISTORY

DATE	ISSUE / REVISION	REVIEW
15 NOV 2022	CRC SUBMITTAL	SBS
11 JAN 2023	CITY SUBMITTAL	SES
08 MAR 2023	PERMIT SET	SES
26 MAY 2023	CITY / WATERSHED RESUBMITTAL	SBS
26 JUN 2023	CITY / WATERSHED RESUBMITTAL	SBS
13 JUL 2023	BULLETIN H12	SES
03 AUG 2023	BULLETIN H13	SES
03 NOV 2023	BULLETIN 05	SBS

CERTIFICATION

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BULLETIN 05
NOVEMBER 03, 2023

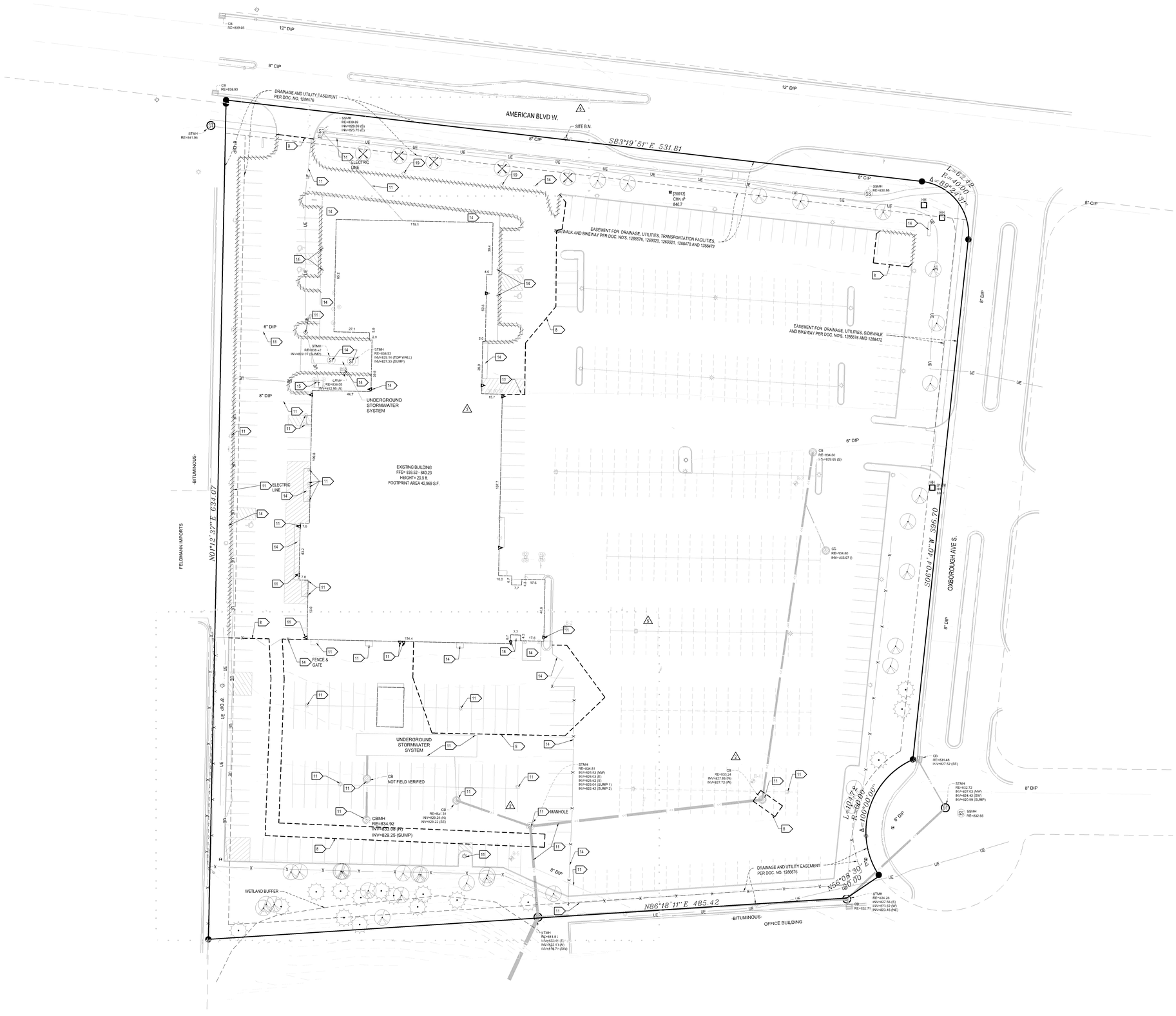
LANDFORM
From Site to Finish

105 South Fifth Avenue
Suite 513
Minneapolis, MN 55401
Tel: 612-252-9070
Fax: 612-252-9077
Web: landform.net

FILE NAME C001LUT054
PROJECT NO. LUT22054

CIVIL & LANDSCAPE TITLE SHEET
C0.1

PL202300187



EXISTING CONDITIONS

1. Background information shown is from survey by Landform, Minneapolis, MN, on August, 02, 2022, expressly for this project, City of Bloomington, MN record drawings, and utility service providers. Landform offers no warranty, expressed or written, for information provided by others. Existing project conditions shall be verified prior to beginning construction. Errors, inconsistencies, or omissions discovered shall be reported to the Engineer IMMEDIATELY.
2. Geotechnical boring locations are approximate and are based on information provided in the Geotechnical Report prepared by NTI, Ramsey, MN, on June, 08, 2011.

DEMOLITION AND CLEARING NOTES

3. Obtain permits for demolition, clearing, and disposal prior to beginning.
4. Contact utility service providers for field location of services 72 hours prior to beginning demolition and clearing.
5. See Sheet C3.1 for erosion prevention and sediment control measures that must be in place prior to disturbances to site.
6. Building demolition: verify with owner that building has been cleared of regulated materials requiring special handling or disposal. Remove structure, columns, canopies, footings, foundations, and any associated construction in its entirety. Refer to Architectural and Structural for removal limits.
7. Dimensions shown for removal are approximate. Coordinate with new construction to ensure appropriate removal of existing facilities.
8. Pavement sawcut. Remove concrete walks and curbing to the nearest existing joint beyond construction limits.
9. Complete demolition with minimal disruption of traffic. Coordinate lane closures with the regulatory authority and provide advance notification to affected emergency response providers.
10. Provide barricades, lights, signs, traffic control, and other measures necessary for protection and safety of the public and maintain throughout construction.
11. Protect structures, utilities, trees, plant material, sod, and adjacent property from damage during construction unless noted for removal. Damage shall be repaired to equal or better condition at no additional cost.
12. Abandon wells and remove on site sewage facilities prior to any other demolition in accordance with requirements of regulatory authorities.
13. Remove trees noted, including root structures, from the site. Coordinate with owner to mark trees to be saved or transplanted prior to clearing. Protect trees indicated with tree protection fencing per Detail C7.1/9.
14. Remove existing site features including, but not limited to, underground utilities, paving, curbing, walkways, fencing, retaining walls, screen walls, aprons, lighting, related foundations, signage, bollards, landscaping, and stairways within the construction limits unless noted otherwise.
15. Coordinate removal, relocation, termination, and re-use of existing private utility services and appurtenances with the utility companies. Restore electric handholes, pullboxes, powerpoles, guylines, and structures disturbed by construction in accordance with utility owner requirements.
16. Existing piping and conduits may be abandoned in-place if filled with sand and if not in location of proposed building or in conflict with proposed utilities or structures. Terminate existing services at the supply side in conformance with provider's standards.
18. Haul demolition debris off-site to a facility approved by regulatory authorities for the handling of demolition debris, unless noted otherwise.
19. Remove and salvage light pole for re-use. Refer to sheet C2.1 for proposed relocations.
20. All construction and post-construction parking and storage of equipment and materials must be on-site. Use of public streets for private construction parking, loading/ unloading, and storage will not be allowed.

LEGEND

- :Tree Removal
- :Soil Boring
- :Curb Removal
- XXXXXXXXXXXXXXXXX :Utility Line Removal
- :Tree Protection per Detail C7.1/9.

DEVELOPER

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ST. LOUIS PARK, MN
TEL (952)258-8800 - FAX (952) 258-8900

MUNICIPALITY

BLOOMINGTON

PROJECT

LUTHER HYUNDAI

BLOOMINGTON, MN

ISSUE / REVISION HISTORY

CONTACT ENGINEER FOR ANY PRIOR HISTORY

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26 JUN 2023	CITY / WATERSHED RESUBMITTAL	SES
11 JUL 2023	BULLETIN H02	SES
01 AUG 2023	BULLETIN H03	SES
03 NOV 2023	BULLETIN 05	SES

CERTIFICATION

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

Steven E. Sekhon
License No. 47165 Date: 11/03/2023

Signature shown is a digital reproductor of original. Wet signed copy of this plan on file at Landform Professional Services, LLC office and is available upon request.

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BULLETIN 05
NOVEMBER 03, 2023

LANDFORM
From Site to Finish
105 South Fifth Avenue Tel: 612-252-9070
Suite 513 Fax: 612-252-9077
Minneapolis, MN 55401 Web: landform.net

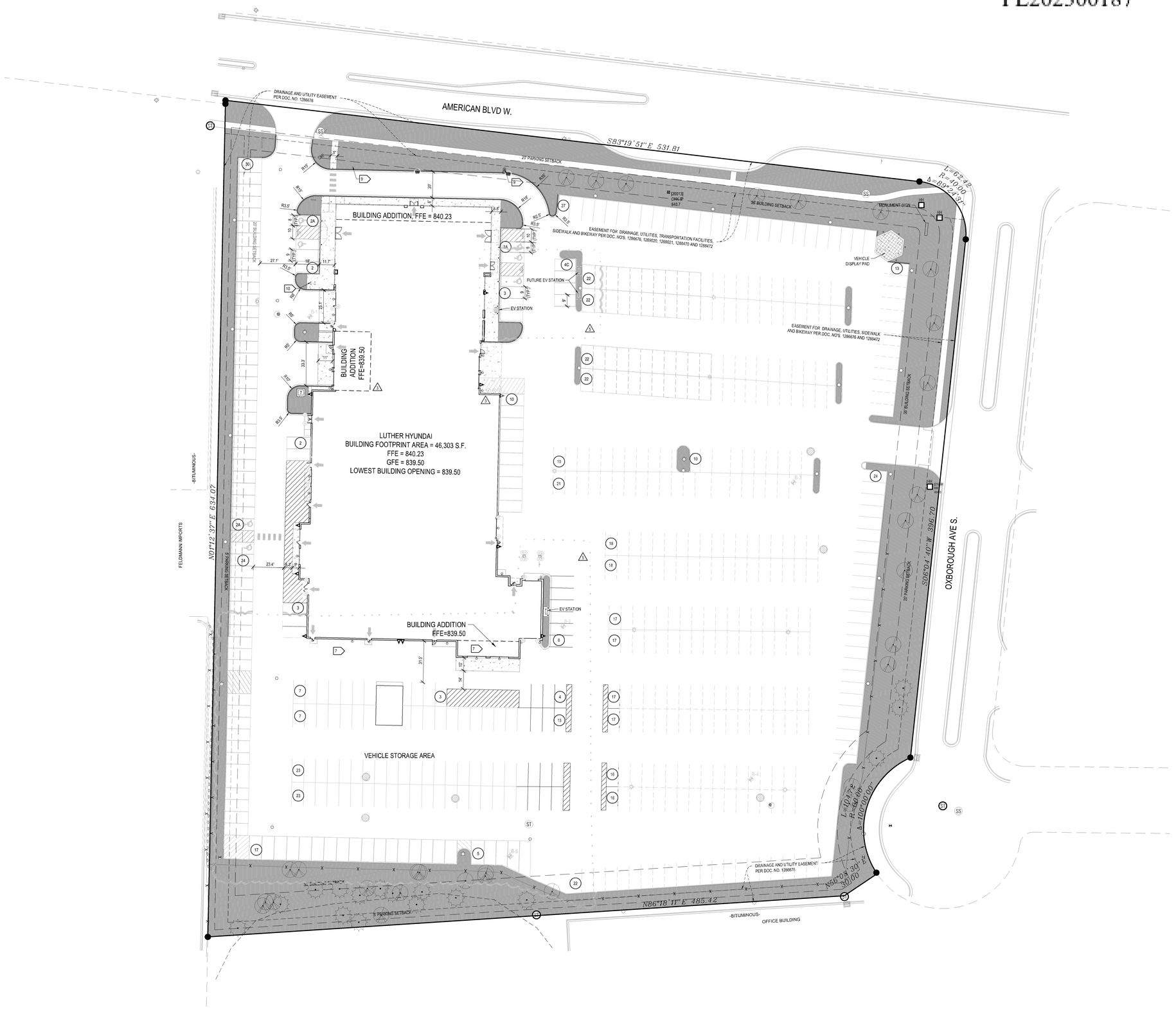
FILE NAME C101LUT22054.DWG
PROJECT NO. LUT22054

EXISTING CONDITIONS & DEMOLITION
C1.1

Know what's Below. Call before you dig.

NORTH
0 30 60

PL202300187



GENERAL NOTES

1. For construction staking and surveying services contact Landform at 612.252.9070.

SITE PLAN NOTES

2. Obtain all necessary permits for construction within, or use of, public right-of-way.
3. The digital file, which can be obtained from the Engineer, shall be used for staking. Discrepancies between the drawings and the digital file shall be reported to the Engineer. The building footprint, as shown on these drawings, and the digital file, shall be compared to the structural drawings prior to staking.
4. Reserved.
5. Dimensions shown are to face of curb and exterior face of building unless noted otherwise.
6. Delineate parking stalls with a 4-inch wide white painted stripe. Delineate access aisles with 4-inch wide white painted stripes 18 inches on center and at 45 degree angle to direction of travel.
7. Trash Enclosure. Refer to Architectural plans for details.
8. Reinstall salvaged fence.
9. Reinstall salvaged light pole.
10. 4-space Bike rack. See sheet L2.1 for detail.

PROPOSED ZONING AND SETBACK SUMMARY

The Existing Property is Currently Zoned: Commercial Service (CS-0.5)

Proposed Zoning: Freeway Office and Service (C-1)

Building Setback Information is as follows:
Front Yard = 35 ft.
Rear = 30 ft.
Side = 20 ft.

Parking Setback Information is as follows:
Front Yard = 20 ft.
Rear = 5 ft.
Side (interior) = 5 ft.
Side (abroid) = 20 ft.

AREA SUMMARY

Existing:					
Pervious	58,149	s.f.	1.33	ac.	18.3%
Impervious	259,620	s.f.	5.96	ac.	81.7%
Total	317,769	s.f.	7.29	ac.	100.0%
Proposed:					
Pervious	57,766	s.f.	1.32	ac.	18.2%
Impervious	260,003	s.f.	5.97	ac.	81.8%
Total	317,769	s.f	7.29	ac.	100.0%
Building expansion:					
Existing	42,969	s.f.			
Additions	3,334	s.f.			
Total	46,303	s.f			

PARKING SUMMARY

Required Parking:

Service Area	Three stalls for each enclosed "major service" bay	24	72 Stalls
	Two stalls for each enclosed "minor service" bay	9	18 Stalls
	One stall per 300 SF of GFA excluding service bays	9,070 SF Service Area	30 Stalls
Car Wash	One stall per 375 SF of GFA	770 SF Car Wash	2 Stalls
Office	One stall per 285 SF of office GFA	8,854 SF Office Area	31 Stalls
Large Item Retail	One stall per 180 SF of retail GFA	3,208 SF Showroom Area	18 Stalls
Warehouse	One stall per 1,000 SF of warehouse GFA	6,848 sf Warehouse Area	7 Stalls
Total Parking Stalls Required			175 Stalls

Provided Parking:

Inventory Stalls	(9x18)	358	ea.
Customer / Employee / Service stalls	(9x18)	175	ea.
Accessible Stalls	(9x18)	7	ea.
Compact Stalls	(9x16)	4	ea.
Total Parking Stalls Provided		544	ea.

LEGEND

- Green Space (Landscape Area)
- Customer / Employee / Service parking (remainder of stalls are sales / inventory)

DEVELOPER

THE LUTHER COMPANY, LLLP
3701 ALABAMA AVENUE SOUTH
ST. LOUIS PARK, MN
TEL (952)258-8800 - FAX (952) 258-8900

MUNICIPALITY

BLOOMINGTON

PROJECT

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BLOOMINGTON, MN

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03 NOV 2023	BULLETIN H15	SES
03 NOV 2023	BULLETIN 05	SES

CERTIFICATION

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

Steven E. Sikkink
License No. 47765 Date: 11/03/2023

Signature shown is a digital reproduction of original. Wet signed copy of this plan on file at Landform Professional Services, LLC office and is available upon request.

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NOVEMBER 03, 2023

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Suite 513
Minneapolis, MN 55401
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Fax: 612-252-9077
Web: landform.net

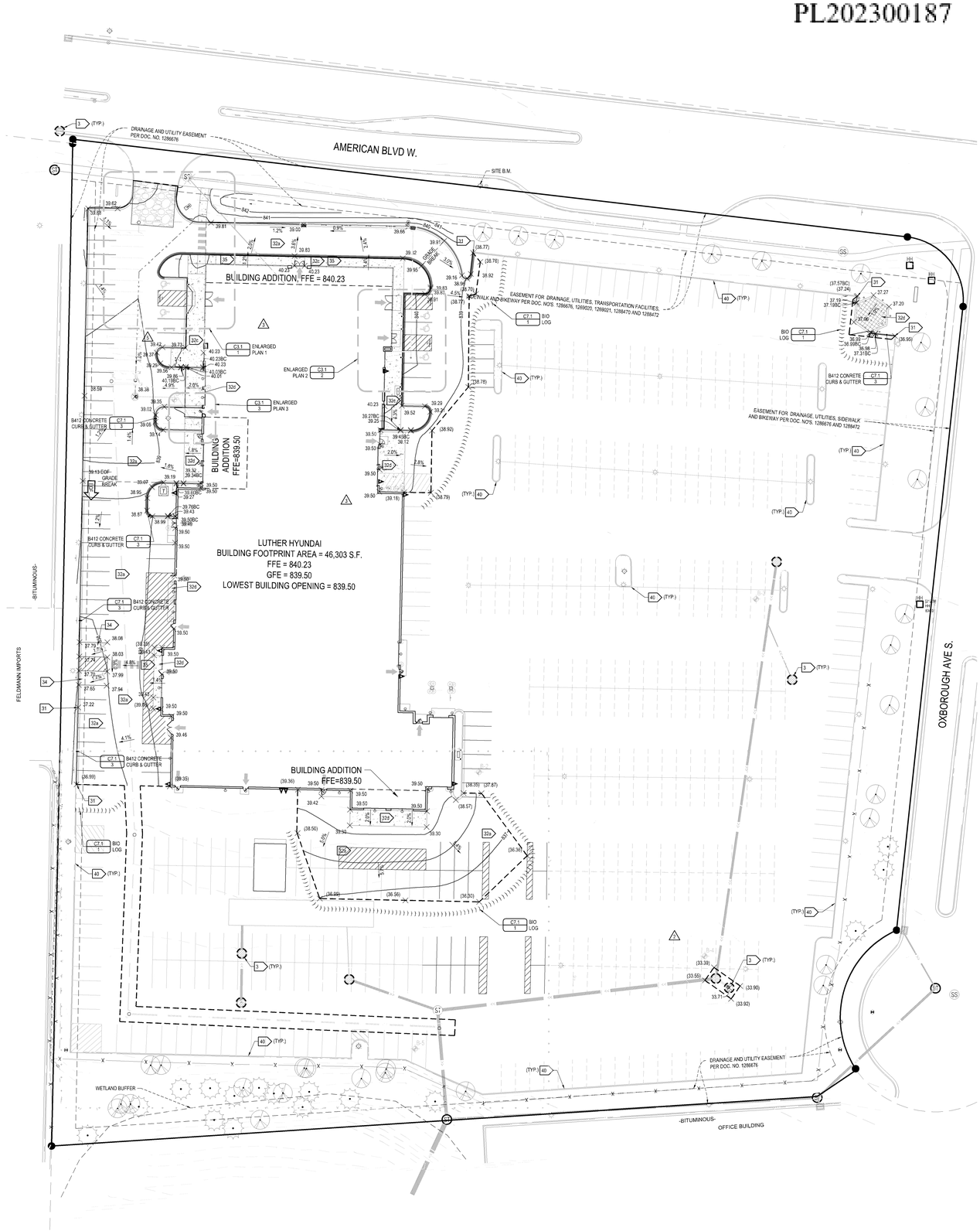
FILE NAME C201LUT22054.DWG
PROJECT NO. LUT22054

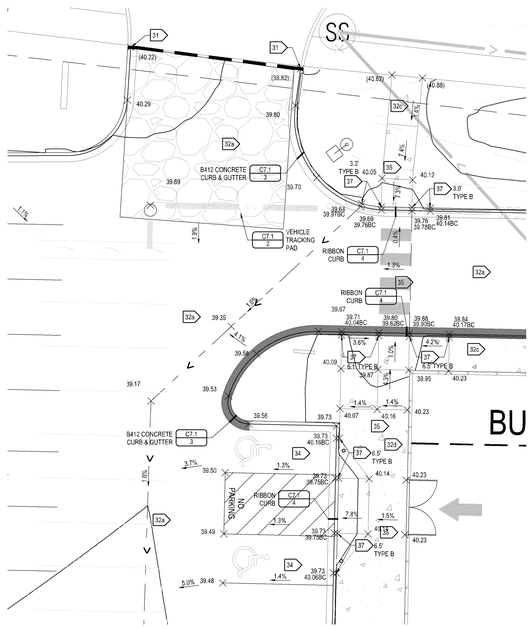
SITE PLAN
C2.1

Know what's Below. Call before you dig.

NORTH
0 30 60

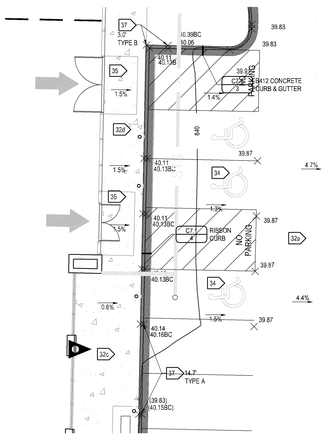
PL202300187





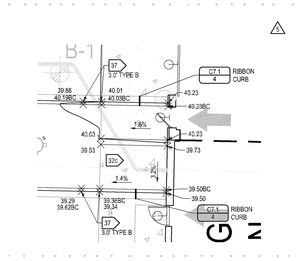
1 **ENLARGED PLAN 1**

10 SCALE



2 **ENLARGED PLAN 2**

10 SCALE



3 **ENLARGED PLAN 3**

10 SCALE

GENERAL NOTES

1. For construction staking and surveying services contact Landform at 612.252.9070.

EROSION PREVENTION AND SEDIMENT CONTROL NOTES

2. Install perimeter sediment controls prior to beginning work and maintain for duration of construction. Remove controls after areas contributing runoff are permanently stabilized and dispose of off site.

3. Install inlet protection: Wimco RD or CG models as appropriate, or approved equal. Maintain protection until project is stabilized.

4. Limit soil disturbance to the grading limits shown. Schedule operations to minimize length of exposure of disturbed areas.

5. Management practices shown are the minimum requirement. Install and maintain additional controls as work proceeds to prevent erosion and control sediment carried by wind or water.

6. Dewatering activity must ensure discharge does not adversely affect surface waters or downstream properties.

7. Soil stockpiles require perimeter control or other erosion control BMP.

8. Contractor shall prevent sediment laden water from entering the infiltration system and all storm sewer until the site is completely stabilized.

9. Stabilization must be started immediately to limit soil erosion when the construction activity in that portion of the site has temporarily or permanently ceased and will not resume for 14 calendar days.

10. Seed, Sod, Mulch, Erosion Control Blanket, and Fertilizer shall meet the following Specifications, as modified.

Item	Specification Number
Sod	MNDOT 3878
Seed	MNDOT 3876
MN Type 21-111 @ 100 lb./ac. - Temporary Erosion Control – Temporary Erosion Control, May 1 - Jul 31 MN Type 21-112 @ 100 lb./ac. - Temporary Erosion Control - Temporary Erosion Control, Aug 1 - Oct 31	
MN Type 25-151 @ 120 lb./ac. - Permanent Turf	
Mulch	MNDOT 3882
(MNDOT Type 1 @ 2 ton/ac., Disc Anchored)	
Erosion Control Blanket MNDOT Type 3N	MNDOT 3885
Fertilizer General Placement	MNDOT 3881 MNDOT 2575

11. See Landscape Sheets for permanent turf and landscape establishment.

12. Scrape adjacent streets clean daily and sweep clean weekly.

GRADING NOTES

13. Contact utility service providers for field location of services 72 hours prior to beginning grading.

14. Refer to the Geotechnical Report prepared by NTI, Dated 09/08/2011, for additional information on backfill material and groundwater conditions.

15. Remove topsoil from grading areas and stockpile sufficient quantity for reuse. Materials may be mined from landscape areas for use and replaced with excess organic material with prior Owner approval.

16. Remove surface and ground water from excavations. Provide initial lifts of stable foundation material if exposed soils are wet and unstable.

17. Rough grade Building Pad to 12 Inches below Finished Floor Elevation (FFE).

18. Refer to Structural Specifications for earthwork requirements for building pads.

19. An Independent Testing Firm shall verify the removal of organic and unsuitable soils, soil correction, and compaction and provide periodic reports to the Owner.

20. Place and compact fill using lift thicknesses matched to soil type and compaction equipment to obtain specified compaction throughout the fill.

21. Compact cohesive soils in paved areas to 95% of maximum dry density, Standard Proctor (ASTM D698) except the top 3 feet which shall be compacted to 100%. Compact to 98% density where fill depth exceeds 10 feet. The soils shall be within 3% of optimum moisture content. In granular soils all portions of the embankment shall be compacted to not less than 95% of Modified Proctor Density (ASTM D1557).

22. Coordinate with Architectural for building stoop locations. Slopes shown on adjacent walks and pavements should continue over stoops.

INFILTRATION BASIN INFORMATION & TESTING

23. Avoid soil compaction of infiltration practices. Any equipment used in infiltration areas should be small scaled and tracked. Install protective fencing as shown before work begins.

24. Reserved.

25. DESIGN PERMEABILITY RATES:
Infiltration Basin was designed with a permeability of 0.45 inches/hour.

TESTING:

a. Infiltration Basins: Once filtration basin media has been placed, permeability testing shall be performed.

b. Contractor shall engage a qualified testing firm to measure the permeability of the basin surface utilizing a Double Ring Infiltrometer, Modified Philip Dunn (MPD) Infiltrometer, or other method approved by the Civil Engineer or Geotechnical Engineer. Test results shall be greater than or equal to the following rates to meet long term rates required for design:
Infiltration Basin needs a permeability of 0.45 inches/hour. Soils encountered with a lower permeability than 0.45 inches/hour within area of infiltration basin must be excavated, removed, and backfilled with material suitable for infiltration.

c. Contractor to contact the following to schedule testing. Representative staff from each entity may wish to observe the tests. Contact shall be made 72 hours prior to testing.

26. Civil Engineer: Steve Sobraski, ssobraski@landform.net, 612-252-9070
Geotechnical Engineer: TBD
Nine Mile Creek Watershed: TBD
City of Bloomington: TBD

27. RATE OF TESTING: Contractor shall coordinate with the testing firm to provide permeameter tests at the following rates:

Infiltration Basin I.D.	Basin Area (s.f.)	No. of Tests Required
1	2,219	2

28. Test results shall be provided to the Civil Engineer, Geotechnical Engineer, Watershed, & City staff.

PAVING NOTES

29. Spot Elevations at curblines indicate flowlines unless noted otherwise. See Sheet C4.1 for rim elevations of catch basins.

30. Grades between proposed spot elevations shall be continuous and nonvariable. Spot Elevations shall govern over contour lines.

31. Meet and Match existing curb. Transition as needed.

32. Paving Sections (Refer to Geotechnical Report by NTI, Dated 06-08-2011)
a. Bituminous Paving (Light Duty)
Bituminous Wear (MNDOT 2360)
Tack Coat (MNDOT 2357)
Bituminous Base (MNDOT 2360)
Aggregate Base (MNDOT 3138, Class 5)
Compacted Subsoil

b. Bituminous Paving (Heavy Duty)
Bituminous Wear (MNDOT 2360)
Tack Coat (MNDOT 2357)
Bituminous Base (MNDOT 2360)
Aggregate Base (MNDOT 3138, Class 5)
Compacted Subsoil

c. Concrete Walkways
4-inch Concrete Walk, 4000 PSI, 5%-8% Air Entrained, Max. 4" Slump (MNDOT 2301)
4-inch Aggregate Base (MNDOT 3138, CLASS 5)
Compacted Subsoil

d. Concrete Drives, Aprons, and Exterior Slabs
Concrete, 4000 PSI, 5%-8% Air Entrained, Max. 4" Slump (MNDOT 2301)
Aggregate Base (MNDOT 3138, CLASS 5)
Compacted Subsoil

33. Concrete Joints
Install joints as shown and align across sidewalks, curbs, and pavement, paying attention to spacing of expansion joints. Joint spacing shall be as follows:
a. Tooled joints: Divide panels into nominally equal areas unless shown otherwise.
b. Expansion Joints: Sidewalks - 40 feet max.; Curbs - 60 feet max.; Pavement: 60 feet max.; Adjacent to building foundations and stoops.
c. Contraction Joints: Sidewalks - 8 to 10 feet; Curbs and Aprons - 12 to 15 feet.

34. Accessible Parking Stalls and adjacent access aisles shall not exceed a 2.00% slope in any direction.

35. Accessible Routes shall have a maximum cross slope of 2.00% and a maximum running slope of 5.00%.

36. Adjust all structure rims to match pavement elevations.

37. Transition from 4" concrete curb & gutter to Ribbon Curb. Refer to detail C7.1/10.

38. Contractor shall obtain a Public Works permit for obstructions and concrete work within the right-of-way. Permit is required prior to removals or installation. Contact Sean Jenkins (952-563-4345, sjenkins@BloomingtonMN.gov) for permit information.

39. Street lighting and interconnect conduit must be exposed for city inspection prior to pouring concrete or backfilling excavation in city right-of-way.

40. Remove and replace existing on-site curb with B412 Concrete Curb and Gutter. See detail C7.1/3

41. Mill and Overlay all on site pavement

LEGEND

SYMBOL	DESCRIPTION	ESTIMATED QUANTITY
	Inlet Protection	7 ea.
	Compost or Bio Log	591 lf.
	Vehicle Tracking Pad	1 ea.
	Tip Out Curb	
	Pavement Sawcut	
	Construction Limits	
	Erosion Control Blanket	325 sf.

Know what's **Below.** **Call** before you dig.

NORTH

0 30 60

DEVELOPER

THE LUTHER COMPANY, LLLP
3701 ALABAMA AVENUE SOUTH
ST. LOUIS PARK, MN
TEL (952)258-8800 - FAX (952) 258-8900

MUNICIPALITY

BLOOMINGTON

PROJECT

LUTHER HYUNDAI
BLOOMINGTON, MN

ISSUE / REVISION HISTORY

CONTACT ENGINEER FOR ANY PRIOR HISTORY

DATE	ISSUE / REVISION	REVIEW
15 NOV 2022	ORIG SUBMITTAL	MFN
11 JAN 2023	CITY SUBMITTAL	SES
06 MAR 2023	PERMIT SET	SES
26 MAY 2023	CITY / WATERSHED RESUBMITTAL	MFN
26 JUN 2023	CITY / WATERSHED RESUBMITTAL	MFN
11 JUL 2023	BULLETIN H12	SES
03 AUG 2023	BULLETIN H15	SES
03 NOV 2023	BULLETIN 05	MFN

CERTIFICATION

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

Steven E. Sobraski
License No. 47765 Date: 11/03/2023

Signature shown is a digital reproduction of original. Wet signed copy of this plan on file at Landform Professional Services, LLC office and is available upon request.

IF THE SIGNATURE, SEAL OR FOUR LINES DIRECTLY ABOVE ARE NOT VISIBLE, THIS SHEET HAS BEEN REPRODUCED BEYOND INTENDED READABILITY AND IS NO LONGER A VALID DOCUMENT. PLEASE CONTACT THE ENGINEER TO REQUEST ADDITIONAL DOCUMENTS.

BULLETIN 05
NOVEMBER 03, 2023

LANDFORM
From Site to Finish

105 South Fifth Avenue
Suite 513
Minneapolis, MN 55401

Tel: 612-252-9070
Fax: 612-252-9077
Web: landform.net

FILE NAME C301LUT22054.DWG
PROJECT NO. LUT22054

GRADING, DRAINAGE, PAVING, & EROSION CONTROL
C3.1

PL202300187

NPDES PERMIT AND SWPPP COMPONENTS

1. ***The current Minnesota Construction Stormwater General Permit (Permit) dated August 1, 2018 is referenced in this document as the Permit.***

   The SWPPP includes the following components:
   - Construction Documents prepared by Landform
   - Stormwater Management Plan prepared by Landform
   - Maintenance Plan for permanent stormwater BMPs
   - Geotechnical Report prepared by NTI

   All components must be kept onsite by the Operator. The Operator shall contact Civil Engineer if they do not have all of the above documents.

SITE INFORMATION

Site location: Latitude: 44.85714, Longitude: -93.34162

Disturbed area = 2.16 ac.
Pre-construction impervious area within disturbed area = 1.97 ac.
Post-construction impervious area within disturbed area = 2.00 ac.
Net change in impervious area within disturbed area = 0.03 ac.

Type of stormwater management:
- Infiltration

Erosion prevention and sediment control quantities are on sheets C3.1

SITE EVALUATION / ASSESSMENT / PLANNING

1. The Operator shall have primary responsibility and significant authority for the development, implementation, maintenance, inspection and amendments to the approved SWPPP. Duties include but are not limited to:
   - Ensuring full compliance with the SWPPP and the Permit
   - Implementing all elements of the SWPPP, including but not limited to:
     - Implementing prompt and effective erosion and sediment control measures
     - Implementing all non-storm water management, and good housekeeping BMPs ensuring that no materials other than Storm water are discharged in quantities, which will have an adverse effect on receiving waters or storm drain systems, etc.
   - Conducting routine inspections and maintenance
   - Ensuring elimination of all unauthorized discharges
   - Coordinating to ensure all of the necessary corrections / repairs are made immediately, and that the project complies with the SWPPP, the Permit, and approved plans at all times.

STORMWATER POLLUTION PREVENTION MANAGEMENT MEASURES

1. ***Operator must develop pollution prevention management measures, implement good housekeeping BMPs, must follow all applicable federal, state, and local building codes, Occupational Safety and Health Act (OSHA), and the general conditions and general requirements of the construction contract.***

2. The Operator shall minimize the exposure to stormwater of any of the products, material, or wastes stored on site that may wash downstream or contaminate stormwater.

3. Building products that have the potential to leach pollutants must be under cover.

4. Chemicals and landscape materials shall be under cover to prevent the discharge of pollutants.

5. Operator to track progress of the following items on site maps: portable toilets, material storage areas, vehicle and equipment fueling and maintenance areas, concrete washouts, paint and stucco washouts, dumpsters or other trash and debris containers, spill kits, stockpiles, any other non-structural non-storm water management BMPs, any temporarily removed structural BMPs, any changes to the structural BMPs.

6. Solid waste: collected sediment, asphalt and concrete millings, floating debris, paper, plastic, fabric, construction and demolition debris and other wastes must be disposed of properly and must comply with MPCA disposal requirements.

7. Hazardous waste: oil, gasoline, paint and any hazardous substances must be properly stored in sealed containers to prevent spills, leaks or other discharge. Restricted access to storage areas must be provided to prevent vandalism. Storage and disposal of hazardous waste or materials must be in compliance with Minn. R. Ch. 7045 including secondary containment as applicable.

8. Portable toilets must be positioned so that they are secure and will not be tipped or knocked over.

9. Concrete and other washout waste: operator must provide effective containment for all liquid and solid wastes generated by washout operations. The liquid and solid wastes must not contact the ground, and the containment must be designed so that it does not result in runoff from the washout operations or areas. Liquid and solid wastes must be disposed of properly and in compliance with MPCA rules. A sign must be installed adjacent to each washout facility that requires site personnel to utilize the proper facilities for disposal of concrete and other washout wastes.

10. External vehicle washing: external washing of trucks and other construction vehicles must be limited to a defined area of the site. Runoff must be contained and waste properly disposed of. No engine degreasing is allowed on site.

11. Operator shall take reasonable steps to prevent the discharge of spilled or leaked chemicals, including fuel, from any area where they will be loaded or unloaded as detailed in the Permit.

SWPPP CONTACT AND TRAINING INFORMATION

1. Owner:
   The Luther Company, LLLP
   attn: Linda McGinty
   3701 Alabama Avenue S
   St. Louis Park, MN 55416
   (952) 258-8800

2. Operator:
   To Be Determined. Contact Owner until Contractor Is Selected.

3. Long Term Maintenance And Operation:
   To Be Determined. Contact Owner until Contractor Is Selected.

4. SWPPP Designer:
   Steve Sobroski, P.E.
   Landform Professional Services
   105 South Fifth Avenue, Suite 513
   Minneapolis, Mn 55401
   612-252-9070
   ssobroski@landform.net
   Certification: U Of MN, Design Of Construction SWPPP, Exp. May 31, 2025

5. SWPPP Inspector / Manager:
   Nick Dow (SWPPP Certified)
   ndow@jlkranz.com
   612-499-7368

6. BMP Installation And Repair:
   Nick Dow (SWPPP Certified)
   ndow@jlkranz.com
   612-499-7368.

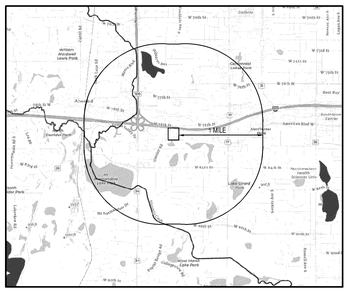
DESCRIPTION OF CONSTRUCTION ACTIVITY

1. Construction activity includes erosion and sediment control BMPs installation, clearing and grubbing, site grading, utility installation, building construction, paving, and landscaping.

SCHEDULE OF BMP INSTALLATION AND CONSTRUCTION ACTIVITY

1. Install perimeter sediment control BMPs prior to start of other site work. Refer to Grading, Drainage, Paving and Erosion Control sheet for initial locations of BMPs.
2. Protect infiltration areas with construction fencing. Install fencing prior to site grading or within 24-hours of excavating an infiltration basin.
3. Construct temporary / permanent sedimentation basins prior to upland disturbance. Install perimeter sediment control BMPs around normal water levels within 48-hours of completion of basin grading.
4. Stabilize outlets from temporary / permanent sedimentation basins within 24-hours of outlet construction.
5. Perform work in phases to minimize disturbed area at any one time. Operator to develop phasing plan prior to start of work.
6. Strip topsoil from areas to be disturbed and stockpile with perimeter sediment control BMPs. Provide stabilization if stockpile is left longer than 14 days.
7. Rough grade site.
8. Install utilities.
9. Install small utilities (gas, electric, communications).
10. Final grade pavement areas and compact subgrade.
11. Lay down pavement aggregate and compact.
12. Install curb and gutter. Backfill after a minimum of three days and provide a minimum of two rolls of sod at the back of curb.
13. Construct building / addition and site features.
14. Construct site walks and patios.
15. Provide final stabilization.
16. Connect infiltration / filtration practices to storm sewer inlets.
17. Remove temporary BMPs and dispose of properly.

WATERS WITHIN ONE MILE OF SITE



MN SPECIAL (PROHIBITED, RESTRICTED, OTHER) & IMPAIRED WATERS

1. Lake Edina is impaired by nutrients based on the current USEPA 303(d) clean water act list; is within 1 mile of this site; and stormwater does not discharge to it. Impairments are for Aquatic consumption.
2. Nine Mile Creek is impaired for aquatic life by elevated chloride concentrations based on the current USEPA 303(d) clean water act list; is within 1 mile of this site; and stormwater does not discharge to it. Impairments are for Aquatic Life.

EROSION PREVENTION AND SEDIMENT CONTROL

1. See Grading, Drainage, Paving and Erosion Control sheets for the location and type of temporary erosion prevention and sediment control BMPs. See Grading and Drainage, Utility, and Landscape sheets for the location and type of permanent erosion prevention and sediment control BMPs.

2. **Minimize Disturbed Areas and Protect Natural Features and Soil**

   Appropriate construction practices (e.g. construction phasing, vegetative buffer strips, horizontal slope grading) shall be used to minimize erosion.

   Areas not to be disturbed (buffers, infiltration basins, etc.) shall be protected with construction or silt fence before work begins.

   Operator shall develop methods to minimize soil compaction outside of building pads, pavement areas and utility trenches and shall use tracked equipment wherever practicable.

   Topsoil shall be salvaged and reused to the extent practicable.

3. **Phase Construction Activity**

   Operator must not disturb more land than can be effectively inspected and maintained.

   Sediment control practices shall be established on all down gradient perimeters before any upgradient land disturbing activities begin. These practices shall remain in place until final stabilization has been established in accordance with the Permit.

   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 shall be installed immediately after the activity is completed. However, sediment control practices shall be installed before the next precipitation event even if the activity is not complete.

4. **Control Stormwater Flowing onto and Through the Project**

   The normal wetted perimeter of any temporary or permanent drainage ditch or swale that drains water from any portion of the construction site, or diverts water around the site, shall be stabilized within 200 lineal feet from the property edge, or from the point of discharge into any surface water.

   Stabilization of the last 200 lineal feet shall be completed within 24 hours after connecting to a surface water.

   Stabilization of the remaining portions of any temporary or permanent ditches or swales shall be complete within 14 days after connecting to a surface water and construction in that portion of the ditch has temporarily or permanently ceased.

   Temporary or permanent ditches or swales that are being used as a sediment containment system (with properly designed rock ditch checks, bio rolls, silt dikes etc.) do not need to be stabilized. These areas shall be stabilized within 24 hours after no longer being used as a sediment containment system.

5. **Stabilize Soils**

   All exposed soil areas, including stockpiles, must be stabilized.

   Stabilization must be started immediately to limit soil erosion when the construction activity in that portion of the site has temporarily or permanently ceased and will not resume for 14 calendar days. Stabilization must be complete within 14 days of cessation of construction activity.

   Temporary soil stockpiles shall have silt fence or other effective sediment controls, and cannot be placed in surface waters, including storm water conveyances such as curb and gutter systems, or conduits and ditches unless there is a bypass in place for the storm water.

   Temporary stockpiles without significant silt, clay or organic components (e.g. clean aggregate stockpiles, demolition concrete stockpiles, sand stockpiles) and the constructed base components of roads, parking lots and similar surfaces, are exempt from this requirement.

6. Protect Slopes

   Operator shall avoid work on slopes with a grade of 3:1 or greater when practicable. Grading on slopes with a grade of 3:1 or steeper will require techniques such as phasing and stabilization practices designed for steep slopes(e.g. slope draining and terracing).

7. Protect Storm Drain Inlets

   All storm drain inlets shall be protected by appropriate BMPs during construction until all sources with potential for discharging to the inlet have been stabilized. Inlet protection may be temporarily removed if a specific safety concern has been identified.

8. Provide Energy Dissipation at all Pipe Outlets within 24 Hours

   After connection to a surface water or permanent stormwater treatment system.

9. Establish Perimeter Controls and Sediment Barriers

   Prior to disturbing soils on a project site, establish sediment control BMPs on all down-gradient perimeters and where site discharges to public waters.

10. Retain Sediment On-site and Control Dewatering Practices

    Discharge shall not cause nuisance conditions, erosion in receiving channels, adversely affect receiving water or impact wetlands, or downstream properties. Discharge points shall be adequately protected from erosion and scour by accepted energy dissipation measures.

    Discharge water containing oil or grease shall be treated to remove oil or grease prior to discharge to surface waters.

    Refer to Permit requirements for temporary or permanent sediment basins.

11. Establish Stabilized Construction Exits

    Vehicle tracking pads shall be established as shown on the Grading, Drainage, Paving and Erosion Control sheet to minimize tracking of sediment from the construction site onto adjacent streets.

12. Infiltration Basin Protection

    Operator must not excavate infiltration systems to final grade or within three (3) feet of final grade until the contributing drainage area has been constructed and fully stabilized unless rigorous erosion prevention and sediment controls have been installed.

    When excavating an infiltration system to within three (3) feet of final grade, operator shall mark off and protect the area from heavy construction equipment to prevent compaction of soils.

13. Dewatering and Basin Draining

    Permittees must discharge turbid or sediment-laden waters related to dewatering or basin draining to a temporary or permanent sediment basin. Discharges must not cause erosion or scour near the discharge points.

14. Remove Sediment from Surface Waters

    All sediment deposits and deltas must be removed from surface waters, including drainage ways, catch basins, and other drainage systems, and the removal areas restabilized within seven (7) days.

TEMPORARY SEDIMENTATION BASIN(S)

1. This project does not have more than five (5) disturbed acres draining to a common location and the site does not drain to an impaired or special water; therefore a temporary sediment basin is not required.
2. Temporary sediment basins shall provide treatment to runoff before it leaves the construction site or enters surface waters. The contractor shall comply with the following requirements:
   A. Sedimentation basins must provide live storage of runoff resulting from the 2-year 24-hour rainfall event from each acre drained to the basin, with a minimum of 1,800 c.f./acre live storage volume. (Where no calculation has been performed, each basin shall provide at least 3,600 c.f./acre live storage.) Sedimentation basins must include a stabilized emergency overflow to prevent basin integrity failure.
   B. Discharge from temporary sedimentation basins will be withdrawn from the surface in order to minimize the discharge of pollutants.
3. Discharge from basin draining shall not adversely affect the receiving water or downstream properties. Contractor will visually check to ensure adequate treatment has been obtained and that nuisance conditions will not result from the discharge.
4. Any discharge observed to be occurring during the inspection shall be recorded, described, and photographed.
5. If any proposed temporary BMPs are not working as intended refer to the "Stormwater Compliance Assistance Toolkit for Small Construction Operators", MPCA, 2017 for additional information. Operator shall contact the SWPPP Designer for additional requirements and information.

POST CONSTRUCTION / PERMANENT BMPS

1. See Grading and Drainage, Utility, and Landscape sheets for post construction and permanent stormwater BMPs.

INSPECTIONS AND MAINTENANCE

1. Permittees must ensure that a trained person will inspect the entire construction site at least once every seven (7) days during active construction and within 24 hours after a rainfall event greater than 0.5-inches in 24 hours.
2. Inspections shall include stabilized areas, erosion prevention and sediment control BMPs, and infiltration areas.
3. Surface waters on or adjacent to the site must be inspected for evidence of erosion or sediment deposition.
4. Permittees must record all inspection and maintenance activities within 24 hours of being conducted as detailed in the Permit.
5. Inspection Records content shall include:
   A. Date and time of inspections;
   B. Name of persons conducting inspections;
   C. Findings of inspections, including specific locations where corrective actions are needed;
   D. Corrective actions taken including dates, times, and the party taking the corrective action;
   E. Dates of all rainfall events greater than 1/2 inch in 24 hours (refer to Permit for measurement requirements);
   F. Any discovered discharge must be recorded, including photographs, descriptions of discharge (color, odor, settled or suspended solids, oil sheen, or other obvious indicators of pollution), and specific location of discharge location;
   G. Any amendments to the Permit as a result of inspections must be documented within seven calendar days as described in the Permit.
6. BMP Maintenance:
   A. Nonfunctional BMPs must be repaired or replaced by the end of the next business day after discovery unless a different time frame is indicated.
   B. Follow the designer's or manufacturer's recommended maintenance procedures for all BMPs.
   C. Remove sediment from BMPs when the depth of sediment has reached 1/2 the height of the BMP and properly dispose of sediment into controlled areas to prevent soil from returning to the BMP during subsequent rain events.
   D. Remove sediment from paved roadways **within one calendar day of discovery**.
   E. Remove sediment from around BMPs protecting storm drain inlets.
   F. Surface waters with evidence of sediment deposition must be stabilized and sediment removed **within seven calendar days of discovery, or as stated by the Permit**.
   G. Ensure that construction support activities, including borrow areas, waste areas, contractor work areas, and material storage areas and dedicated concrete and asphalt batch plants are cleaned and maintained.
   H. Replace damaged BMPs that no longer operate effectively.
7. Add BMPs as needed during construction to minimize erosion and prevent sediment from leaving the site.

RECORD KEEPING / RECORD RETENTION

1. The SWPPP (original or copies), including all changes to it, and inspections and maintenance records, shall be kept at the site during construction by the Owner / Operator who has operational control of that portion of the site. The SWPPP can be kept in either the field office or in an on site vehicle during normal working hours.
2. All Owners(s) must keep the SWPPP, along with the following additional records, on file for three (3) years after submittal of the Notice of Termination (NOT). This does not include any records after submittal of the NOT.
3. The following is a list of records that shall be kept at the project site available for inspectors to review:
   - Copy of the SWPPP, with any modifications;
   - Inspection and maintenance records;
   - Permanent operation and maintenance agreements;
   - Calculations for the design of temporary and permanent stormwater management systems;
   - Any other permits required for the project;
   - Records of all inspection and maintenance conducted during construction; and
   - All permanent operation and maintenance agreements that have been implemented, including all right-of-way, contracts, covenants and other binding requirements regarding perpetual maintenance

LOG OF CHANGES TO THE SWPPP / AMENDMENTS

1. ***The Owner / Operator(s) must amend the SWPPP as necessary to include additional requirements, such as additional or modified BMPs, designed to correct problems identified or address situations as detailed in the Permit.***

FINAL STABILIZATION

1. ***The Owner / Operator(s) must ensure final stabilization of the site. Final stabilization includes:***
   A. Ensuring all areas have permanent cover.
   B. Vegetative areas must have perennial cover with a density of 70% of expected final growth.

TERMINATION OF COVERAGE

1. ***Owner / Operator(s) wishing to terminate coverage under the Permit must submit a Notice of Termination (NOT) to the MPCA. Compliance with the Permit is required until a NOT is submitted. Refer to the Permit for details. Conditions for submitting a NOT include:***
   A. Site must have achieved final stabilization (refer to section above).
   B. The permanent stormwater treatment and conveyance systems must be clean and all accumulated sediment removed.
   C. All temporary synthetic erosion prevention and sediment control BMPs must be removed from the site and disposed of properly.

DEVELOPER

THE LUTHER COMPANY, LLLP
3701 ALABAMA AVENUE SOUTH
ST. LOUIS PARK, MN
TEL (952)258-8800 - FAX (952) 258-8900

MUNICIPALITY

BLOOMINGTON

PROJECT

LUTHER HYUNDAI
BLOOMINGTON, MN

ISSUE / REVISION HISTORY

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11 JUL 2023	BULLETIN H02	SES
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03 NOV 2023	BULLETIN 05	SBS

CERTIFICATION

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

Steven E. Sobroski
License No. 47165 Date: 11/03/2023

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NOVEMBER 03, 2023

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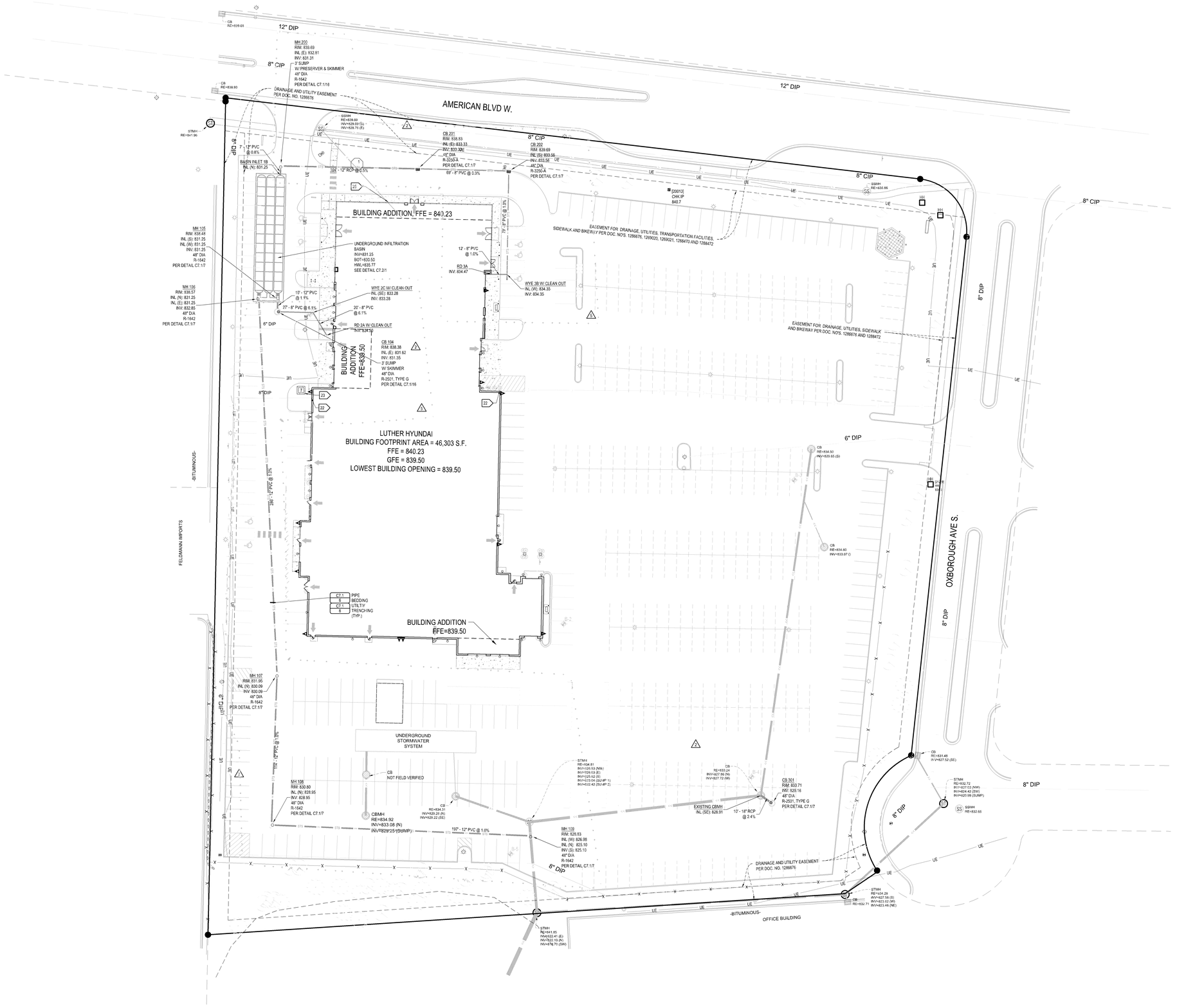
Suite 513 Fax: 612-252-9077
Minneapolis, MN 55401 Web: landform.net

FILE NAME C302LUT54.DWG
PROJECT NO. LUT22054

MN SWPPP NOTES

C3.2

PL202300187



GENERAL NOTES

1. For construction staking and surveying services contact Landform at 612.252.9070.

UTILITY NOTES

2. Pipe Materials
   - Storm Sewer: PVC Schedule 40 (ASTM: D1785, D2665, F794, & F1866); RCP 12"-18" Class 5 (ASTM C76)
   - Drain Tile: HDPE - Corrugated & Perforated (ASTM F405 & F667)
3. Contact utility service providers for field location of services 72 hours prior to beginning.
4. Contractor to field verify location and elevation of all utility points of connection prior to construction of any proposed utilities. Contractor to notify Engineer immediately if there is any discrepancy.
5. Contractor to pothole all utility crossings prior to construction of new utilities to verify depths of existing lines. Contact Engineer immediately if any conflicts are discovered.
6. Provide means and measures to protect adjacent property from damage during utility installation.
7. Pipe lengths shown are from center of structure to center of structure or end of end section.
8. Install tracer wire with all non-conductive utilities in accordance with City of Bloomington Standards.
9. Connect to City utilities in accordance with City of Bloomington Standards.
10. HDPE pipe connections into all concrete structures must be made with water tight materials utilizing an A-Lok or WaterStop gasket or boot, cast-in-place rubber boot, or approved equal. Where the alignment precludes the use of the above approved watertight methods, Conseal 231 WaterStop sealant, or approved equal will only be allowed as approved by the Engineer.
11. Utility permits are required for connection to the public storm, sanitary, and water system. Contact utilities (952-563-8777) for permit information
12. Deflect water to maintain 18-inch minimum outside separation at sewer crossings. Center pipe lengths to provide greatest separation between joints.
13. Contact City of Bloomington Utilities Department Department, at 952.563.8777 for flushing and pressure test inspections.
14. Reserved.
15. Reserved.
16. Reserved.
17. All portions of the storm sewer system, located within 10 feet of the building or water service line must be tested in accordance with Minnesota Rules, Part 4714.
18. All joints and connections in the storm sewer system shall be gaslight or water tight. Approved resilient rubber joints must be used to make watertight connections to manholes, catch basins, and other structures.
19. Catch basins in curb and gutter are sumped 2 inches below the gutter grade.
20. Rock media in infiltration or filtration systems shall be angular, non-calcareous rock.
21. Irrigation sleeve to be 4 inch Schedule 80 PVC buried 24" below grade. Extend sleeves 3-feet beyond the edge of pavement. Mark each end of sleeve with 3/4-inch rebar 12 inches below finish grade. (Coordinate with irrigation contractor.)
22. Coordinate with Private Utilities to provide electric, natural gas, and communications services to building.
23. The primary electric feed, transformer, and meter are provided and installed by Xcel Energy. The transformer pad design is provided by the Utility and construction is by the Contractor. Contact Utility for pad detail. The secondary electric and conduits shall be installed by the Electrical Contractor.
24. See site lighting plan for additional information.
25. Protect sanitary service line. Contractor to inspect line after construction to ensure it has not been damaged.
26. Reserved.
27. Provide conduits for cable television and other electronic communication.
28. Coordinate with Mechanical, Plumbing, and Electrical Drawings for locations of service connections and continuation of services within building.
29. Compact cohesive soils in paved areas to 95% of maximum dry density, Standard Proctor (ASTM D698) except the top 3 feet which shall be compacted to 100%. compact to 98% density where fill depth exceeds 10 feet. The soils shall be within 3% of optimum moisture content. In granular soils all portions of the embankment shall be compacted to not less than 95% of Modified Proctor Density (ASTM D1557).
30. Adjust structures to final grade where disturbed. Comply with requirements of Utility. Meet requirements for traffic loading in paved areas.

INFILTRATION / FILTRATION BASIN REQUIREMENTS

31. Refer to the C3.1 sheet notes for requirements.

UTILITY CROSSINGS

1. Crossing 1
   Storm Sewer Bottom=832.93
   Sanitary Sewer Top=832.47
   Clearance = 0.46'

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03 NOV 2023	BULLETIN 05	MRs

CERTIFICATION

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

Steven E. Sakwa
License No. 47765 Date: 11/03/2023

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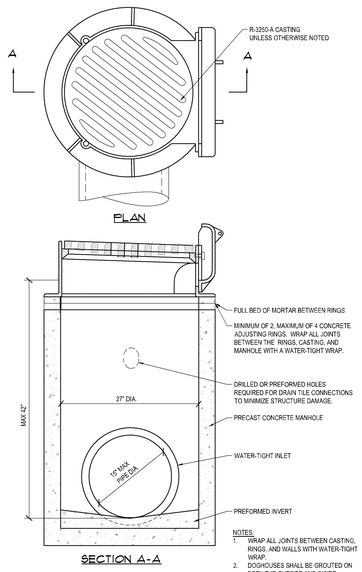
PROJECT NO. LUT22054

UTILITIES
C4.1

Know what's Below. Call before you dig.

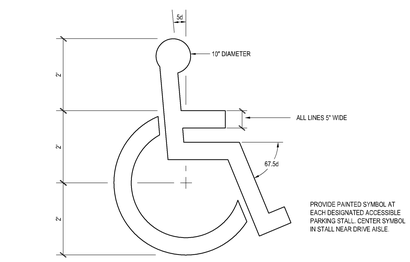
NORTH
0 30 60

PL202300187



15 **27" STORM SEWER CATCH BASIN**

NO SCALE



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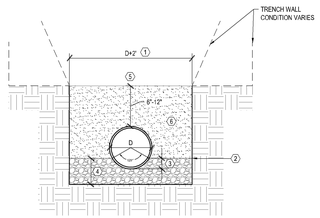

8 **UTILITY TRENCHING**

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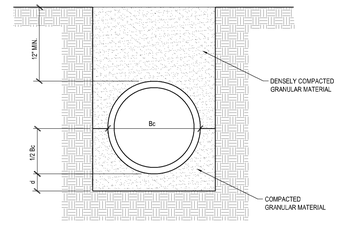

6 **PIPE BEDDING**

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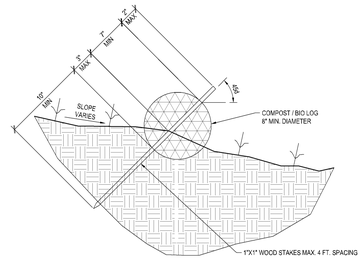
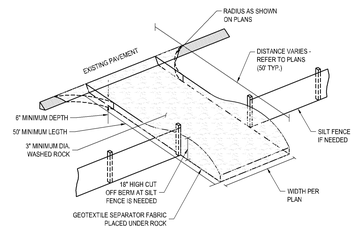


1 **TEMPORARY COMPOST/BIO LOG**

NO SCALE



2 **VEHICLE TRACKING PAD**

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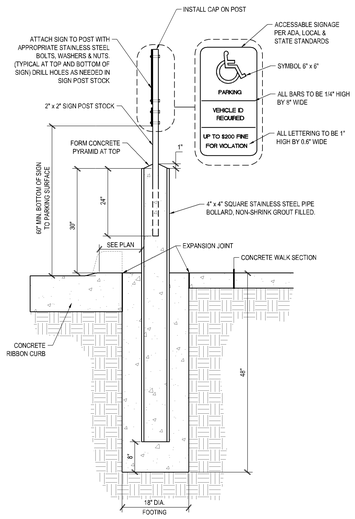
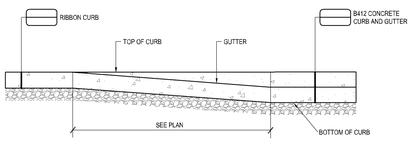


13 **SQUARE BOLLARD WITH ACCESSIBLE SIGNAGE**

NO SCALE



10 **CONCRETE CURB TRANSITION**

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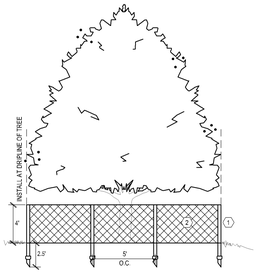

9 **TREE PROTECTION**

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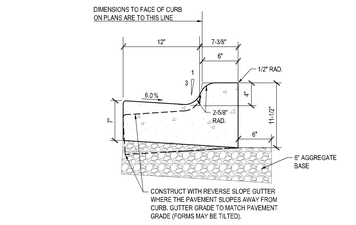

3 **B412 CONCRETE CURB AND GUTTER**

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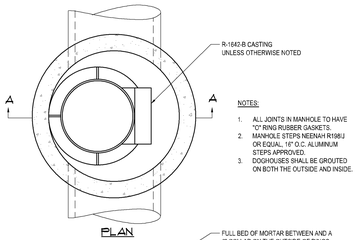
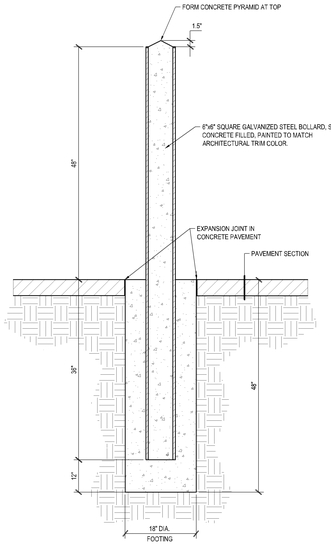


16 **SUMP STORM SEWER CATCH BASIN MANHOLE**

NO SCALE



14 **SQUARE BOLLARD**

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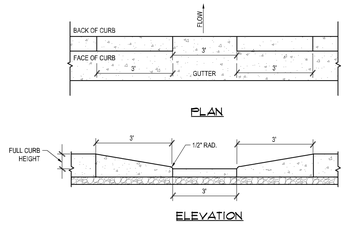

11 **CURB CUT OUTLET**

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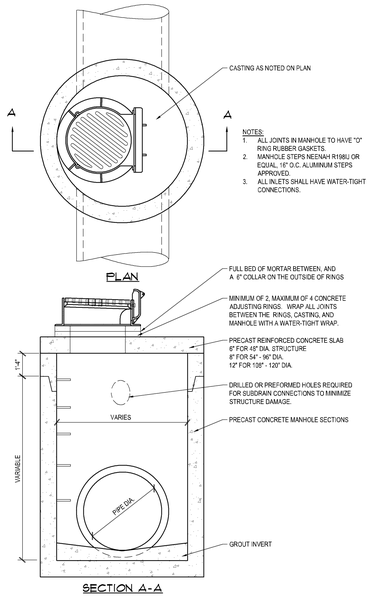

7 **STORM SEWER CATCH BASIN MANHOLE**

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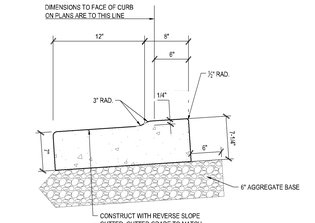
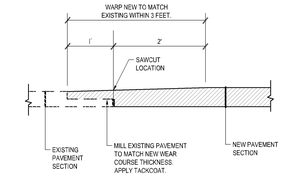


4 **12" CONCRETE RIBBON CURB**

NO SCALE



5 **ASPHALT PAVEMENT TRANSITION**

NO SCALE

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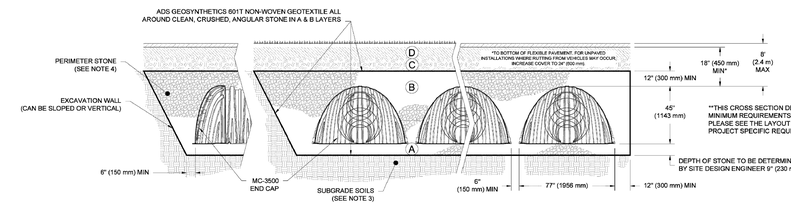
CIVIL CONSTRUCTION DETAILS

C7.1



PL202300187

ACCEPTABLE FILL MATERIALS: STORMTECH MC-3500 CHAMBER SYSTEMS

MATERIAL LOCATION		DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	**FINAL FILL:** FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	**INITIAL FILL:** FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 24" (600 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145[1] A-1, A-2-4, A-3 OR AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 24" (600 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 12" (300 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS.
B	**EMBEDMENT STONE:** FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43[1] 3, 4	NO COMPACTION REQUIRED.
A	**FOUNDATION STONE:** FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43[1] 3, 4	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE.[2,3]

PLEASE NOTE:
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9" (230 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
4. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.

*FOR COVER DEPTHS GREATER THAN 8.0' (2.4 m) PLEASE CONTACT ADS

NOTES:

1. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 45x76 DESIGNATION SS.
2. MC-3500 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
4. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
5. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 500 LBS/FT/%. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

MC-3500
STANDARD CROSS SECTION
DATE: 8/03/22
DRAWN: KLJ
PROJECT #:
CHECKED: KLJ

DATE	DRWN	CHKD	DESCRIPTION

StormTech®
Chamber System
888-892-2694 | WWW.STORMTECH.COM

ADS
4640 TRUEMAN BLVD
HILLIARD, OH 43026

SHEET 1 OF 1

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1 UNDERGROUND INFILTRATION SYSTEM

NO SCALE

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MUNICIPALITY

BLOOMINGTON

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Steven E. Sabraski
License No. 47165 Date: 11/03/2023

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C7.2

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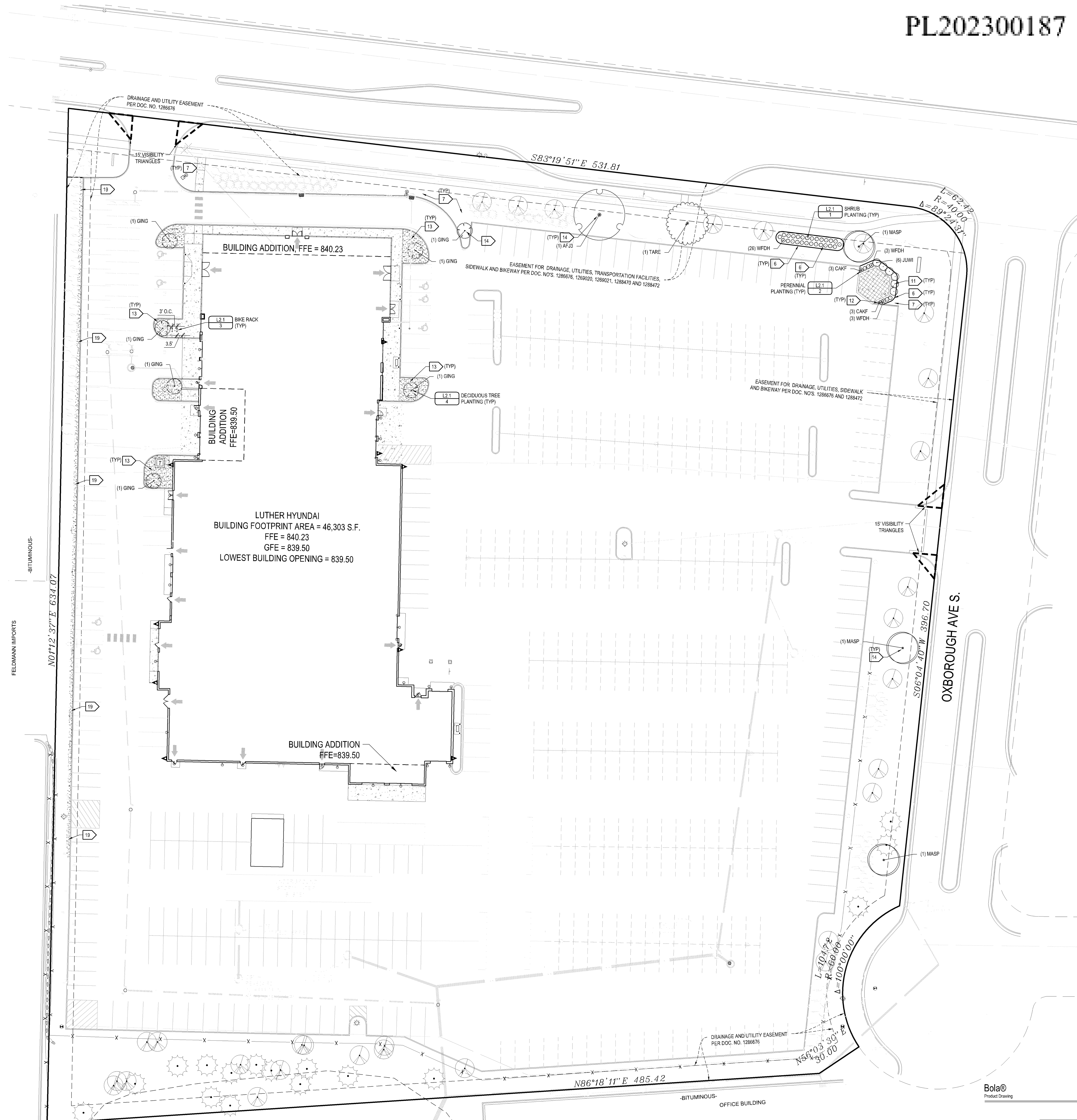


DECIDUOUS TREES	CODE	QTY	BOTANICAL NAME	COMMON NAME	MATURE SIZE	PLANTING SIZE	ROOT CONDITION
	AFJ3	1	Acer x freemanii `Jeffersred`	Autumn Blaze Maple	50`H x 40`W	3"Cal	B & B
	GING	7	Ginkgo biloba 'JN9'	Sky Tower™ Maidenhair Tree	20`H x 10`W	2.5" CAL.	B&B
	TARE	1	Tilia americana `Redmond`	Redmond American Linden	60`H x 40`W	2.5"Cal	B & B
ORNAMENTAL TREES	**CODE**	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**MATURE SIZE**	**PLANTING SIZE**	**ROOT CONDITION**
	MASP	3	Malus x `Spring Snow`	Spring Snow Crab Apple	25`H x 20`W	1.5"Cal	POT
SHRUBS	**CODE**	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**MATURE SIZE**	**PLANTING SIZE**	**ROOT CONDITION**
	JUWI	6	Juniperus horizontalis `Wiltonii`	Blue Rug Juniper	0.5`H x 7`W	3 GAL.	POT
	WFDH	32	Weigela florida `Dark Horse`	Weigela	3`H x 3`W	5 GAL.	POT
GRASSES	**CODE**	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**MATURE SIZE**	**PLANTING SIZE**	**ROOT CONDITION**
	CAKF	6	Calamagrostis x acutiflora `Karl Foerster`	Feather Reed Grass	4`H x 2`W	2 GAL.	POT

PLANT SCHEDULE

REPLACEMENT PLANT SCHEDULE

SHRUBS	BOTANICAL NAME	COMMON NAME	PLANTING SIZE
	Cornus racemosa	Gray Dogwood	#5 Pot
	Cornus alba sibirica 'Red Gnome'	Red Gnome Dogwood	#2 Pot
	Viburnum lantana 'Mohican'	Mohican Viburnum	#2 Pot
	Acer ginnala 'Compact'	Compact Amur Maple	#5 Pot
	Spirea x bumalda 'Goldflame'	Goldflame Spirea	#2 Pot
	Viburnum trilobum 'Bailey Compact'	Compact Viburnum	#2 Pot
	Diervilla lonicera 'Bailey Compact'	Dwarf Bush Honeysuckle	#2 Pot
	Juniperus horizontalis 'Hughes'	Hughes Juniper	#5 Pot
	Juniperus horizontalis 'Wiltonii'	Wilton Carpet Juniper	#5 Pot

Replacement Plant Schedule symbols are representative of previously approved landscape plan.
Replace any missing plants with the species and sizes listed above.

REQUIREMENTS

Final plant quantities shall meet quantities listed below (shown in parentheses). Existing shrubs have not been field-verified.
Replace any missing shrubs using species from Replacement Plant Schedule above.

Existing shrubs	218	Existing trees	54
Proposed shrubs	45	Proposed trees	12
Total shrubs	263	Total trees	66

(shrubs on previously approved plan - 244)
(trees on previously approved plan - 41)

GENERAL NOTES

1. For construction Staking and Surveying services contact Landform at 612.252.9070.

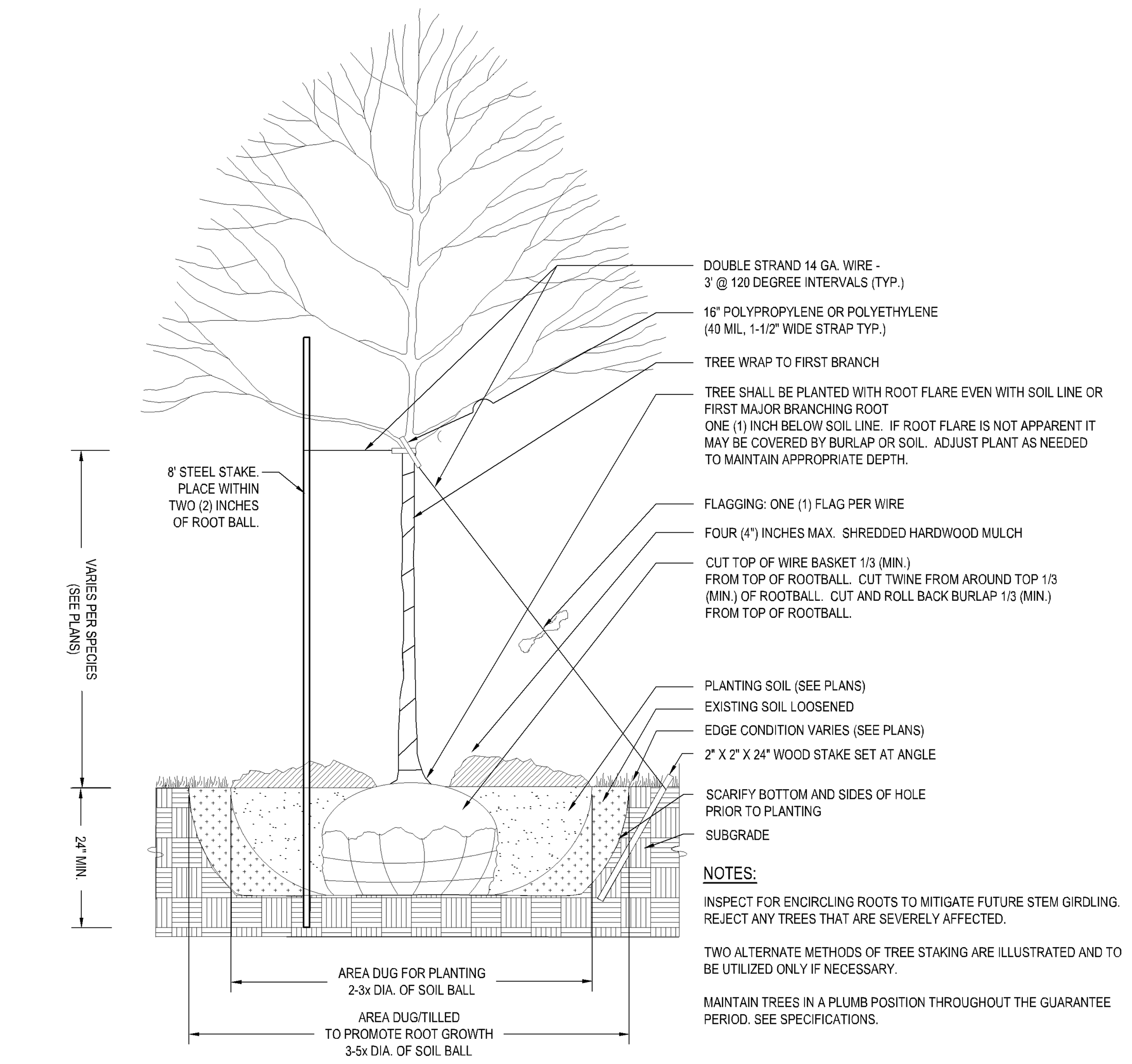
LANDSCAPE NOTES

2. Contact Utility Service providers for field location of services 72 hours prior to beginning.
3. Coordinate installation with Contractors performing related work.
4. Plant material shall conform to the American Association of Nurserymen Standards and be of hardy stock, free from disease, infestation, damage, and disfiguration.
5. All existing deciduous/coniferous trees are to be trimmed of dead wood and pruned to a natural uniform shape.
6. Planting soil shall consist of 4 parts topsoil to 1 part peat humus, with 3 pounds of commercial fertilizer added per cubic yard.
7. Spread a minimum of 4 inches of topsoil and sod all turf areas disturbed by Construction.
8. Edge planting beds with 6-inch Black Vinyl Edging (Black Diamond or approved equal) except where adjacent to curbing, walks or buildings.
9. Place plants according to layout with proper nominal spacing. For discrepancy between the number of plants on the Schedule and the number shown on the Drawing, the Drawing shall govern.
10. See Details for depth of planting soil.
11. Install 4 inch depth of triple-shredded hardwood mulch in Shrub Bed Areas.
12. Install 2 to 3 inch depth of triple-shredded hardwood mulch in Perennial Bed Areas.
13. Install rock mulch to match existing. Landscape fabric shall be installed under all areas of rock mulch. Secure all edges and seams of fabric with 6-inch landscape staples.
14. Install a 4-foot diameter triple-shredded hardwood mulch dish around tree. Edging is not required.
15. Irrigation is not required. Irrigation shall be designed by irrigation contractor. Contractor shall submit design plan and all shop drawings and system components to Landscape Architect for review, prior to purchase and installation. Contractor shall follow all applicable codes and obtain all necessary permits from local jurisdiction.
16. All plant material shall have a 2-year warranty. The warranty shall begin after the last plant has been installed and the Landscape Architect has approved the installation. Landscape contractor is responsible for replacing any and all plant material that dies during the warranty period. Landscape contractor shall assume all costs to any replacements. All replacements shall be same species and sizes and equal or better vigor as original installation.
17. Reserved.
18. Reserved.
19. Restore existing rock mulch to match existing conditions. Maintain depth of mulch to blend with adjacent grades.

LEGEND

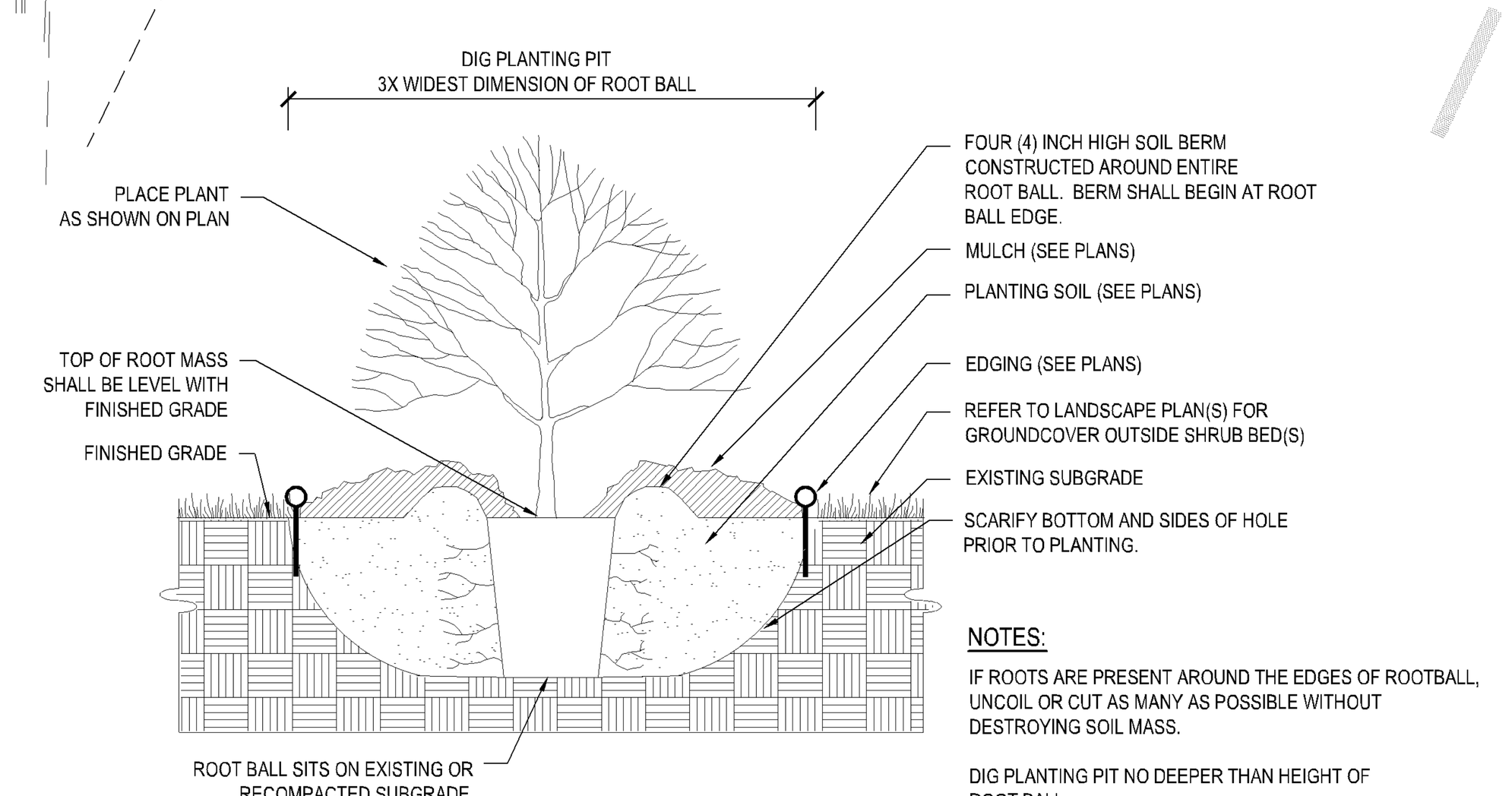
Sod area

Rock mulch



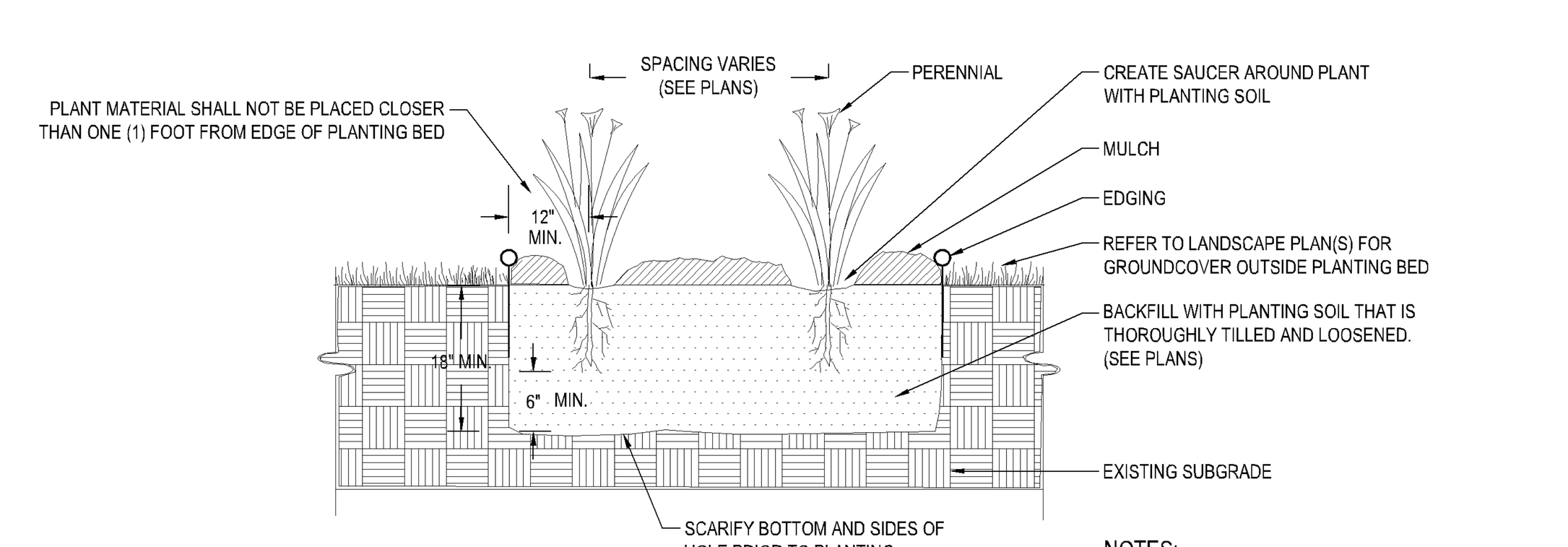
4 **DECIDUOUS TREE PLANTING**

NO SCALE



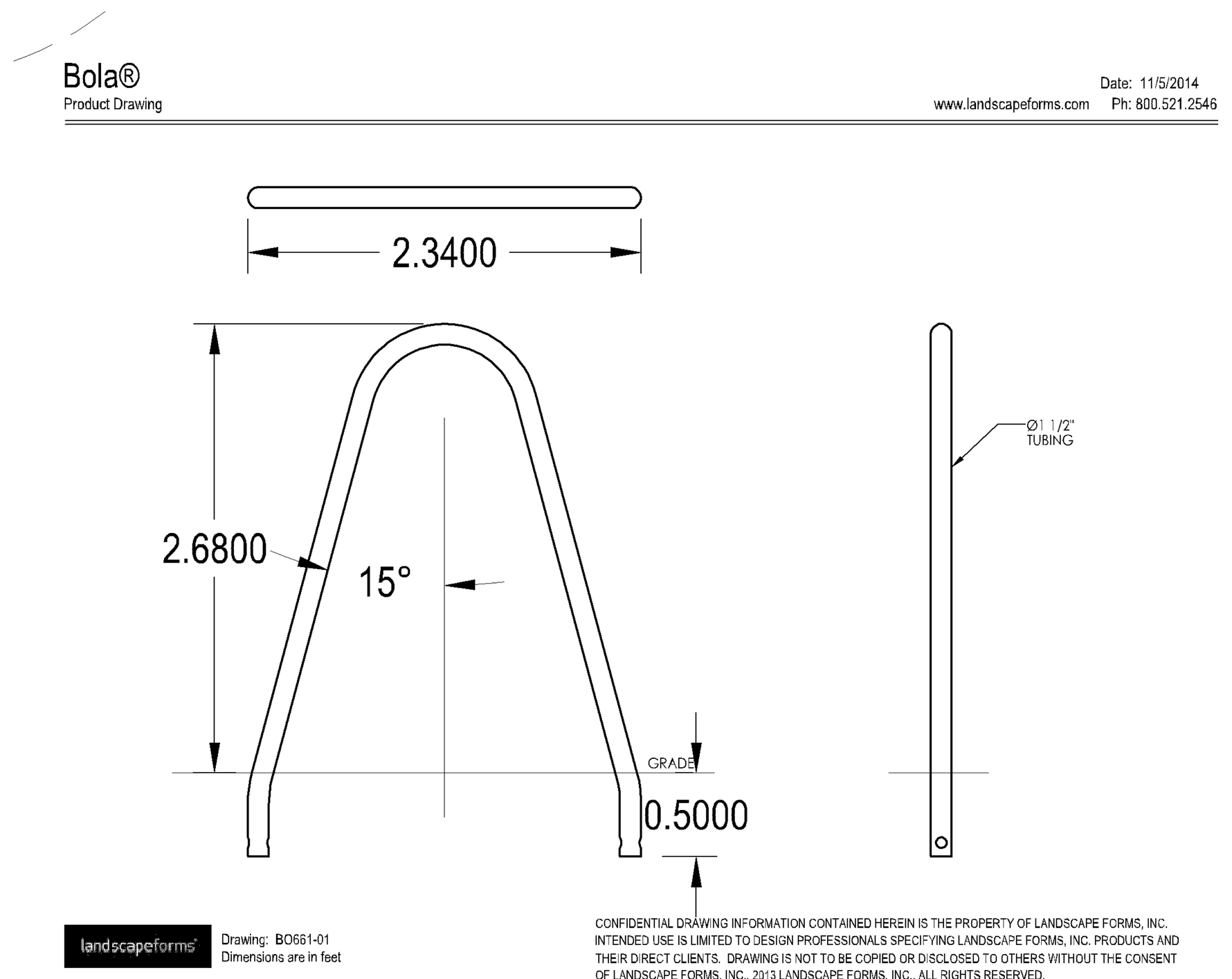
1 **SHRUB PLANTING**

NO SCALE



2 **PERENNIAL PLANTING**

NO SCALE



3 **BIKE RACK**

NO SCALE

NORTH

0 30 60

DEVELOPER

THE LUTHER COMPANY, LLLP
3701 ALABAMA AVENUE SOUTH
ST. LOUIS PARK, MN
TEL (952)258-8800 - FAX (952) 258-8900

MUNICIPALITY

BLOOMINGTON

PROJECT

LUTHER HYUNDAI
BLOOMINGTON, MN

ISSUE / REVISION HISTORY

CONTACT ENGINEER FOR ANY PRIOR HISTORY

DATE	ISSUE / REVISION	REVIEW
15 NOV 2022	DRC SUBMITTAL	SES
11 JAN 2023	CITY SUBMITTAL	SES
08 MAR 2023	PERMIT SET	SES
30 MAY 2023	CITY / WATERSHED RESUBMITTAL	SES
26 JUN 2023	CITY / WATERSHED RESUBMITTAL	SES
13 JUL 2023	BULLETIN H02	SES
03 AUG 2023	BULLETIN H03	SES
03 NOV 2023	BULLETIN 05	SES

CERTIFICATION

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

Joshua K. Popehn
License No: 44803 Date: 08/03/2023

Signature shown is a digital reproduction of original. Wet signed copy of this plan on file at Landform Professional Services, LLC office and is available upon request.

IF THE SIGNATURE, SEAL OR FOUR LINES DIRECTLY ABOVE ARE NOT VISIBLE, THIS SHEET HAS BEEN REPRODUCED BEYOND INTENDED READABILITY AND IS NO LONGER A VALID DOCUMENT. PLEASE CONTACT THE ENGINEER TO REQUEST ADDITIONAL DOCUMENTS.

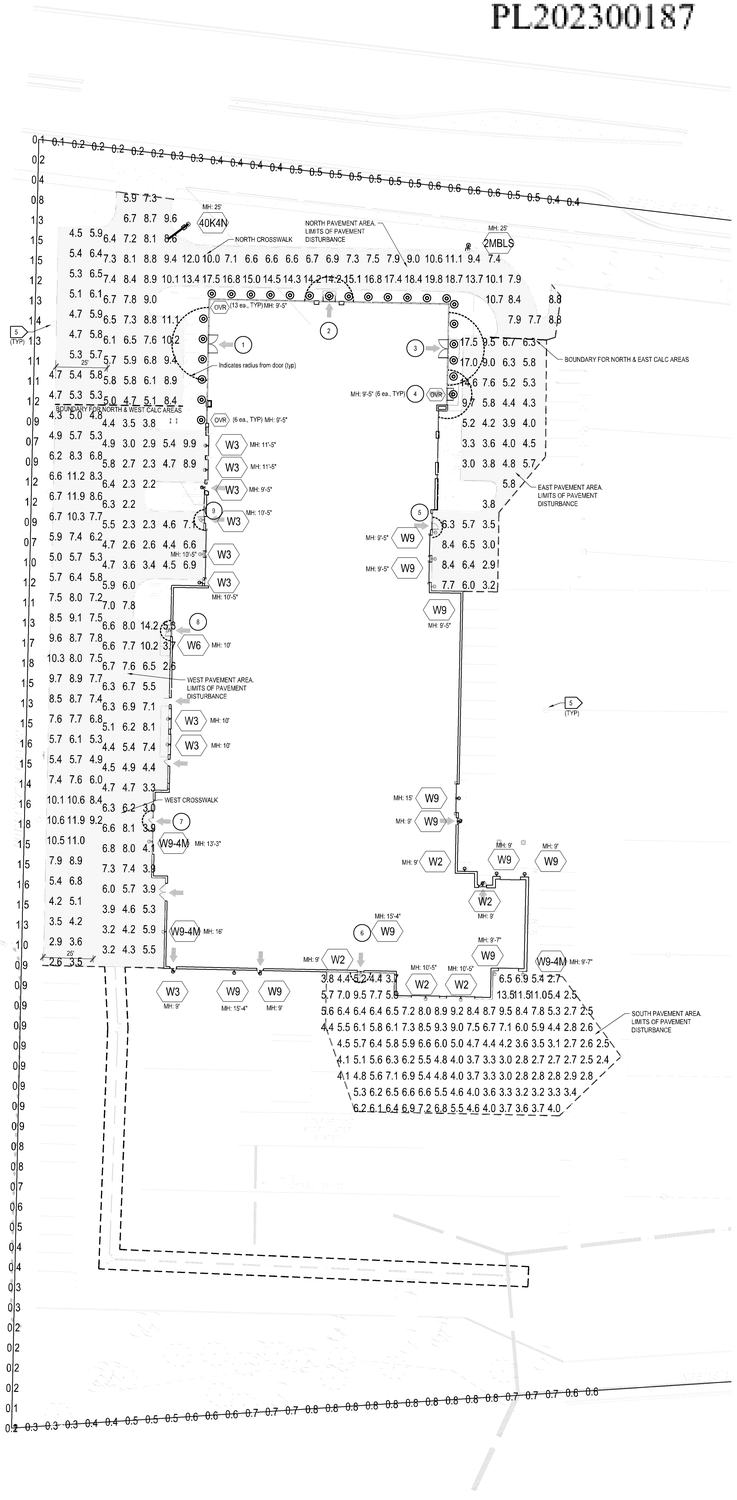
BULLETIN 05
NOVEMBER 03, 2023

LANDFORM
From Site to Finish
105 South Fifth Avenue
Suite 513
Minneapolis, MN 55401
Tel: 612-252-9070
Fax: 612-252-9077
Web: landform.net

FILE NAME L201LUT054.DWG

PROJECT NO. LUT22054

LANDSCAPE PLAN
L2.1



PL202300187

XSP Series

XSPW™ LED Wall Mount Luminaire featuring Cree TrueWhite® Technology

Product Description

Performance Summary

NanoOptic® Precision Delivery Grid™ optic

Accessories

Field-Installed

Lumen Package	Weight

CREE LIGHTING

OSQ Series

OSQ™ LED Area/Flood Luminaire featuring Cree TrueWhite® Technology – Medium & Large

Product Description

Performance Summary

Ordering Information

CREE LIGHTING

GENERAL NOTES

1. Coordinate with electrical contractor to provide conduits for site lighting.
2. Light pole base shall be designed and provided by others. all bases in green space shall be eight (8") inch height. all bases in pavement shall be thirty-six (36") inch height.
3. Mounting height listed in luminaire schedule includes height of lite pole base.
4. Calculations based on cree lighting fixtures. any substitutions need to meet city code requirements.
5. Existing light pole and luminaire.
6. Quantities shown on this sheet are total quantities for design.

BLOOMINGTON CODE REQUIREMENTS

33' - maximum pole height
10:1 - max/min uniformity ratio (50% reduction for perimeter 25')
2.0 fc - minimum foot candles (pavement surface)
2.0 fc - maximum foot candles (at property line)
10.0 fc - minimum foot candles (primary building entrance/exit, radius of 2x door opening)
2.0 fc - minimum foot candles (secondary building entrance/exit, 5' radius)
3.0 fc - minimum foot candles (pedestrian access surface from primary building entrance, within 30')
2.0 fc - minimum foot candles (pedestrian access surface to primary building entrance, beyond 30')
4.0 fc - minimum foot candles (pedestrian crosswalk, 2x fc level of pavement)
50,000 maximum lumens (per single lite source, initial lumens)

LUMINAIRE SCHEDULE

CALLOUT	SYMBOL	QUANTITY	MOUNTING	MODEL	LUMENS / LAMP
2MBLSF	○─□	2	POLE	Cree Lighting , OSQL-B-30L-40K7-2M-UL-xx-xx-xx-xx w_OSQ-BLSLF	23800
40K4N	○─□	1	POLE	Cree Lighting, OSQX-B-40L-40K7-4M-UL-xx-xx-xxxx w-OSQ-BLSXF CONFIGURED FROM OSQX-B-40L-40K7-4M-UL-xx-xx-xx-xx w-OSQ-BLSXF	0
OVR	⊙	50	RECESSED	C-Lite, C-CP-B-BRQ-S7L-SCCT-xx (40K)	0
W2	⊢⊗	10	WALL	Cree Inc , XSPW-B-xx-2ME-2L-40K-UL CONFIGURED FROM XSPW-B-xx-2ME-8L-40K-UL	0
W3	⊢⊗	20	WALL	Cree Inc , XSPW-B-WM-3ME-2L-40K-UL-WH	0
W6	⊢⊗	2	WALL	Cree Inc , XSPW-B-WM-3ME-6L-40K-UL-WH	0
W9	⊢⊗	20	WALL	Cree Inc , XSPW-B-xx-2ME-2L-40K-UL CONFIGURED FROM XSPW-B-xx-2ME-8L-40K-UL	8475
W9-4M	⊢⊗	6	WALL	Cree Lighting , XSPW-B-WM-4ME-8L-40K-UL-xxxx	8475

FOOT CANDLE CALCULATIONS

SOUTH PAVEMENT

AVERAGE FOOT-CANDLES	5.31
MAXIMUM FOOT-CANDLES	13.5
MINIMUM FOOT-CANDLES	2.4
MINIMUM TO MAXIMUM FC RATIO	0.18
MAXIMUM TO MINIMUM FC RATIO	5.65
AVERAGE TO MINIMUM FC RATIO	2.22

NORTH PAVEMENT

AVERAGE FOOT-CANDLES	9.43
MAXIMUM FOOT-CANDLES	19.8
MINIMUM FOOT-CANDLES	4.7
MINIMUM TO MAXIMUM FC RATIO	0.24
MAXIMUM TO MINIMUM FC RATIO	4.23
AVERAGE TO MINIMUM FC RATIO	2.01

WEST PAVEMENT

AVERAGE FOOT-CANDLES	5.38
MAXIMUM FOOT-CANDLES	14.2
MINIMUM FOOT-CANDLES	2.2
MINIMUM TO MAXIMUM FC RATIO	0.15
MAXIMUM TO MINIMUM FC RATIO	6.47
AVERAGE TO MINIMUM FC RATIO	2.46

25' ZONE - WEST

AVERAGE FOOT-CANDLES	6.79
MAXIMUM FOOT-CANDLES	11.9
MINIMUM FOOT-CANDLES	2.6
MINIMUM TO MAXIMUM FC RATIO	0.22
MAXIMUM TO MINIMUM FC RATIO	4.58
AVERAGE TO MINIMUM FC RATIO	2.62

EAST PAVEMENT

AVERAGE FOOT-CANDLES	6.25
MAXIMUM FOOT-CANDLES	17.5
MINIMUM FOOT-CANDLES	2.9
MINIMUM TO MAXIMUM FC RATIO	0.17
MAXIMUM TO MINIMUM FC RATIO	6.03
AVERAGE TO MINIMUM FC RATIO	2.16

NORTH CROSSWALK

AVERAGE FOOT-CANDLES	15.2
MAXIMUM FOOT-CANDLES	21
MINIMUM FOOT-CANDLES	10.8
MINIMUM TO MAXIMUM FC RATIO	0.51
MAXIMUM TO MINIMUM FC RATIO	1.95
AVERAGE TO MINIMUM FC RATIO	1.41

WEST CROSSWALK

AVERAGE FOOT-CANDLES	6.18
MAXIMUM FOOT-CANDLES	6.5
MINIMUM FOOT-CANDLES	4.5
MINIMUM TO MAXIMUM FC RATIO	0.69
MAXIMUM TO MINIMUM FC RATIO	1.44
AVERAGE TO MINIMUM FC RATIO	1.38

WALKWAY

AVERAGE FOOT-CANDLES	22.34
MAXIMUM FOOT-CANDLES	40.9
MINIMUM FOOT-CANDLES	2.3
MINIMUM TO MAXIMUM FC RATIO	0.06
MAXIMUM TO MINIMUM FC RATIO	17.42
AVERAGE TO MINIMUM FC RATIO	9.52

Door 1

AVERAGE FOOT-CANDLES	16.46
MAXIMUM FOOT-CANDLES	20.6
MINIMUM FOOT-CANDLES	10.4
MINIMUM TO MAXIMUM FC RATIO	0.5
MAXIMUM TO MINIMUM FC RATIO	1.99
AVERAGE TO MINIMUM FC RATIO	1.59

Door 2

AVERAGE FOOT-CANDLES	17.88
MAXIMUM FOOT-CANDLES	20.2
MINIMUM FOOT-CANDLES	13.4
MINIMUM TO MAXIMUM FC RATIO	0.66
MAXIMUM TO MINIMUM FC RATIO	1.51
AVERAGE TO MINIMUM FC RATIO	1.34

Door 3

AVERAGE FOOT-CANDLES	18.42
MAXIMUM FOOT-CANDLES	25.3
MINIMUM FOOT-CANDLES	12.4
MINIMUM TO MAXIMUM FC RATIO	0.49
MAXIMUM TO MINIMUM FC RATIO	2.04
AVERAGE TO MINIMUM FC RATIO	1.48

Door 7

AVERAGE FOOT-CANDLES	3.91
MAXIMUM FOOT-CANDLES	4.2
MINIMUM FOOT-CANDLES	3.6
MINIMUM TO MAXIMUM FC RATIO	0.85
MAXIMUM TO MINIMUM FC RATIO	1.17
AVERAGE TO MINIMUM FC RATIO	1.1

Door 8

AVERAGE FOOT-CANDLES	7.47
MAXIMUM FOOT-CANDLES	7.7
MINIMUM FOOT-CANDLES	7
MINIMUM TO MAXIMUM FC RATIO	0.9
MAXIMUM TO MINIMUM FC RATIO	1.11
AVERAGE TO MINIMUM FC RATIO	1.07

Door 9

AVERAGE FOOT-CANDLES	3.6
MAXIMUM FOOT-CANDLES	3.7
MINIMUM FOOT-CANDLES	3.4
MINIMUM TO MAXIMUM FC RATIO	0.92
MAXIMUM TO MINIMUM FC RATIO	1.08
AVERAGE TO MINIMUM FC RATIO	1.05

Door 4

AVERAGE FOOT-CANDLES	13.49
MAXIMUM FOOT-CANDLES	19.9
MINIMUM FOOT-CANDLES	7.9
MINIMUM TO MAXIMUM FC RATIO	0.4
MAXIMUM TO MINIMUM FC RATIO	2.51
AVERAGE TO MINIMUM FC RATIO	1.7

Door 5

AVERAGE FOOT-CANDLES	3.11
MAXIMUM FOOT-CANDLES	3.4
MINIMUM FOOT-CANDLES	2.8
MINIMUM TO MAXIMUM FC RATIO	0.8
MAXIMUM TO MINIMUM FC RATIO	1.24
AVERAGE TO MINIMUM FC RATIO	1.13

Door 6

AVERAGE FOOT-CANDLES	4.39
MAXIMUM FOOT-CANDLES	4.5
MINIMUM FOOT-CANDLES	4.3
MINIMUM TO MAXIMUM FC RATIO	0.96
MAXIMUM TO MINIMUM FC RATIO	1.04
AVERAGE TO MINIMUM FC RATIO	1.02

Property line - North

AVERAGE FOOT-CANDLES	0.27
MAXIMUM FOOT-CANDLES	0.6
MINIMUM FOOT-CANDLES	0
MINIMUM TO MAXIMUM FC RATIO	0.03
MAXIMUM TO MINIMUM FC RATIO	37.67
AVERAGE TO MINIMUM FC RATIO	16.21

Property line - SOUTH

AVERAGE FOOT-CANDLES	0.47
MAXIMUM FOOT-CANDLES	0.8
MINIMUM FOOT-CANDLES	0
MINIMUM TO MAXIMUM FC RATIO	0.06
MAXIMUM TO MINIMUM FC RATIO	17.27
AVERAGE TO MINIMUM FC RATIO	10.31

Property line - WEST

AVERAGE FOOT-CANDLES	0.98
MAXIMUM FOOT-CANDLES	1.8
MINIMUM FOOT-CANDLES	0.1
MINIMUM TO MAXIMUM FC RATIO	0.06
MAXIMUM TO MINIMUM FC RATIO	17.13
AVERAGE TO MINIMUM FC RATIO	9.41

LEGEND

▨	Pavement areas affected by construction
◠	Radius from door (varies)

DEVELOPER

THE LUTHER COMPANY, LLLP
3701 ALABAMA AVENUE SOUTH
ST. LOUIS PARK, MN
TEL (952)258-8800 - FAX (952) 258-8900

MUNICIPALITY

BLOOMINGTON

PROJECT

LUTHER HYUNDAI
BLOOMINGTON, MN

ISSUE / REVISION HISTORY

CONTACT ENGINEER FOR ANY PRIOR HISTORY

DATE	ISSUE / REVISION	REVIEW
15 NOV 2022	DRC SUBMITTAL	SES
11 JAN 2023	CITY SUBMITTAL	SES
08 MAR 2023	PERMIT SET	SES
30 MAY 2023	CITY / WATERSHED RESUBMITTAL	SES
26 JUN 2023	CITY / WATERSHED RESUBMITTAL	SES
13 JUL 2023	BULLETIN H02	SES
03 AUG 2023	BULLETIN H03	SES
03 NOV 2023	BULLETIN 05	SES

CERTIFICATION

IF THE SIGNATURE, SEAL OR FOUR LINES DIRECTLY ABOVE ARE NOT VISIBLE, THIS SHEET HAS BEEN REPRODUCED BEYOND INTENDED READABILITY AND IS NO LONGER A VALID DOCUMENT. PLEASE CONTACT THE ENGINEER TO REQUEST ADDITIONAL DOCUMENTS.

BULLETIN 05
NOVEMBER 03, 2023

Know what's Below.
Call before you dig.

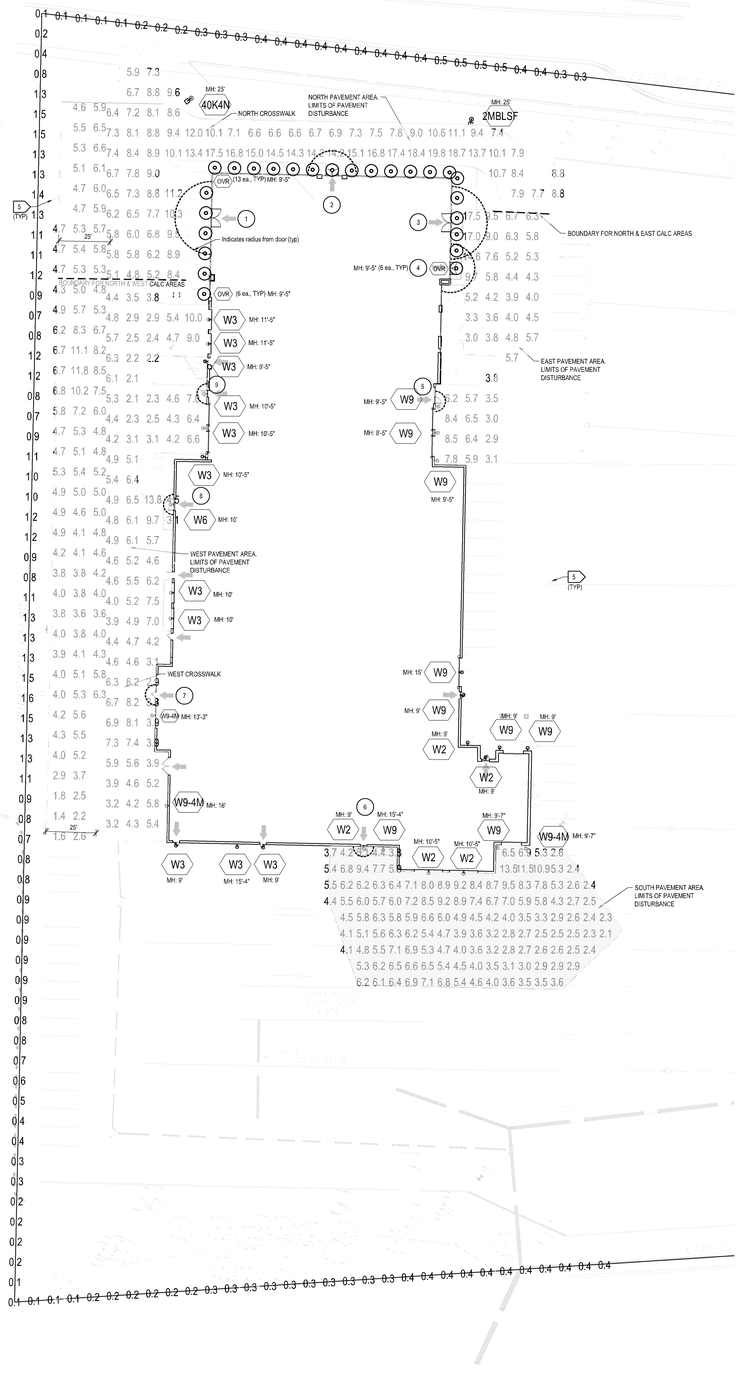
LANDFORM
From Site to Finish

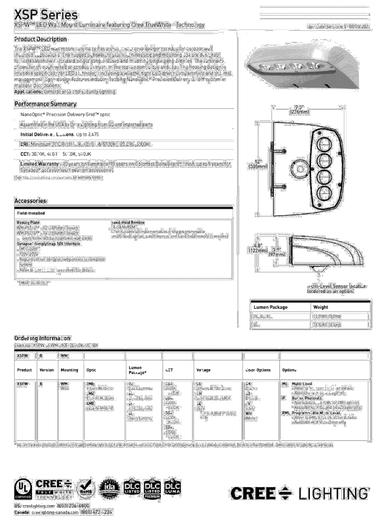
105 South Fifth Avenue
Suite 513
Minneapolis, MN 55401
Tel: 612-252-9070
Fax: 612-252-9077
Web: landform.net

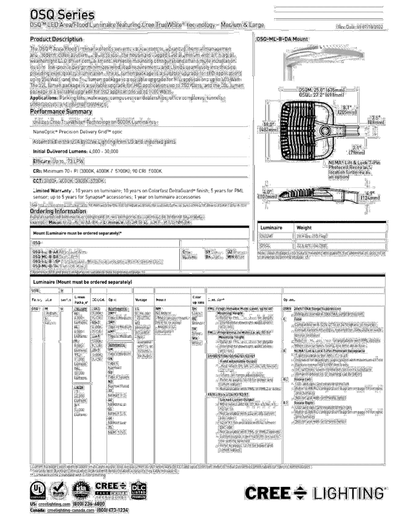
FILE NAME	L401LUT054.DWG
PROJECT NO.	LUT22054

PHOTOMETRICS PLAN - INSTALLED VALUES
L4.1

PL202300187







GENERAL NOTES

1. Coordinate with electrical contractor to provide conduits for site lighting.
2. Light pole base shall be designed and provided by others. all bases in green space shall be eight (8") inch height. all bases in pavement shall be thirty-six (36") inch height.
3. Mounting height listed in luminaire schedule includes height of life pole base.
4. Calculations based on cree lighting fixtures. any substitutions need to meet city code requirements.
5. (5) Existing light pole and luminaire.
6. Quantities shown on this sheet are total quantities for design.

BLOOMINGTON CODE REQUIREMENTS

33' - maximum pole height
10:1 - max/min uniformity ratio (50% reduction for perimeter 25')
2.0 fc - minimum foot candles (pavement surface)
2.0 fc - maximum foot candles (at property line)
10.0 fc - minimum foot candles (primary building entrance/exit, radius of 2x door opening)
2.0 fc - minimum foot candles (secondary building entrance/exit, 5' radius)
3.0 fc - minimum foot candles (pedestrian access surface from primary building entrance, within 30')
2.0 fc - minimum foot candles (pedestrian access surface to primary building entrance, beyond 30')
4.0 fc - minimum foot candles (pedestrian crosswalk, 2x fc level of pavement)
50,000 maximum lumens (per single like source, initial lumens)

LUMINAIRE SCHEDULE

CALLOUT	SYMBOL	QUANTITY	MOUNTING	MODEL	LUMENS / LAMP
2MBLSF		1	POLE	Cree Lighting OSQL-B-30L-40K7-2M-Ux-xx-xx-xxxx w- OSQ-BLSLF CONFIGURED FROM OSQL-B-30L-40K7-2M-UL-xx-xx-xx-xx w_OSQ-BLSLF	0
40K4N		1	POLE	Cree Lighting OSQX-B-40L-40K7-4M-UL-xx-xx-xxxx w-OSQ-BLSXF CONFIGURED FROM OSQX-B-40L-40K7-4M-UL-xx-xx-xx-xx w-OSQ-BLSXF	0
OVR		50	RECESSED	C-Lite, C-CP-B-BRO-S/L-SCCT-xx (40K)	0
W2		10	WALL	Cree Inc XSPW-B-xx-2ME-2L-40K-UL CONFIGURED FROM XSPW-B-xx-2ME-6L-40K-UL	0
W3		20	WALL	Cree Inc XSPW-B-WM-3ME-2L-40K-UL-WH	0
W6		2	WALL	Cree Inc XSPW-B-WM-3ME-6L-40K-UL-WH	0
W9		20	WALL	Cree Inc XSPW-B-xx-2ME-2L-40K-UL CONFIGURED FROM XSPW-B-xx-2ME-6L-40K-UL	8475
W9-4M		6	WALL	Cree Lighting XSPW-B-WM-4ME-6L-40K-UL-xxxx	8475

FOOT CANDLE CALCULATIONS - MAINTAINED VALUES

SOUTH PAVEMENT

AVERAGE FOOT-CANDLES	5.22
MAXIMUM FOOT-CANDLES	13.5
MINIMUM FOOT-CANDLES	2.1
MINIMUM TO MAXIMUM FC RATIO	0.16
MAXIMUM TO MINIMUM FC RATIO	6.31
AVERAGE TO MINIMUM FC RATIO	2.44

NORTH PAVEMENT

AVERAGE FOOT-CANDLES	9.44
MAXIMUM FOOT-CANDLES	19.8
MINIMUM FOOT-CANDLES	4.8
MINIMUM TO MAXIMUM FC RATIO	0.24
MAXIMUM TO MINIMUM FC RATIO	4.15
AVERAGE TO MINIMUM FC RATIO	1.98

WEST PAVEMENT

AVERAGE FOOT-CANDLES	5.01
MAXIMUM FOOT-CANDLES	13.8
MINIMUM FOOT-CANDLES	2.1
MINIMUM TO MAXIMUM FC RATIO	0.15
MAXIMUM TO MINIMUM FC RATIO	6.7
AVERAGE TO MINIMUM FC RATIO	2.43

EAST PAVEMENT

AVERAGE FOOT-CANDLES	6.25
MAXIMUM FOOT-CANDLES	17.5
MINIMUM FOOT-CANDLES	2.9
MINIMUM TO MAXIMUM FC RATIO	0.17
MAXIMUM TO MINIMUM FC RATIO	6.04
AVERAGE TO MINIMUM FC RATIO	2.16

NORTH CROSSWALK

AVERAGE FOOT-CANDLES	12.32
MAXIMUM FOOT-CANDLES	17
MINIMUM FOOT-CANDLES	8.7
MINIMUM TO MAXIMUM FC RATIO	0.51
MAXIMUM TO MINIMUM FC RATIO	1.95
AVERAGE TO MINIMUM FC RATIO	1.41

WALKWAY

AVERAGE FOOT-CANDLES	18.09
MAXIMUM FOOT-CANDLES	33.1
MINIMUM FOOT-CANDLES	1.9
MINIMUM TO MAXIMUM FC RATIO	0.06
MAXIMUM TO MINIMUM FC RATIO	17.42
AVERAGE TO MINIMUM FC RATIO	9.52

25' ZONE - WEST

AVERAGE FOOT-CANDLES	5.1
MAXIMUM FOOT-CANDLES	11.8
MINIMUM FOOT-CANDLES	1.4
MINIMUM TO MAXIMUM FC RATIO	0.12
MAXIMUM TO MINIMUM FC RATIO	8.2
AVERAGE TO MINIMUM FC RATIO	3.55

WEST CROSSWALK

AVERAGE FOOT-CANDLES	6.23
MAXIMUM FOOT-CANDLES	6.5
MINIMUM FOOT-CANDLES	4.5
MINIMUM TO MAXIMUM FC RATIO	0.7
MAXIMUM TO MINIMUM FC RATIO	1.43
AVERAGE TO MINIMUM FC RATIO	1.37

Door 1

AVERAGE FOOT-CANDLES	16.48
MAXIMUM FOOT-CANDLES	20.6
MINIMUM FOOT-CANDLES	10.4
MINIMUM TO MAXIMUM FC RATIO	0.5
MAXIMUM TO MINIMUM FC RATIO	1.99
AVERAGE TO MINIMUM FC RATIO	1.59

Door 2

AVERAGE FOOT-CANDLES	17.86
MAXIMUM FOOT-CANDLES	20.2
MINIMUM FOOT-CANDLES	13.4
MINIMUM TO MAXIMUM FC RATIO	0.66
MAXIMUM TO MINIMUM FC RATIO	1.51
AVERAGE TO MINIMUM FC RATIO	1.34

Door 3

AVERAGE FOOT-CANDLES	18.42
MAXIMUM FOOT-CANDLES	25.3
MINIMUM FOOT-CANDLES	12.4
MINIMUM TO MAXIMUM FC RATIO	0.49
MAXIMUM TO MINIMUM FC RATIO	2.04
AVERAGE TO MINIMUM FC RATIO	1.48

Door 7

AVERAGE FOOT-CANDLES	3.88
MAXIMUM FOOT-CANDLES	4.1
MINIMUM FOOT-CANDLES	3.5
MINIMUM TO MAXIMUM FC RATIO	0.85
MAXIMUM TO MINIMUM FC RATIO	1.18
AVERAGE TO MINIMUM FC RATIO	1.1

Door 8

AVERAGE FOOT-CANDLES	5.69
MAXIMUM FOOT-CANDLES	5.9
MINIMUM FOOT-CANDLES	5.3
MINIMUM TO MAXIMUM FC RATIO	0.89
MAXIMUM TO MINIMUM FC RATIO	1.13
AVERAGE TO MINIMUM FC RATIO	1.08

Door 9

AVERAGE FOOT-CANDLES	3.44
MAXIMUM FOOT-CANDLES	3.6
MINIMUM FOOT-CANDLES	3.2
MINIMUM TO MAXIMUM FC RATIO	0.9
MAXIMUM TO MINIMUM FC RATIO	1.11
AVERAGE TO MINIMUM FC RATIO	1.06

Door 4

AVERAGE FOOT-CANDLES	13.48
MAXIMUM FOOT-CANDLES	19.9
MINIMUM FOOT-CANDLES	7.9
MINIMUM TO MAXIMUM FC RATIO	0.4
MAXIMUM TO MINIMUM FC RATIO	2.51
AVERAGE TO MINIMUM FC RATIO	1.71

Door 5

AVERAGE FOOT-CANDLES	3.22
MAXIMUM FOOT-CANDLES	3.4
MINIMUM FOOT-CANDLES	3.1
MINIMUM TO MAXIMUM FC RATIO	0.9
MAXIMUM TO MINIMUM FC RATIO	1.11
AVERAGE TO MINIMUM FC RATIO	1.05

Door 6

AVERAGE FOOT-CANDLES	4.5
MAXIMUM FOOT-CANDLES	4.5
MINIMUM FOOT-CANDLES	4.5
MINIMUM TO MAXIMUM FC RATIO	1
MAXIMUM TO MINIMUM FC RATIO	1
AVERAGE TO MINIMUM FC RATIO	1

Property line - North

AVERAGE FOOT-CANDLES	0.32
MAXIMUM FOOT-CANDLES	0.5
MINIMUM FOOT-CANDLES	0.1
MINIMUM TO MAXIMUM FC RATIO	0.17
MAXIMUM TO MINIMUM FC RATIO	6.01
AVERAGE TO MINIMUM FC RATIO	3.78

Property line - SOUTH

AVERAGE FOOT-CANDLES	0.29
MAXIMUM FOOT-CANDLES	0.4
MINIMUM FOOT-CANDLES	0.1
MINIMUM TO MAXIMUM FC RATIO	0.26
MAXIMUM TO MINIMUM FC RATIO	3.9
AVERAGE TO MINIMUM FC RATIO	2.83

Property line - WEST

AVERAGE FOOT-CANDLES	0.88
MAXIMUM FOOT-CANDLES	1.6
MINIMUM FOOT-CANDLES	0.1
MINIMUM TO MAXIMUM FC RATIO	0.06
MAXIMUM TO MINIMUM FC RATIO	16.06
AVERAGE TO MINIMUM FC RATIO	8.61

LEGEND

Pavement areas affected by construction

Radius from door (varies)

DEVELOPER

THE LUTHER COMPANY, LLLP
3701 ALABAMA AVENUE SOUTH
ST. LOUIS PARK, MN
TEL (952)258-8800 - FAX (952) 258-8900

MUNICIPALITY

BLOOMINGTON

PROJECT

LUTHER HYUNDAI
BLOOMINGTON, MN

ISSUE / REVISION HISTORY

CONTACT ENGINEER FOR ANY PRIOR HISTORY

DATE	ISSUE / REVISION	REVIEW
15 NOV 2022	CRC SUBMITTAL	MFS
11 JAN 2023	CITY SUBMITTAL	SES
09 MAR 2023	PERMIT SET	SES
26 MAY 2023	CITY / WATERSHED RESUBMITTAL	MFS
26 JUN 2023	CITY / WATERSHED RESUBMITTAL	MFS
11 JUL 2023	BULLETIN H12	SES
01 AUG 2023	BULLETIN H13	SES
03 NOV 2023	BULLETIN 05	MFS

CERTIFICATION

IF THE SIGNATURE, SEAL OR FOUR LINES DIRECTLY ABOVE ARE NOT VISIBLE, THIS SHEET HAS BEEN REPRODUCED BEYOND INTENDED READABILITY AND IS NO LONGER A VALID DOCUMENT. PLEASE CONTACT THE ENGINEER TO REQUEST ADDITIONAL DOCUMENTS.

BULLETIN 05
NOVEMBER 03, 2023

LANDFORM
From Site to Finish
105 South Fifth Avenue
Suite 513
Minneapolis, MN 55401
Tel: 612-252-9070
Fax: 612-252-9077
Web: landform.net

FILE NAME L402/LUT054.DWG
PROJECT NO. LUT22054

PHOTOMETRICS PLAN - MAINTAINED VALUES
L4.2

Know what's Below. Call before you dig.

NORTH
0 30 60