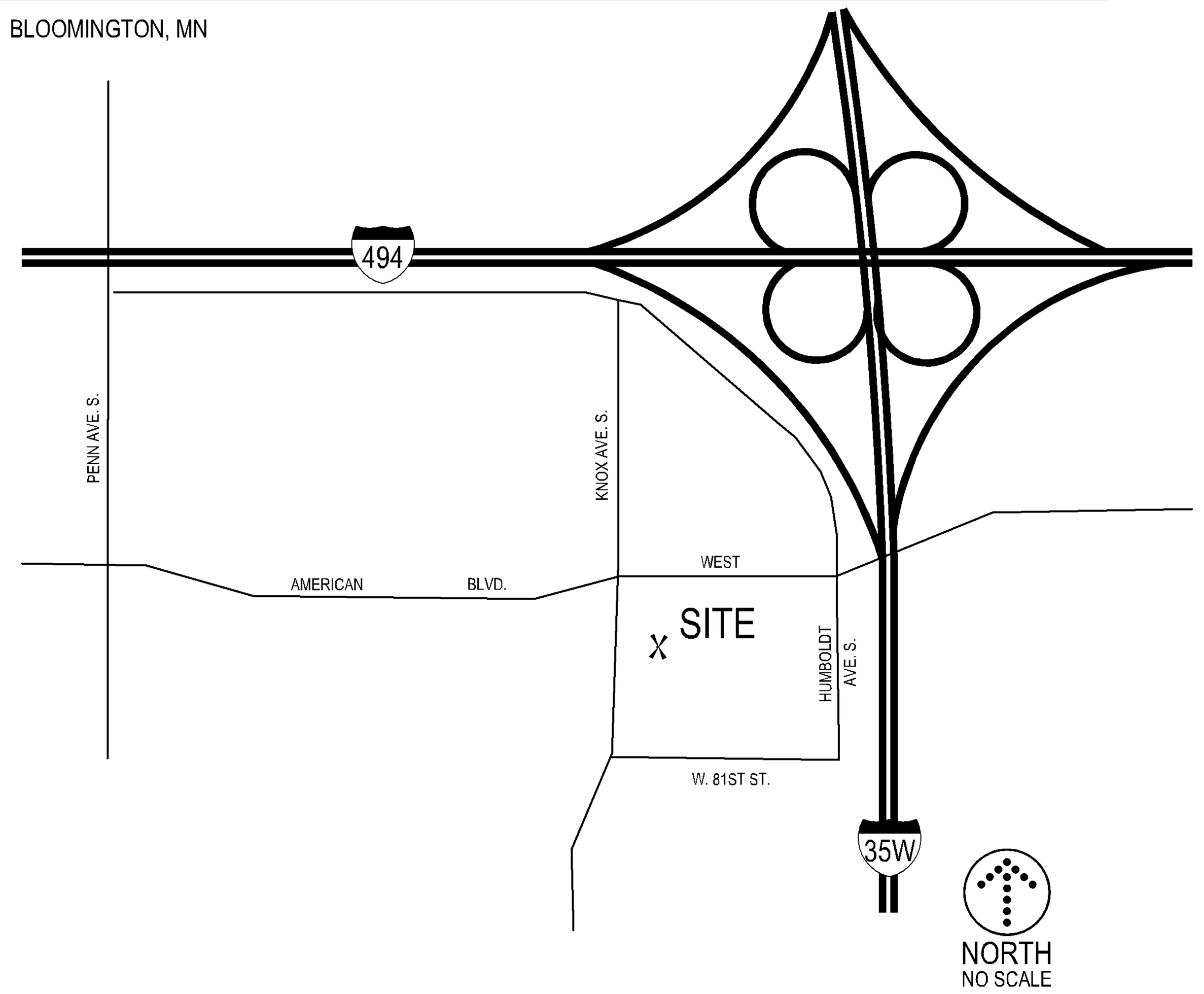
LUTHER BLOOMINGTON KIA

BLOOMINGTON, MINNESOTA

AREA LOCATION MAP



DEVELOPER

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MUNICIPALITY

BLOOMINGTON

PROJECT

LUTHER
BLOOMINGTON KIA
BLOOMINGTON, MN

ISSUE / REVISION HISTORY

CONTACT ENGINEER FOR ANY PRIOR HISTORY

DATE	ISSUE / REVISION	REVIEW
07 FEB 2024	DRC SUBMITTAL	SES
05 AUG 2024	CLIENT REVIEW	SES
14 AUG 2024	CITY SUBMITTAL	SES
09 SEP 2024	CITY RESUBMITTAL	SES

ABBREVIATIONS

D	Angle
&	And
@	At
100 YR.	100 Year Flood Elevation
A.B.	Anchor Bolt
A.D.	Area Drain
A/C	Air Conditioning Unit
ADD.	Addendum
ADDL.	Additional
ADJ.	Adjacent / Adjust
AHU	Air Handling Unit
ALT.	Alternate
ALUM.	Aluminum
ANOD.	Anodized
APPROX.	Approximate
ARCH	Architect / Architectural
AUTO.	Automatic
AVG.	Average
B.C.	Back of Curb
B/W	Bottom of Wall
BFE	Basement Floor Elevation
BIT	Bituminous (Asphaltic)
BLDG	Building
BM	Benchmark
BSMT.	Basement
C.F.	Cubic Feet
C.F.S.	Cubic Feet Per Second
C.G.	Corner Guard
C.J.	Control Joint
C.L.	Centerline
C.M.U.	Concrete Masonry Unit
C.O.	Cleanout
C.O.E.	U.S. Army Corps Of Engineers
C.Y.	Cubic Yards
CB	Catch Basin
CBMH	Catch Basin Manhole
CEM.	Cement
CIP	Cast Iron Pipe
CMP	Corrugated Metal Pipe
CONC.	Concrete (Portland)
CONN.	Connection
CONST.	Construction
CONT.	Continuous
CONTR.	Contractor
COP.	Copper
CU.	Cubic
D.S.	Down Spout
DEG.	Degree
DEMO.	Demolition / Demolish
DEPT.	Department
DET.	Detail
DIA.	Diameter
DIAG.	Diagonal
DIM.	Dimension
DIP	Ductile Iron Pipe
DN	Down
DWG.	Drawing
E.	East
E.J.	Expansion Joint
E.O.	Emergency Overflow
E.O.S.	Emergency Overflow Swale
E.W.	Each Way
EA.	Each EL. Elevation
ELEC.	Electrical
ELEV.	Elevation
EMER.	Emergency
ENGR.	Engineer
ENTR.	Entrance
EQ.	Equal
EQUIP.	Equipment
EQUIV.	Equivalent
EXIST.	Existing
EXP.	Expansion
F & I	Furnish and Install
F.B.O.	Furnished by Others
F.C.	Face of Curb
F.D.	Floor Drain
F.D.C.	Fire Department Connection
F.V.	Field Verify
FB	Full Basement
FBWO	Full Basement Walk Out
FBLO	Full Basement Look Out
FDN.	Foundation
FES	Flared End Section
FFE	Finished Floor Elevation
FLR.	Floor
FT. OR (')	Foot
FUT.	Future
G.B.	Grade Break
G.C.	General Contractor
GAL.	Gallon
GALV.	Galvanized
GFE	Garage Floor Elevation
GL.	Glass
GR.	Grade
H.	Height
H.P.	High Point
HDPEP	High Density Polyethylene Pipe
HGT.	Height
HORIZ.	Horizontal
HVAC	Heating, Ventilation, Air Conditioning
HYD	Hydrant
I.D.	Inside Dimension OR Identification
I.E. or IE	Invert Elevation
IN. OR (")	Inches
INFO.	Information
INL.	Inlet Elevation
INSUL.	Insulation
INV.	Invert Elevation
JT.	Joint
L.F.	Linear Feet
L.P.	Low Point / Liquid Petroleum

LB.	Pound
LGU	Local Government Unit
LB.	Pound
LB.	Longitudinal
LT.	Light / Lighting
MAINT.	Maintenance
MAS.	Masonry
MATL.	Material
MAX.	Maximum
MECH	Mechanical
MED.	Medium
MFR.	Manufacturer
MH	Manhole
MIN.	Minimum / Minute
MISC.	Miscellaneous
MNDOT	Minnesota Department Of Transportation
MOD.	Module / Modular
MUL.	Mullion
N.	North
N.I.C.	Not In Contract
NO. OR #	Number
NOM	Nominal
NTS	Not to Scale
NWE	Normal Water Elevation
NWL	Normal Water Level
O.F.	On Center
O.G.	Outside Dimension
O.H.	Overhead Electric
OH.	Overhead
OHWL	Ordinary High Water Level
OPNG.	Opening
ORIG.	Original
P.C.	Point of Curvature
P.I.	Point of Intersection
PIV	Post Indicator Valve
P.L. OR P/L	Property Line
P.O.B.	Point of Beginning
P.S.F.	Pounds Per Square Foot
P.S.I.	Pounds Per Square Inch
P.T.	Point of Tangency
P.V.C.	Point of Vertical Curvature
P.V.I.	Point of Vertical Intersection
P.V.T.	Point of Vertical Tangency
PE	Polyethylene
PED.	Pedestal / Pedestrian
PERF.	Perforated
PREP.	Preparation
PROJ.	Project
PROP.	Proposed
PVC	Poly-Vinyl-Chloride (Piping)
PVMT.	Pavement
QTR.	Quarter
QTY.	Quantity
R	Radius
RAD.	Radius
RE	Rim Elevation (Casting)
R.D.	Roof Drain
R.E.	Remove Existing
R.O.	Rough Opening
R.P.	Radius Point
RC	Reinforced Concrete Pipe
R.S.	Rough Slab
RSD	Roof Storm Drain
RE.	Regarding
REINF.	Reinforced
REQ'D	Required
REV.	Revision / Revised
RGU	Regulatory Government Unit
ROW OR R/W	Right of Way
S.	South
S.F.	Square Feet
SAN.	Sanitary Sewer
SECT.	Section
SE	Split Entry /Side Exit
SEWO	Split Entry Walk Out /Side Exit Walk Out
SHT.	Sheet
SIM.	Similar
SLNT.	Sealant
SPEC.	Specification
SQ.	Square
SSD	Subsurface drain
STMH	Storm Sewer Manhole
STD.	Standard
STRUCT.	Structural
SYM.	Symmetrical
T	Thickness
T/R	Top of Rim
T/W	Top of Wall
TEMP.	Temporary
THK.	Thick / Thickness
T.J.	Tooled Joint
TNH	Top Nut Hydrant
TYP.	Typical
U.N.O.	Unless Noted Otherwise
V.B.	Vapor Barrier
V.C.	Vertical Curve
V.I.F.	Verify In Field
VER.	Verify
VER.	Vertical
VEST.	Vestibule
W	Width
W.PT.	Working Point
W.W.F.	Welded Wire Fabric
W/	With
W/O	Without
WO	Walk Out
VER.	Wetland
WP	Waterproof
WETL.	Weight
YD.	Yard
YR.	Year

SYMBOLS

EXISTING	DESCRIPTION
120	MAJOR CONTOUR
123	MINOR CONTOUR
× 234.5	SPOT ELEVATION
	BUILDING
	CANOPY / OVERHANG
	CONCRETE
	BITUMINOUS
	LANDSCAPING
	GRAVEL
	PAVING BLOCK
	PAVING BLOCK
12"STS >>	STORM SEWER LINE
8"SAN >	SANITARY SEWER LINE
6"WTR	WATER MAIN
OE	OVERHEAD ELECTRIC
UT	UNDERGROUND TELEPHONE
FO	UNDERGROUND FIBER OPTIC
UE	UNDERGROUND ELECTRIC
G	GAS LINE
	CONCRETE CURB
X X HEIGHT, TYPE	FENCING
	RETAINING WALL
	SET 1/2" X 14" IRON PIPE
	IRON MONUMENT FOUND
	SURVEY DISK (BENCHMARK)
	POWERPOLE
	GUY WIRE
	GUARD POST
	GAS METER
T	TRANSFORMER
	WATER SHUT-OFF VALVE
	TRAFFIC SIGN
	FLAG POLE
	LIGHT POLE
	TREES
	TREE LINE
	STORM MANHOLE
	SANITARY MANHOLE
	CATCH BASIN
	FIRE HYDRANT
	WATER VALVE
	FLARED END SECTION
MB	MAILBOX
1	NOTE NUMBER
(M)	MEASURED DISTANCE
(P)	DISTANCE PER RECORDED PLAT
B#	SOIL BORING

NEW	DESCRIPTION
120	MAJOR CONTOUR
123	MINOR CONTOUR
123.45 ×	SPOT ELEVATION
	BUILDING
	CANOPY / OVERHANG
	UNDERGROUND STRUCTURE
	CONCRETE
	CONCRETE CURB
BIT. EDGE	EDGE OF PAVEMENT
HEIGHT, TYPE	FENCING
	GUARD RAIL
	CONCRETE RETAINING WALL
	MODULAR RETAINING WALL
	FIELDSTONE RETAINING WALL
	EXIT LOCATION
	LIGHT STANDARD
Ø	POWER POLE
1.00 %	SLOPE DIRECTION
	CATCH BASIN
	MANHOLE
	BOLLARD
STS >> FES RIPRAP	STORM SEWER
SAN >	SANITARY SEWER-WASTE
FM >	FORCE MAIN
RD >>	ROOF DRAIN SYSTEM
GATE VALVE WTR HYD	WATERMAIN
FIRE	FIRE LINE (IF SEPARATE)
BLDG.	FIRE DEPT. CONNECTION
C.O. X"SSD	SOIL SUBDRAIN
GAS	GAS LINE-UNDERGROUND
ELEC	ELECTRIC-UNDERGROUND
TELE	TELEPHONE-UNDERGROUND
CATV	UNDERGROUND CABLE/TV
LSS	LAWN SPRINKLER SLEEVE

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
2	REVISION - ADDENDUM, BULLETIN, ETC.
	REVISED AREA (THIS ISSUE)

LEGAL DESCRIPTION

PARCEL 2:
LOT 1, BLOCK 1, INFINITI SATURN ADDITION, EXCEPT THAT PART LYING SOUTH OF THE NORTH LINE OF THE SOUTH 858 FEET OF THE SOUTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 4, TOWNSHIP 27, RANGE 24.

(ABSTRACT PROPERTY)

THAT PART OF LOT 1, BLOCK 1, INFINITI SATURN ADDITION, LYING SOUTH OF THE NORTH LINE OF THE SOUTH 858 FEET OF THE SOUTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 4, TOWNSHIP 27, RANGE 24.

(TORRENS PROPERTY, CERTIFICATE OF TITLE NO. 1343783)

PARCEL 3:
LOT 2, BLOCK 1 PANNEKOEKEN HUIS ADDITION, EXCEPT THAT PART LYING SOUTH OF THE NORTH LINE OF THE SOUTH 858 FEET OF THE SOUTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 4, TOWNSHIP 27, RANGE 24.

(ABSTRACT PROPERTY)

THAT PART OF LOT 2, BLOCK 1, PANNEKOEKEN HUIS ADDITION, LYING SOUTH OF THE NORTH LINE OF THE SOUTH 858 FEET OF THE SOUTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 4, TOWNSHIP 27, RANGE 24.

(TORRENS PROPERTY, CERTIFICATE OF TITLE NO. 1343783)

PARCEL 4:
LOT 1, BLOCK 1, HYUNDAI ADDITION.

(TORRENS PROPERTY, CERTIFICATE OF TITLE NO. 1343783)

PARCEL 5:
ALL OF LOT 3, BLOCK 1, INFINITI SATURN ADDITION.

(TORRENS PROPERTY, CERTIFICATE OF TITLE NO. 1341795)

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NEENAH, WI, 54956
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CONTACT: BRANNIN GRIES

CIVIL / LANDSCAPE SHEET INDEX & REVISION MATRIX

SHEETS ISSUED BY DATE

SHEET NO.	DESCRIPTION	02.07.24	08.14.24	09.09.24
C0.1	CIVIL & LANDSCAPE TITLE SHEET	X	X	X
C1.1	EXISTING CONDITIONS - BOUNDARY	X	X	X
C1.2	EXISTING CONDITIONS - SITE	X	X	X
C1.3	DEMOLITION		X	X
C2.1	SITE PLAN	X	X	X
C3.1	GRADING, DRAINAGE, PAVING & EROSION CONTROL	X	X	X
C3.1A	GRADING, DRAINAGE, PAVING & EROSION CONTROL - ENLARGED			X
C3.2	SWPPP			X
C4.1	UTILITIES	X	X	X
C7.1	CIVIL CONSTRUCTION DETAILS		X	X
C7.2	CIVIL CONSTRUCTION DETAILS		X	X
L2.1	TREE PLAN		X	X
L2.2	LANDSCAPE PLAN-NORTH BOULEVARD		X	X
L2.3	LANDSCAPE PLAN-SOUTH BOULEVARD		X	X
L2.4	LANDSCAPE PLAN-BUILDING		X	X
L4.1	PHOTOMETRICS-INITIAL VALUES		X	X
L4.2	INITIAL VALUES-CALCULATIONS		X	X
L4.3	PHOTOMETRICS-MAINTAINED VALUES		X	X
L4.4	MAINTAINED VALUES-CALCULATIONS		X	X
L4.5	LUMINAIRES		X	X
L7.1	LANDSCAPE DETAILS		X	X

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PROJECT NO.	LUT23061

CIVIL & LANDSCAPE
TITLE SHEET
C0.1

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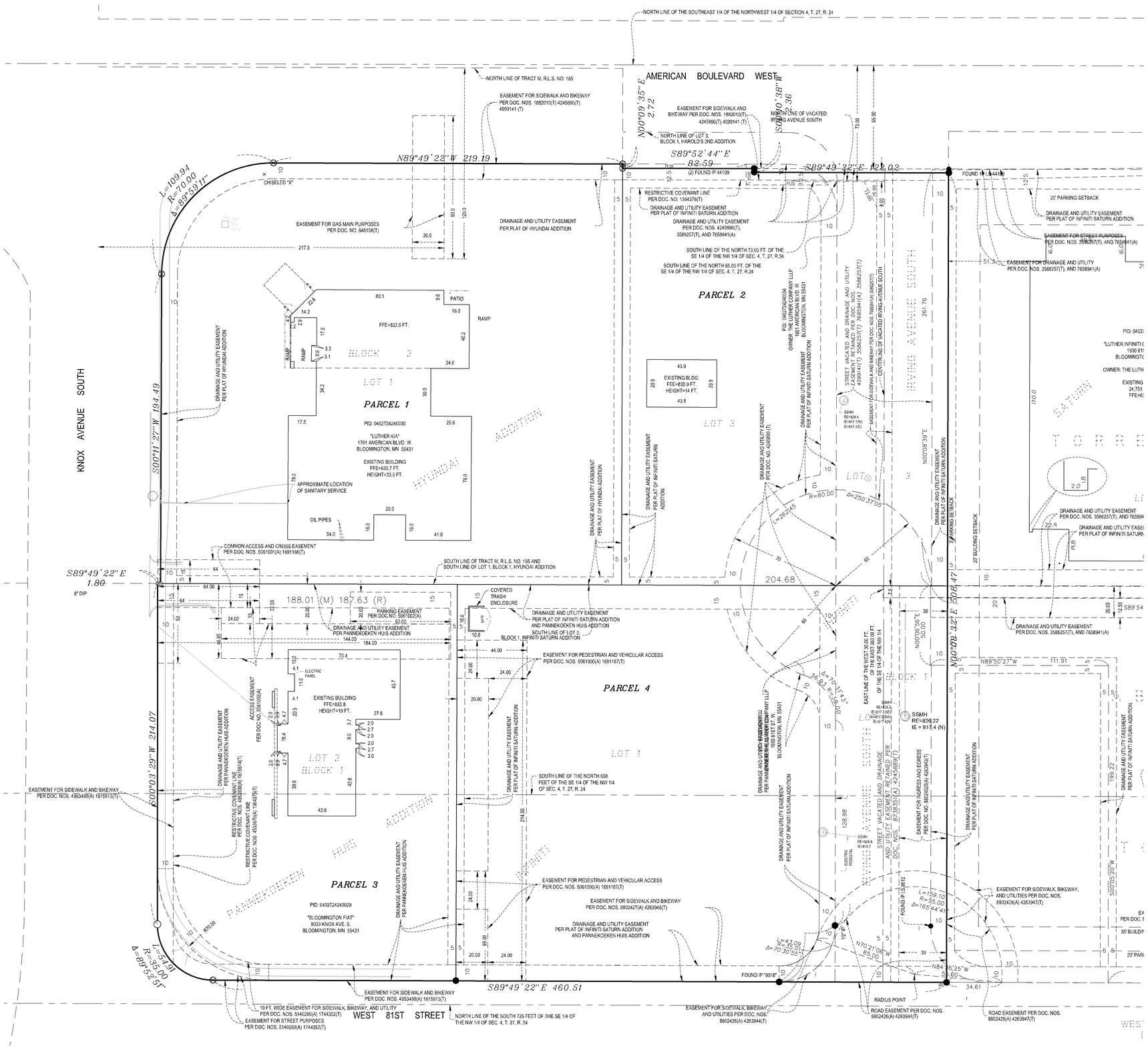

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1. Background information shown is from survey by Landform, Minneapolis, MN, on November, 30, 2023, expressly for this project; City of Bloomington, MN record drawings; and utility service providers. Landform offers no warranty, expressed or written, 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 at a later date

DEVELOPER

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EXISTING CONDITIONS BOUNDARY

C1.1

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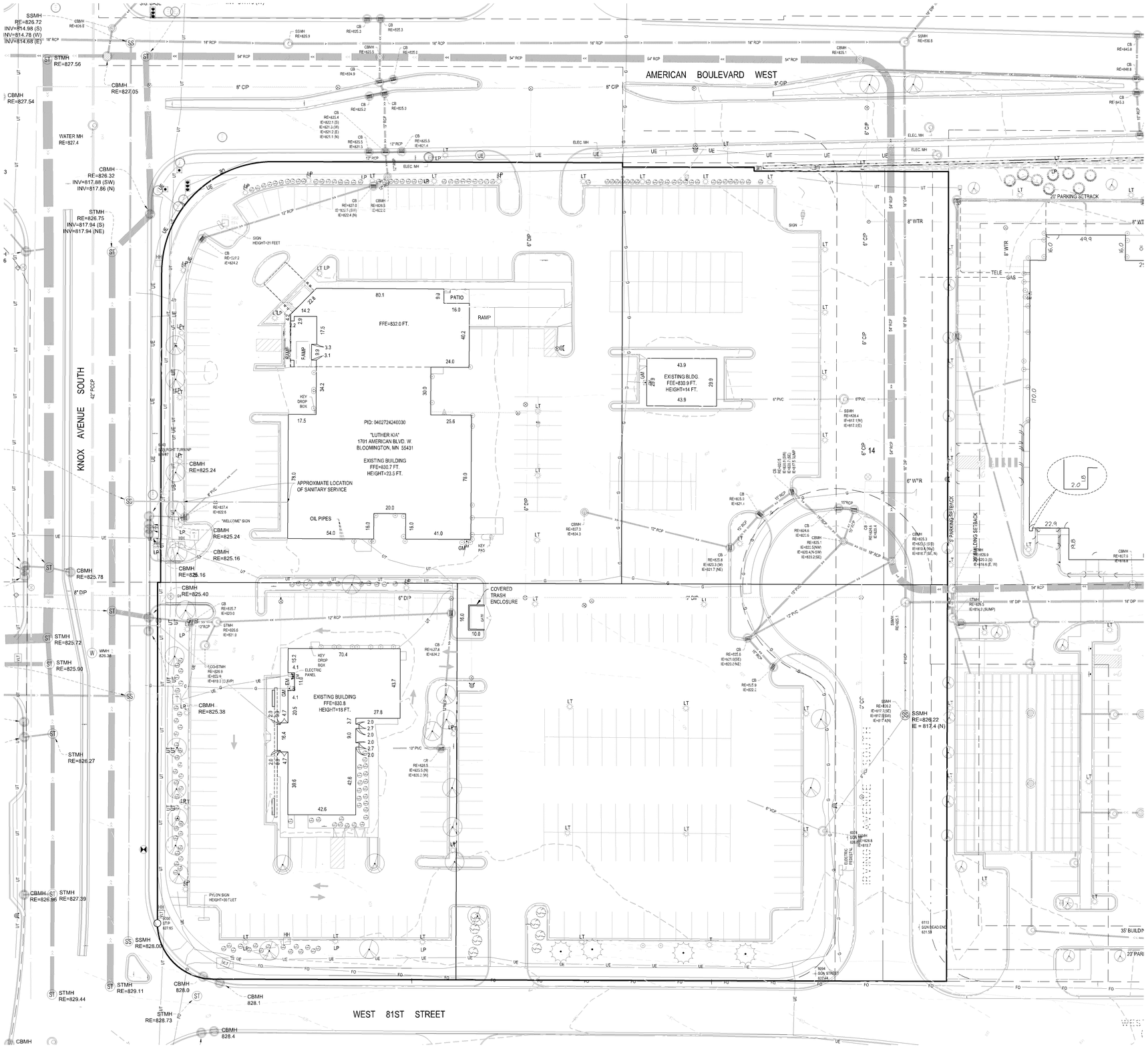

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EXISTING CONDITIONS SITE

C1.2

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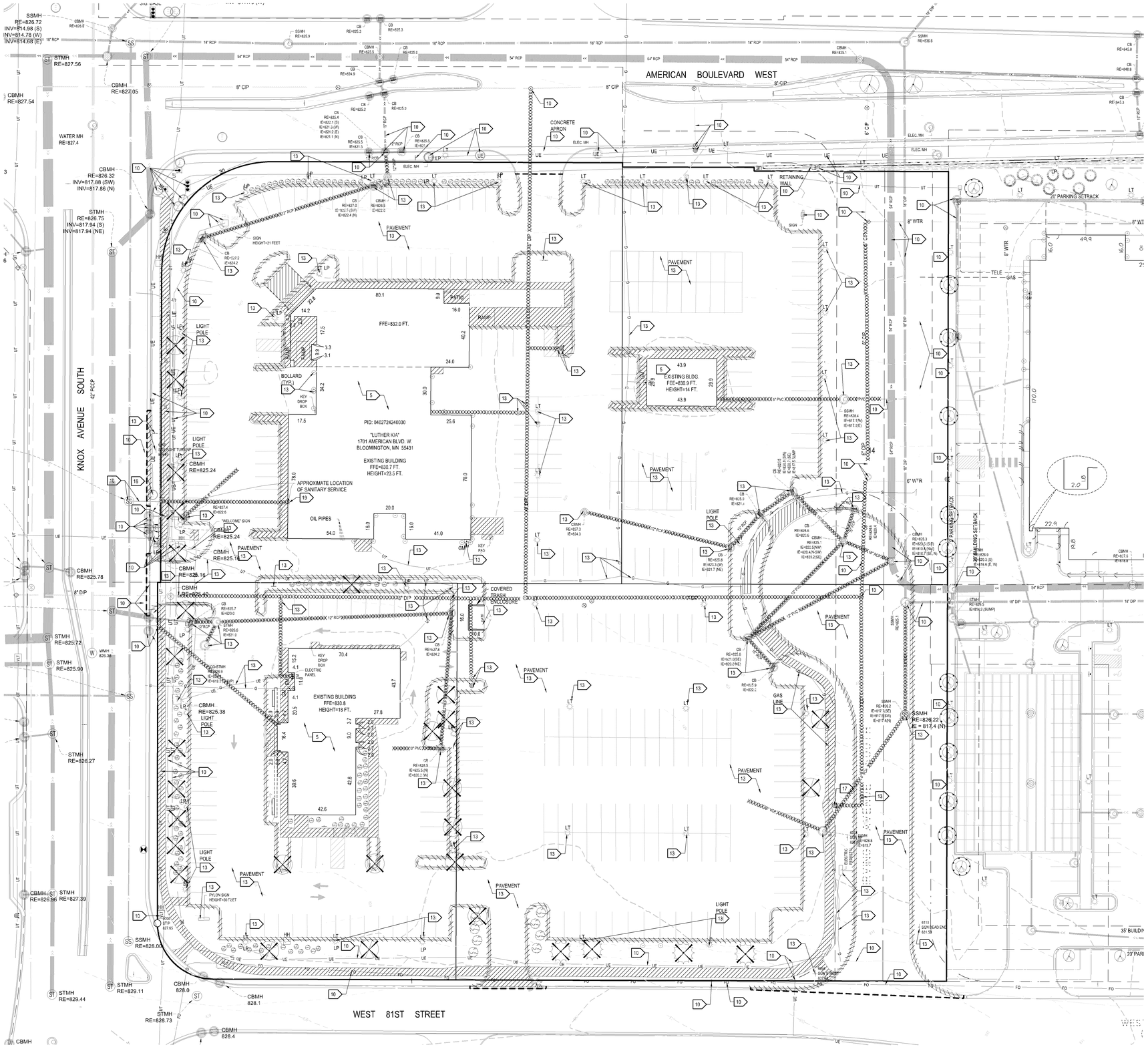

GENERAL NOTES

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

DEMOLITION AND CLEARING NOTES

2. Obtain permits for demolition, clearing, and disposal prior to beginning.
3. Contact utility service providers for field location of services 72 hours prior to beginning demolition and clearing.
4. See Sheet C3.1 for erosion prevention and sediment control measures that must be in place prior to disturbances to site.
5. 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.
6. Dimensions shown for removal are approximate. Coordinate with new construction to ensure appropriate removal of existing facilities.
7. Pavement sawcut. Remove concrete walks and curbing to the nearest existing joint beyond construction limits.
8. Complete demolition with minimal disruption of traffic. Coordinate lane closures with the regulatory authority and provide advance notification to affected emergency response providers.
9. Provide barricades, lights, signs, traffic control, and other measures necessary for protection and safety of the public and maintain throughout construction.
10. 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.
11. Abandon wells and remove on site sewage facilities prior to any other demolition in accordance with requirements of regulatory authorities.
12. 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.
13. 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.
14. 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.
15. 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. Removal is preferred, contact engineer before abandoning pipe and conduits.
16. Haul demolition debris off-site to a facility approved by regulatory authorities for the handling of demolition debris, unless noted otherwise.
17. Salvage and relocate hydrant. Refer to sheet C4.1 for proposed location.
18. Salvage and relocate electric manhole, coordinate with Xcel Energy. Refer to sheet C4.1 for proposed location.
19. Contractor to verify location of existing sanitary service. Remove sanitary to property line.

LEGEND

- :Tree Removal
- :Tree Protection
- :Concrete Removal
- B-X :Soil Boring
- :Curb Removal
- XXXXXXXXXXXXXXXXXXXX :Utility Line Removal
- :Pavement Sawcut

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DEMOLITION
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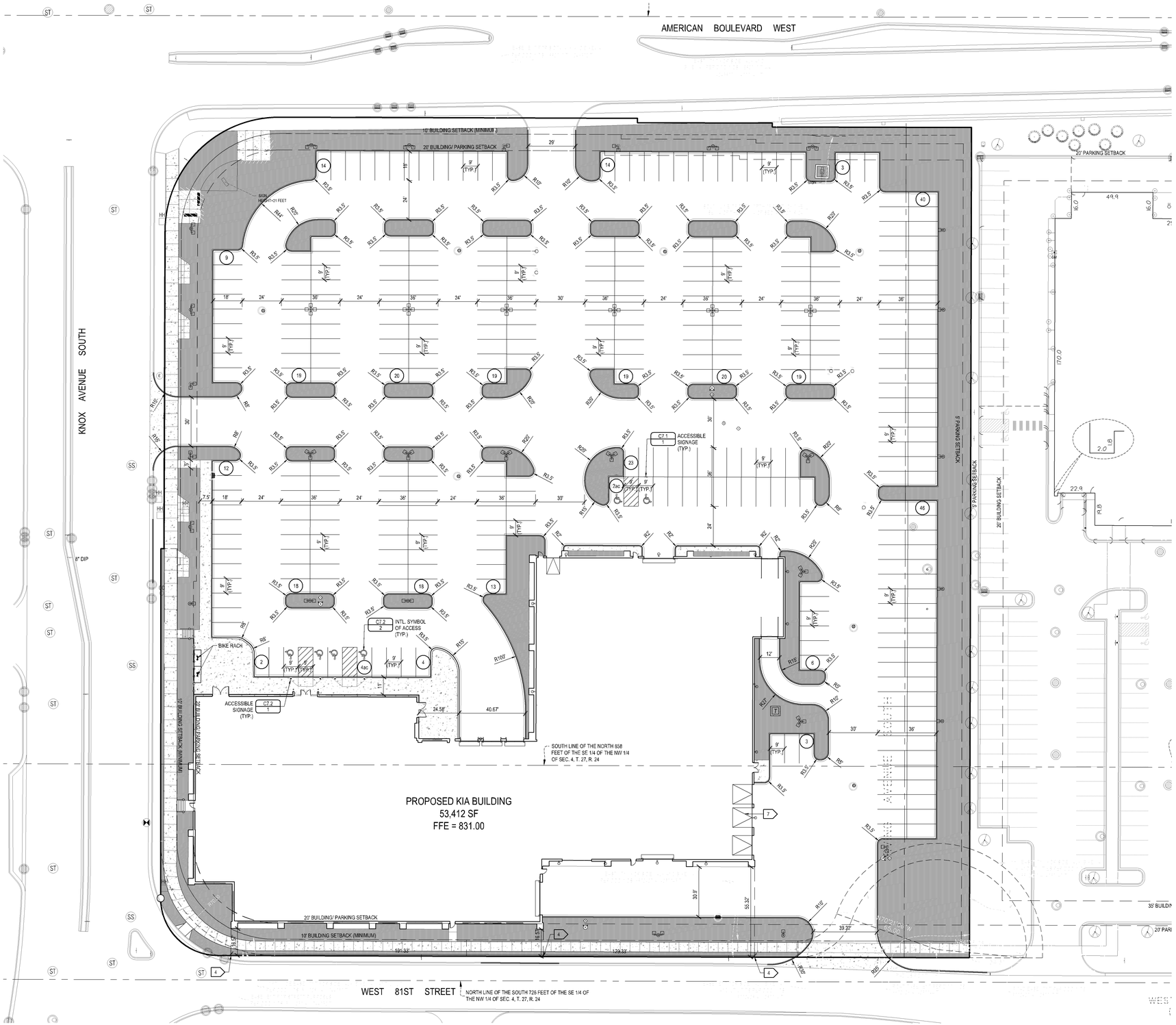

GENERAL NOTES

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. Building layout angles are parallel with or perpendicular to the property line at the location indicated.
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 / Recycling areas: See Architectural drawings.
8. 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.
9. 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 (952-563-4545), sjenkins@BloomingtonMN.gov) for permit information.

ZONING AND SETBACK SUMMARY

The Property is Zoned Freeway Mixed Use Zone (C-5)

Building Setback Information is as follows:
50% of bldg facade must be located at bldg setback on primary street .

Knox Ave frontage = 513 l.f.
50% = 257 l.f. required
117 l.f. proposed

30% of bldg facade must be located at bldg setback on secondary street.

81st St frontage = 495 l.f.
Effective = 380 l.f. (Less Irving Right of Way Easement)
30% = 114 l.f. required
191 l.f. proposed

Parking Setback Information is as follows:
Front Yard / Street = 20 ft.
Side = 5 ft.

Existing F.A.R. : 0.09
Proposed F.A.R. : 0.23

AREA SUMMARY

Existing:

Pervious	54,829	s.f.	1.26	ac.	21.8%
Impervious	197,054	s.f.	4.52	ac.	78.2%
Total	251,883	s.f.	5.78	ac.	100.0%

Proposed:

Pervious	43,455	s.f.	0.99	ac.	17.3%
Impervious	208,428	s.f.	4.79	ac.	82.7%
Total	251,883	s.f	5.78	ac.	100.0%

PARKING SUMMARY

Required Parking:

1 space per 300 square feet of gross floor area excluding service bays, plus 2 spaces per service bay.
53,412 gross floor area + 3 service bays
1 space x [53,412 sf/ 300 sf) + 2 spaces x 3 service bays = 171.4

Total Parking Stalls Required	194 ea.

Provided Parking:

Standard Stalls	(9x18)	343 ea.
Accessible Stalls	(9x18)	6 ea.
Total Parking Stalls Provided		349 ea.

LEGEND

Green Space (Landscape Area)

DEVELOPER

THE LUTHER COMPANY, LLLP.
3701 ALABAMA AVENUE SOUTH
ST. LOUIS PARK, MN
TEL (952)258-8600 - FAX (952) 258-8600

MUNICIPALITY

BLOOMINGTON

PROJECT

LUTHER BLOOMINGTON KIA

BLOOMINGTON, MN

ISSUE / REVISION HISTORY

CONTACT ENGINEER FOR ANY PRIOR HISTORY

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CERTIFICATION

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09.09.2024

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 C201LUT061.DWG
PROJECT NO. LUT23061

SITE PLAN
C2.1

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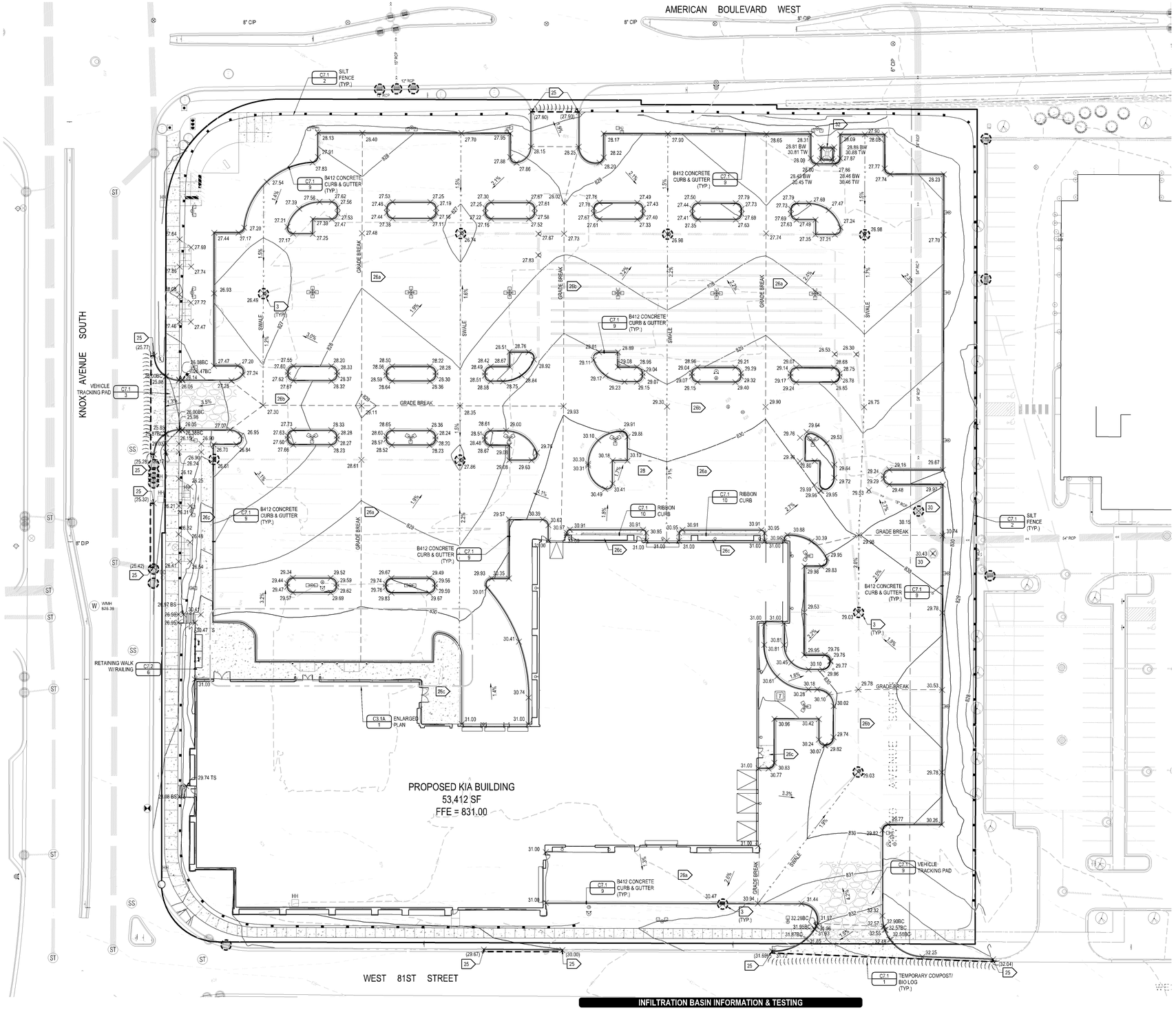

GENERAL NOTES

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. Refer to SWPPP Notes on Sheet C3.2 for additional requirements.

7. Reserved.

8. Contractor shall prevent sediment laden water from entering the filtration / infiltration system 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. Seeded areas without erosion control blanket shall be disc mulched.

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 (25-141 @ 59 lbs./ac. for General Roadside, 25-151 @ 120 lb./ac. for Residential Turf) - Permanent Turf	
Mulch	MNDOT 3882
(MNDOT Type 1 @ 2 ton/ac., Disc Anchored)	
Erosion Control Blanket	MNDOT 3885
(MNDOT Type 3N (for 12 mo.) 4N (for 24 mo.))	
Fertilizer	MNDOT 3881
General Placement	MNDOT 2575

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

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

GRADING NOTES

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

13. Refer to the Geotechnical Report prepared at later date, for additional information on backfill material and groundwater conditions.

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

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

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

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

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

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

20. 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).

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

PAVING NOTES

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

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

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

26. Paving Sections

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

27. 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: 80 feet max.; Adjacent to building foundations and stoops.
c. Contraction Joints: Sidewalks - 8 to 10 feet; Curbs and Aprons - 12 to 15 feet.

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

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

30. Adjust all structure rims to match pavement elevations.

31. Transition from B412 curb & gutter to Ribbon curb.

31a. Transition from B412 curb & gutter to D412 surmountable curb & gutter.

DRY CAST RETAINING WALL NOTES

32. Dry Cast Concrete Segmental Retaining Wall. Color to be determined by Owner or Architect.

33. Provide structural design of retaining walls, following MNDOT Retaining Wall specifications for minimum design and performance. Provide construction of walls in accordance with approved design.

34. Confirm architectural requirements for wall units with owner.

35. Submit design to City for approval prior to Building Permit issuance.

36. Provide coordination and assurance that related work constructed within the reinforced earth zone; including fences, underground utilities, guard rails, etc.; is in accordance with approved design and does no damage to reinforcing elements of the retaining wall.

LEGEND

SYMBOL	DESCRIPTION	ESTIMATED QUANTITY
	:Inlet Protection	23 ea.
	:Silt Fence	1,584 ft.
	:Compost or Bio Log	249 ft.
	:Vehicle Tracking Pad	2 ea.
	:Pavement Sawcut	
T/W XXX.XX B/W XXX.XX	:Top of Wall :Bottom of Wall	
	:Tip Out Curb	

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NORTH

0 30 60

INFILTRATION BASIN INFORMATION & TESTING

37. 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.

38. The bottom of surface infiltration basins (not underground) shall be scarified to a depth of 12" prior to placement of topsoil or planting media.

39. DESIGN PERMEABILITY RATES:
Infiltration Basin 1P was designed with a permeability of 0.45 inches/hour.

40. TESTING:

a. Infiltration Basins: At the time of basin excavation, and prior to placement of any material (soil, chambers, etc.), permeability testing shall be performed.

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

c. Contractor shall contact Landform at 612-252-9070 or 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 1P needs a permeability of 0.9 inches/hour.

d. 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.

Civil Engineer: Steve Sabraski, ssabraski@landform.net, (612) 252-9070
Geotechnical Engineer: Paul Gionfriddo, ced.engineer@palarisami, (763) 504-5265
Nine Mile Creek Watershed: Zach Stafslien, permitting@ninemilecreek.org, (952) 204-9690
City of Bloomington: Mike Centinario, mcentinario@BloomingtonMN.gov, (952) 553-8921

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

Filtration/Infiltration Basin I.D.	Basin Area (s.f.)	No. of Tests Required
1P	11,218	4

42. Test results shall be provided to the Civil Engineer, Geotechnical Engineer, Nine Mile Creek Watershed & City of Bloomington.

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DEVELOPER

THE LUTHER COMPANY, LLLP.
3701 ALABAMA AVENUE SOUTH
ST. LOUIS PARK, MN
TEL (952)258-8800 - FAX (952) 258-8500

MUNICIPALITY

BLOOMINGTON

PROJECT

LUTHER BLOOMINGTON KIA

BLOOMINGTON, MN

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CITY RESUBMITTAL
09.09.2024

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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	C301LUT061.DWG
PROJECT NO.	LUT23061

GRADING, DRAINAGE, PAVING, & EROSION CONTROL

C3.1

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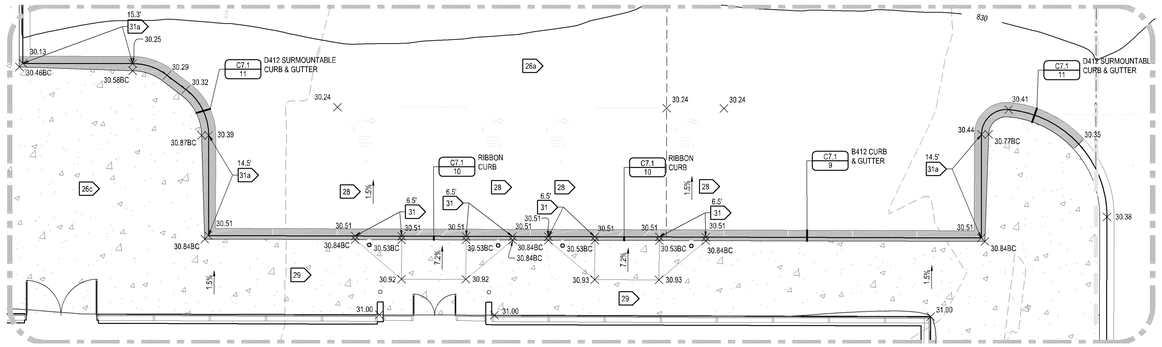

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ENLARGED PLAN

10 SCALE

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Seed	MNDOT 3876
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MN Type 21-112 @ 100 lb./ac. - Temporary Erosion Control - Temporary Erosion Control, Aug 1 - Oct 31	
MN Type (25-141 @ 59 lbs./ac. for General Roadside, 25-151 @ 120 lb./ac. for Residential Turf) - Permanent Turf	
	MNDOT 3882
Mulch	
(MNDOT Type 1 @ 2 ton/ac., Disc Anchored)	
Erosion Control Blanket	MNDOT 3885
(MNDOT Type 3N (for 12 mo.) 4N (for 24 mo.))	
Fertilizer	MNDOT 3881
General Placement	MNDOT 2575

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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
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DRY CAST RETAINING WALL NOTES

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34. Confirm architectural requirements for wall units with owner.

35. Submit design to City for approval prior to Building Permit issuance.

36. Provide coordination and assurance that related work constructed within the reinforced earth zone; including fences, underground utilities, guard rails, etc.; is in accordance with approved design and does no damage to reinforcing elements of the retaining wall.

LEGEND

SYMBOL	DESCRIPTION
	:Inlet Protection
	:Silt Fence
	:Compost or Bio Log
	:Vehicle Tracking Pad
	:Pavement Sawcut
T/W XXX.XX	:Top of Wall
B/W XXX.XX	:Bottom of Wall
	:Tip Out Curb

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NORTH
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DEVELOPER

THE LUTHER COMPANY, LLLP.
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MUNICIPALITY

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FILE NAME C301LUT061.DWG
PROJECT NO. LUT23061

GRADING, DRAINAGE, PAVING, & EROSION CONTROL-ENLARGED
C3.1A

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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 Construction Engineering Labratory

All components must be kept onsite, or electronically available onsite, by the Operator during regular work hours. The Operator shall contact Civil Engineer if they do not have all of the above documents.

SITE INFORMATION

Site location: Latitude: 44.857864, Longitude: -93.300865
Disturbed area = 5.83 ac.
Pre-construction impervious area within disturbed area = 4.79 ac.
Post-construction impervious area within disturbed area = 4.86 ac.
Net change in impervious area within disturbed area = 0.07 ac.

Type of stormwater management:
- Infiltration

Erosion prevention and sediment control quantities are on sheet 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 South
   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 Sabraski, P.E.
   Landform Professional Services
   105 South Fifth Avenue, Suite 513
   Minneapolis, MN 55401
   612-252-9070
   ssabraski@landform.net
   Certification: U of MN, Design of Construction SWPPP, Exp. May 31, 2025
5. SWPPP Inspector / Manager:
   To Be Determined. Contact Owner until Contractor And SWPPP Inspector / Manager is selected.
6. BMP Installation And Repair:
   To Be Determined. Contact Owner until BMP Installer And Maintainer is selected.
   Certification: , Exp.

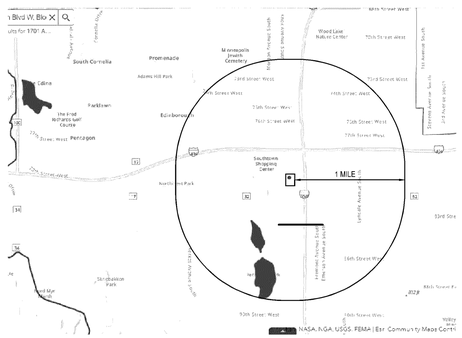
DESCRIPTION OF CONSTRUCTION ACTIVITY

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(s) 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. Perform work in phases to minimize disturbed area at any one time. Operator to develop phasing plan prior to start of work. Open work areas should be limited to those that can be managed and inspected within required time frames.
4. Strip topsoil from areas to be disturbed and stockpile with perimeter sediment control BMPs. Provide stabilization if stockpile is left longer than 14 days.
5. Rough grade site.
6. Install utilities.
7. Install small utilities (gas, electric, communications).
8. Final grade pavement areas and compact subgrade.
9. Lay down pavement aggregate and compact.
10. 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.
11. Construct building / addition and site features.
12. Construct site walks and patios.
13. Provide final stabilization.
14. Connect infiltration practices to storm sewer inlets.
15. Remove temporary BMPs and dispose of properly.

WATERS WITHIN ONE MILE OF SITE



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

1. Upper Penn Lake and Penn Lake are impaired based on the current USEPA 303(d) clean water act list; are within 1 mile of this site; and stormwater does not discharge to them. Impairments are for AQR.
   A. TMDLs have been established for this impaired water for Nutrients.
   B. This site will meet these TMDLs using the following methods: infiltration.

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.

   Perimeter sediment control measures must be in place prior to the placement of any stockpiles.

   Any erosion control netting shall be "wildlife friendly" and of a natural type that can decompose and shall have non-welded moveable joints.

   Any sediment control device made of soil must be stabilized within 24 hours.
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.

    Discharge shall be photographed at the beginning of discharge and at least every 24 hours afterward, while discharge is occurring.

    If nuisance conditions result from dewatering, dewatering shall be stopped until nuisance condition can be remedied.
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.

SURFACE WATER BUFFERS

1. There are no surface waters within or adjacent to the project boundary, therefore no buffers are required.

TEMPORARY SEDIMENTATION BASIN(S)

1. This project does not have more than ten (10) disturbed acres draining to a common location, therefore a temporary sediment basin is not required. Refer to sheet(s) C3.1 for further information.
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. Records of inspections shall include all maintenance activities and must be recorded within 24 hours of the inspection and retained with the SWPPP.
3. Inspections shall include stabilized areas, erosion prevention and sediment control BMPs, and infiltration areas. Additionally, areas adjacent to the project shall be inspected.
4. Surface waters on or adjacent to the site must be inspected for evidence of erosion or sediment deposition.
5. Permittees must record all inspection and maintenance activities within 24 hours of being conducted as detailed in the Permit.

   Inspection Records content shall include:
   A. Date and time of inspections;
   B. Name of persons conduction 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.
   H. All photographs of dewatering activities and documentation of nuisance conditions resulting from dewatering.
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.
   Any basin that has the water quality volume reduced by half shall be drained and have the sediment removed within 72 hours of discovery.
8. Any temporary or permanent sediment basin that has the water quality volume reduced by half shall be drained and have the sediment removed within 72 hours of discovery.

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 within seven (7) days to include additional requirements, such as additional or modified BMPs, designs to correct problems identified during inspections, 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.

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

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DEVELOPER

THE LUTHER COMPANY, LLLP.
3701 ALABAMA AVENUE SOUTH
ST. LOUIS PARK, MN
TEL (952)258-8800 - FAX (952) 258-8500

MUNICIPALITY

BLOOMINGTON

PROJECT

LUTHER BLOOMINGTON KIA

BLOOMINGTON, MN

ISSUE / REVISION HISTORY

CONTACT ENGINEER FOR ANY PRIOR HISTORY

DATE	ISSUE / REVISION	REVIEW
07 FEB 2024	DRC SUBMITTAL	SES
05 AUG 2024	CLIENT REVIEW	SES
14 AUG 2024	CITY SUBMITTAL	SES
09 SEP 2024	CITY RESUBMITTAL	SES

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CERTIFICATION

PRELIMINARY NOT FOR CONSTRUCTION

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CITY RESUBMITTAL
09.09.2024

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

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PROJECT NO. LUT23061

MN SWPPP NOTES

C3.2

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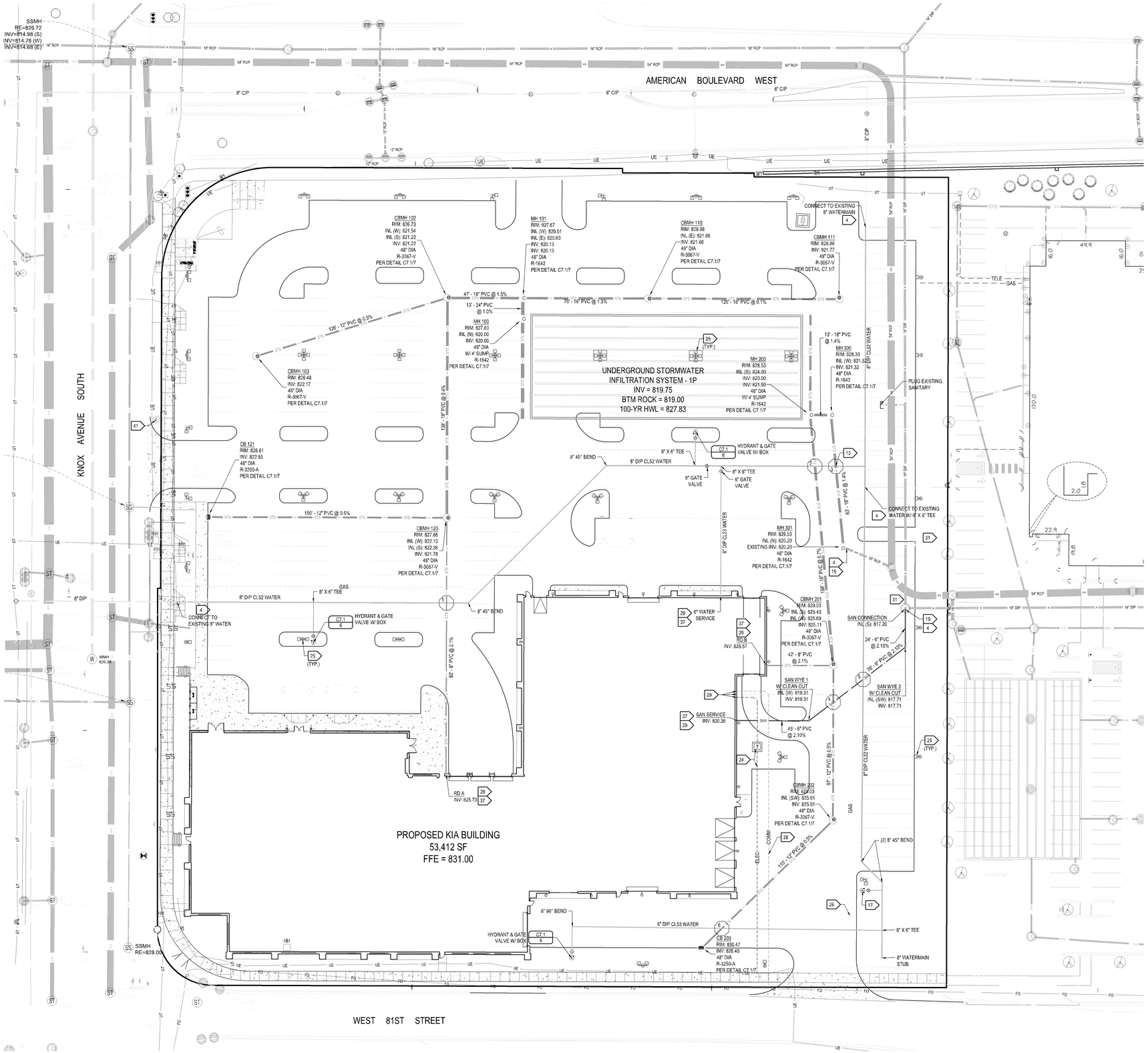

GENERAL NOTES

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

UTILITY NOTES

2. Pipe Materials

Watermain	DIP Class 52 (ANSI A21.51/AWWA C151)
Water Service	Copper Type K (ASTM B88)
Private Sanitary Sewer	PVC Schedule 40 (ASTM: D1785, D2665, F891, F1488 & F1760)
Storm Sewer	PVC Schedule 40 (ASTM: D1785, D2665, F891, F1488 & F1760) RCP 12"-18" Class 5 (ASTM C76) RCP 24"-48" Class 3 (ASTM C76) HDPE - Corrugated, Smooth Interior, Water Tight (ASTM D3350, ASTM D4976, ASTM F2306, AASHTO M252)
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.
5. Contractor to notify Engineer immediately if there is any discrepancy.
6. 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.
7. Provide means and measures to protect adjacent property from damage during utility installation.
8. Pipe lengths shown are from center of structure to center of structure or end of end section.
9. Install tracer wire with all non-conductive utilities in accordance with City of Bloomington Standards.
10. Connect to City utilities in accordance with City of Bloomington Standards.
11. Contact the City of Bloomington for wet tap inspection.
12. Maintain 8.0 feet of cover on water.
13. Deflect water to maintain 18-inch minimum outside separation at sewer crossings. Center pipe lengths to provide greatest separation between joints.
14. Contact City of Bloomington Utilities Department, at 952.563.8777 for flushing and pressure test inspections.
15. The water distribution system shall be disinfected per Minnesota Rules, Part 4714.
16. Provide 4-inch rigid foam (ASTM D1621) insulation on sanitary sewer less than 6 feet deep.
17. Proposed location of salvaged hydrant.
18. 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.
19. All joints and connections in the storm sewer and sanitary sewer system shall be gastight or water tight. Approved resilient rubber joints must be used to make watertight connections to manholes, catch basins, and other structures.
20. Catch basins in curb and gutter are sumped 2 inches below the gutter grade.
21. Rock media in infiltration or filtration systems shall be angular, non-calcareous rock.
22. 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.)
23. Coordinate with Private Utilities to provide electric, natural gas, and communications services to building.
24. 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.
25. See site lighting plan for additional information.
26. Xcel Energy will furnish and install gas service piping from the mainline to the meter and the meter. Gas service from the meter shall be installed by the Mechanical Contractor.
27. Provide one 2-inch PVC conduit with pull-string from existing telephone service to building.
28. Provide conduits for cable television and other electronic communication.
29. Coordinate with Mechanical, Plumbing, and Electrical Drawings for locations of service connections and continuation of services within building.
30. 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).
31. Adjust structures to final grade where disturbed. Comply with requirements of Utility. Meet requirements for traffic loading in paved areas.
32. Refer to the C3.1 sheet notes for infiltration requirements.
33. Combination fire and domestic services must be terminated with a thread on flange or an MJ to flange adapter.
34. Contractor shall obtain a Public Works permit for underground work within the right-of-way. The permit is required prior to removals or installation. Contact Utilities at (952) 563-4568 for permit information.
35. Utility permits are required for connection to the public storm, sanitary, and water system. Contact Utilities at (952) 563-8777 for permit information.
36. All components of the water system, up to the water meter or fire service equipment must utilize protective internal coatings meeting current ANSI/ AWWA standards for cement mortar lining or special coatings. The use of unlined or uncoated pipe is not allowed.
37. Utility and mechanical contractors must coordinate the installation of all water and sewer service pipes into the building to accommodate city inspection and testing.
38. A minimum 8 mil polywrap is required on all DIP.
39. Utility as-builts must be provided prior to issuance of Certificate of Occupancy.
40. 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.
41. Proposed location of salvaged electric manhole.

UTILITY CROSSINGS

1. Crossing 1
   Storm Sewer Inv. = 823.44
   Watermain Top = 821.02
   Clearance = 2.42'
2. Crossing 2
   Storm Sewer Inv. = 824.16
   Watermain Top = 821.04
   Clearance = 3.12'
3. Crossing 3
   Storm Sewer Inv. = 820.85
   Watermain Top = 820.79
   Clearance = 0.06'
   CONFLICT - LOWER WATERMAIN
4. Crossing 4
   Storm Sewer Inv. = 825.49
   Sanitary Sewer Top = 819.42
   Clearance = 6.07'
5. Crossing 5
   Watermain Inv. = 820.78
   Sanitary Sewer Top = 818.92
   Clearance = 1.86'
6. Crossing 6
   Storm Sewer Inv. = 826.37
   Watermain Top = 822.76
   Clearance = 3.61'

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) 258-8500

MUNICIPALITY

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LUTHER BLOOMINGTON KIA

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CITY RESUBMITTAL
09.09.2024

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	C401LUT061.DWG
PROJECT NO.	LUT23061

UTILITIES

C4.1

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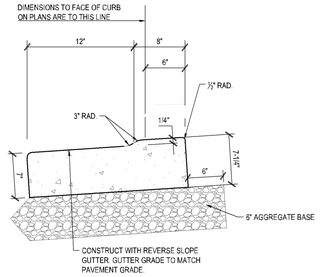
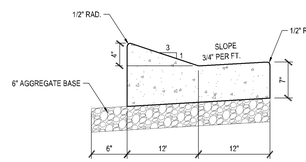


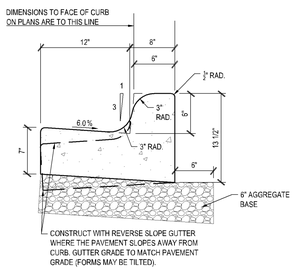
10 12" CONCRETE RIBBON CURB

NO SCALE



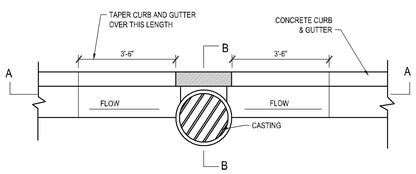
11 D412 SURMOUNTABLE CURB AND GUTTER

NO SCALE

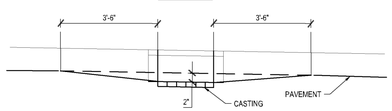


12 B612 CONCRETE CURB AND GUTTER

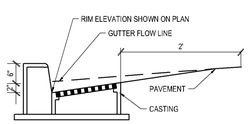
NO SCALE



PLAN VIEW



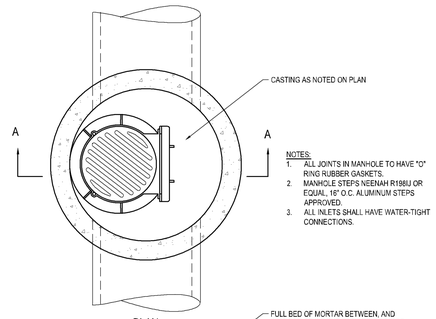
SECTION A-A



SECTION B-B

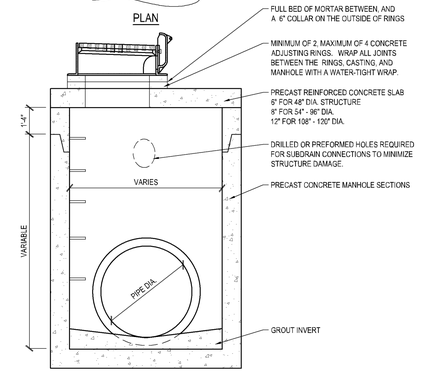
13 CATCH BASIN CASTING SUMP AT CONCRETE CURB AND GUTTER

NO SCALE



NOTES:
1. ALL JOINTS IN MANHOLE TO HAVE "O" RING RUBBER GASKETS.
2. MANHOLE STEPS NEENAH R1986U OR EQUAL, 16" O.C. ALUMINUM STEPS APPROVED.
3. ALL INLETS SHALL HAVE WATER-TIGHT CONNECTIONS.

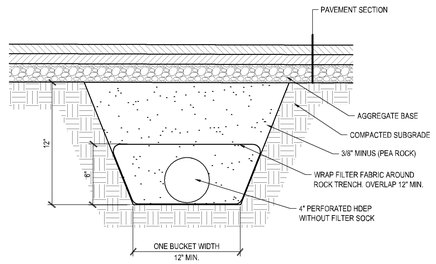
PLAN



SECTION A-A

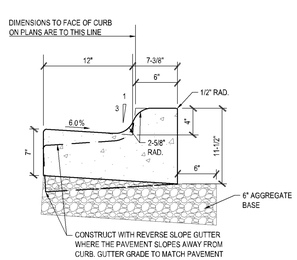
7 STORM SEWER CATCH BASIN MANHOLE

NO SCALE



8 PAVEMENT DRAIN TILE

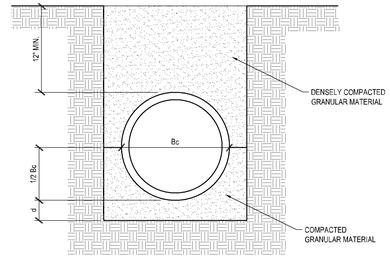
NO SCALE



9 B412 CONCRETE CURB AND GUTTER

NO SCALE

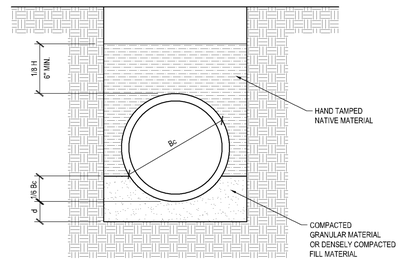
Bc = OUTSIDE DIAMETER
H = BACKFILL COVER ABOVE PIPE
d = DEPTH OF BEDDING MATERIAL UNDER PIPE



GRANULAR FOUNDATION
CLASS B (PVC & HDPE PIPE)

CLASS B BEDDING
THE PIPE IS BEDDED IN COMPACTED GRANULAR MATERIAL PLACED UP TO A HEIGHT EQUAL TO ONE-HALF THE OUTSIDE DIAMETER OF THE PIPE. THE DEPTH (d) OF THE GRANULAR BEDDING BELOW THE PIPE IS A MINIMUM OF 3" FOR 27" DIAMETER AND SMALLER PIPE, 6" FOR 68" DIAMETER AND LARGER PIPE, AND 4" FOR INTERMEDIATE SIZES. THE INITIAL FILL MATERIAL SHALL BE DENSELY COMPACTED GRANULAR UP TO A HEIGHT OF 12" OVER THE TOP OF THE PIPE.

Bc = OUTSIDE DIAMETER
H = BACKFILL COVER ABOVE PIPE
d = DEPTH OF BEDDING MATERIAL UNDER PIPE

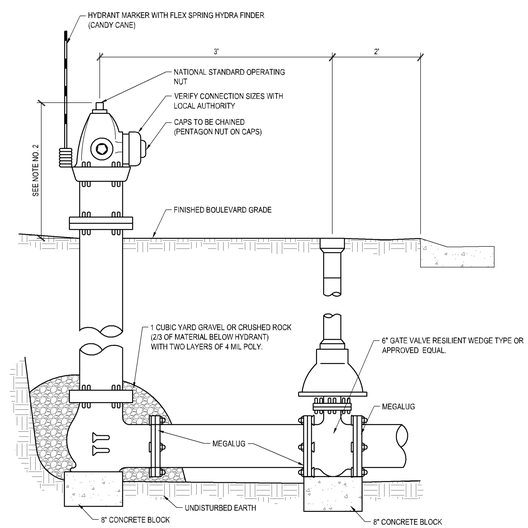


GRANULAR FOUNDATION
CLASS C (DIP & RCP)

CLASS C BEDDING
THE PIPE IS BEDDED IN COMPACTED GRANULAR MATERIAL, OR DENSELY COMPACTED FILL MATERIAL UP TO A HEIGHT EQUAL TO ONE-SIXTH THE OUTSIDE DIAMETER OF THE PIPE. THE DEPTH (d) OF THE BEDDING MATERIAL BELOW THE PIPE IS A MINIMUM OF 3" FOR 27" AND SMALLER PIPE, 6" FOR 68" DIAMETER AND LARGER PIPE, AND 4" FOR INTERMEDIATE SIZES. THE REMAINING SIDEFILL AND BACKFILL MATERIAL IS COMPACTED NATIVE SOILS.

5 PIPE BEDDING

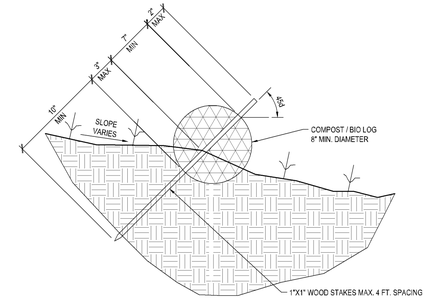
NO SCALE



NOTES:
1. FIRE HYDRANTS SHALL BE PAINTED RED AT THE FACTORY.
2. TOP OF FIRE HYDRANT - DESIGN ELEVATION SHALL BE 2.5' ABOVE FINISHED BOULEVARD GRADE.
3. THRUST BLOCKING MAY ALSO BE REQUIRED ON DEAD END LINES.
4. COVER ON WATERMAIN PER PLAN.
5. VERIFY BRAND AND MODEL OF HYDRANT WITH LOCAL AUTHORITY.

6 HYDRANT AND GATE VALVE WITH BOX

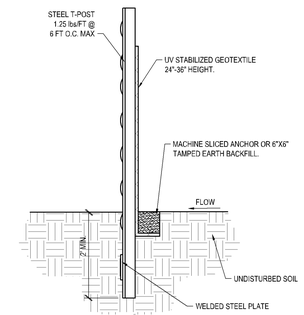
NO SCALE



MAINTAIN BY REMOVING SEDIMENT AND REPLACING DAMAGED LOGS UNTIL TURF IS ESTABLISHED. REMOVE AFTER PERMANENT STABILIZATION IS COMPLETE.

1 TEMPORARY COMPOST/BIO LOG

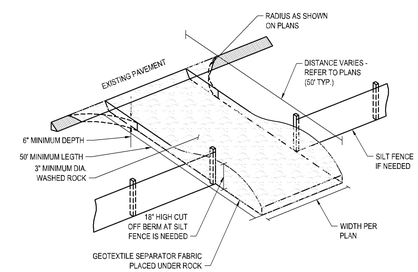
NO SCALE



NOTES:
1. DIG A 6" TRENCH ALONG THE INTENDED FENCE LINE OR USE MACHINE SLICED ANCHOR.
2. INSTALL ON CONTOUR AT CONSTANT ELEVATION.
3. DRIVE ALL POSTS INTO THE GROUND AT THE BACK SIDE OF THE TRENCH.
4. LAYOUT WIRE MESH AND SILT FENCE ON THE UPHILL SIDE ALONG THE FENCE LINE, AND BACK FILL.

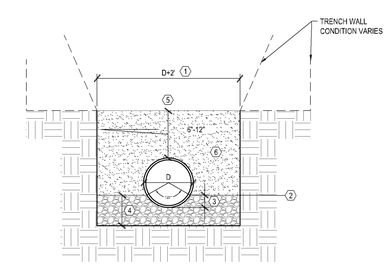
2 SILT FENCE

NO SCALE



3 VEHICLE TRACKING PAD

NO SCALE



1. 2' FOR PIPE 4" OR LESS.
2. MACHINE EXCAVATION LIMIT FOR RIGID PIPE.
3. HAND SHAPE BOTTOM FOR SUPPORT OF RIGID PIPE.
4. MACHINE EXCAVATION LIMIT FOR FLEXIBLE PIPE. GRANULAR FOUNDATION (IF REQUIRED), OR BEDDING REQUIRED FOR LOCAL CONDITIONS. DEPTH VARIES.
5. PROVIDE LOCATING/MARKING TAPE MEETING LOCAL REQUIREMENTS.
6. SEE DETAIL FOR BEDDING AND ENCASEMENT

4 UTILITY TRENCHING

NO SCALE

DEVELOPER

THE LUTHER COMPANY, LLLP.
3701 ALABAMA AVENUE SOUTH
ST. LOUIS PARK, MN
TEL (952)258-8600 - FAX (952) 258-8500

MUNICIPALITY

BLOOMINGTON

PROJECT

LUTHER BLOOMINGTON KIA

BLOOMINGTON, MN

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PL202400150
PL2024-150

CERTIFICATION

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CITY RESUBMITTAL
09.09.2024

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	C701LUT061.DWG
PROJECT NO.	LUT23061

CIVIL CONSTRUCTION DETAILS

C7.1

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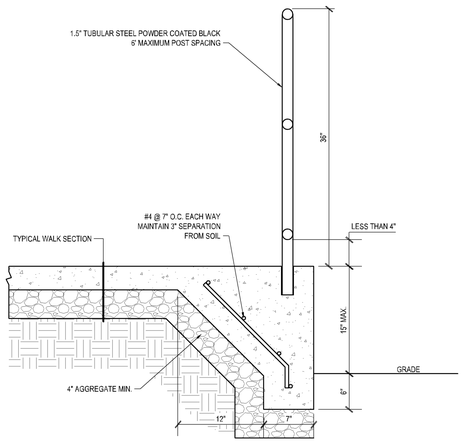
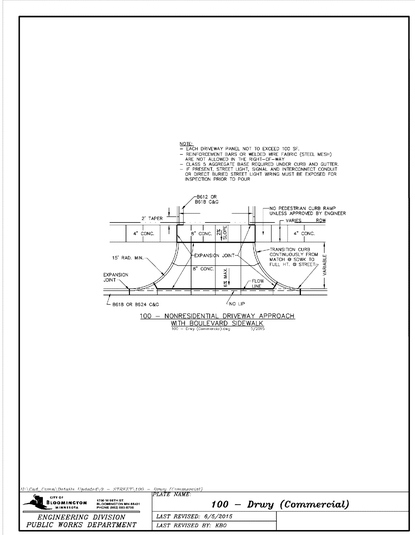


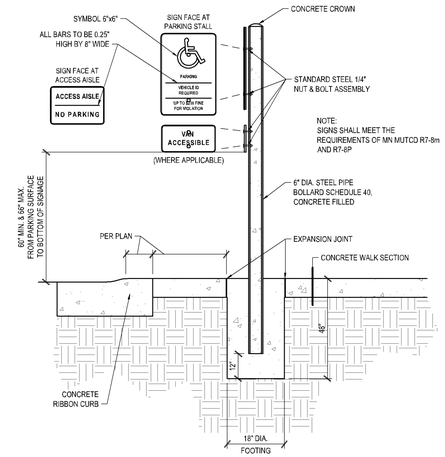
6 **RETAINING WALK WITH RAILING**

NO SCALE



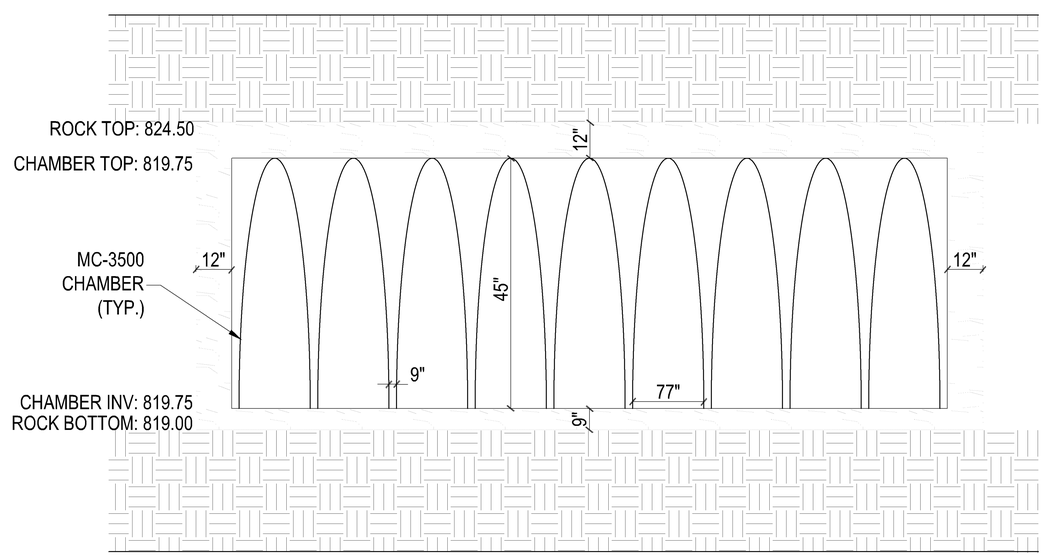
4 **COMMERCIAL DRIVEWAY CITY OF BLOOMINGTON**

NO SCALE



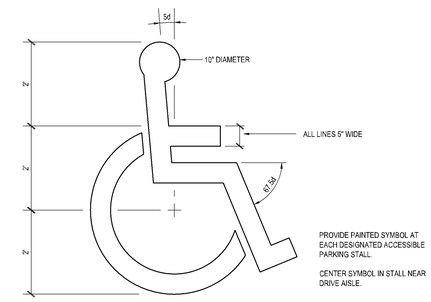
1 **PIPE BOLLARD/ACCESSIBLE SIGN - MN**

NO SCALE



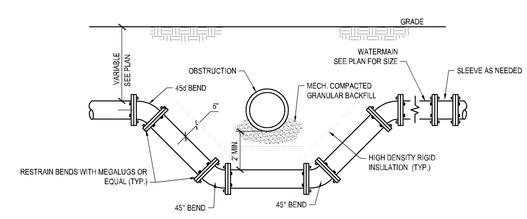
5 **UNDERGROUND INFILTRATION SYSTEM**

NO SCALE



2 **INTERNATIONAL SYMBOL OF ACCESS**

NO SCALE



1. USE MEGALUG THRUST RESTRAINTS ON ALL FITTINGS.
2. ON NEW CONSTRUCTION: RESTRAIN A MINIMUM OF TWO PIPE JOINTS (40 LF) LEFT AND RIGHT OF THE LOWERING.
3. ANTI CORROSIVE COATING REQUIRED ON ALL BOLT AND RESTRAINT ASSEMBLIES.
4. INSTALL POLYETHIELENE FILM WRAP AROUND ALL PIPE INCLUDED IN THE LOWERING.
5. INSULATION SHALL BE OF 1" OR 2" THICK BOARDS OF EXTRUDED OR EXPANDING POLYSTYRENE PLASTIC FOAM SPECIFICALLY DESIGNED FOR USE IN UNDERGROUND CONSTRUCTION AND HAVING A MINIMUM COMPRESSIVE STRENGTH OF 35 PSI. SPECIAL NOTE IS TO BE TAKEN THAT THIS TYPE IS DIFFERENT THAN THE TYPE USED IN ORDINARY BUILDING CONSTRUCTION. THE INSULATION BOARD SHALL COMPLY WITH ATSM-D 1621.

3 **WATERMAIN LOWERING WITH INSULATION**

NO SCALE

DEVELOPER

THE LUTHER COMPANY, LLLP.
3701 ALABAMA AVENUE SOUTH
ST. LOUIS PARK, MN
TEL (952)258-8600 - FAX (952) 258-8600

MUNICIPALITY

BLOOMINGTON

PROJECT

LUTHER BLOOMINGTON KIA

BLOOMINGTON, MN

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CITY RESUBMITTAL
09.09.2024

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	C702LUT061.DWG
PROJECT NO.	LUT23061

CIVIL CONSTRUCTION DETAILS
C7.2

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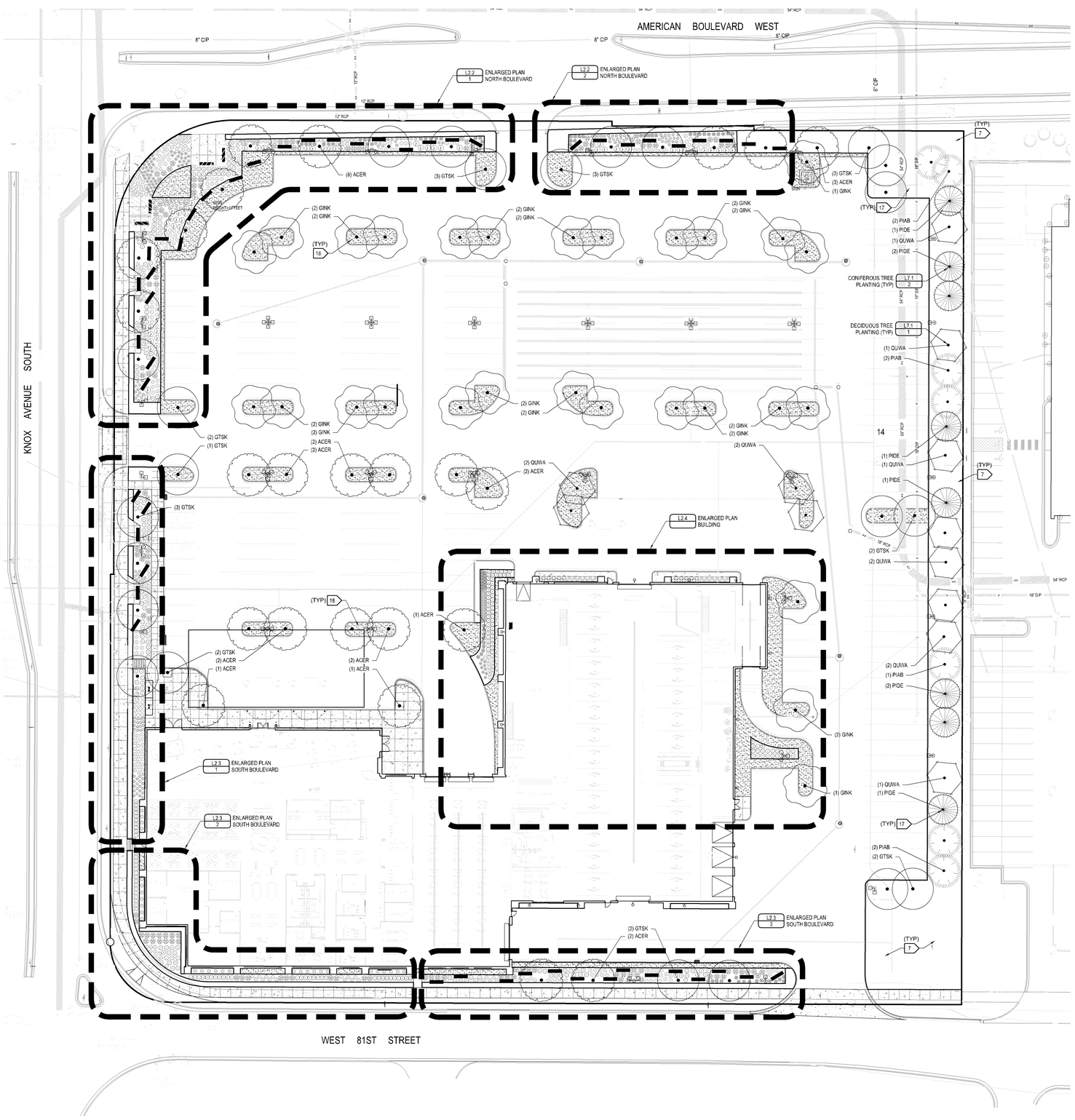

GENERAL NOTES

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. Reserved.
5. Reserved.
6. Reserved.
7. Import off site topsoil for all sod areas. Spread topsoil to a minimum depth of (4) inches over all proposed sod areas. Coordinate with grading contractor to ensure final design grades are met.
8. Repair any and all areas disturbed beyond the project area. Repair with sod if existing area is manicured turf. Repair with seed if existing area is unmowed or unmanicured grass. Rake area to be repaired and add topsoil as defined in Note 7 prior to final sod or seed repair.
9. Planting soil shall consist of 4 parts topsoil to 1 part peat humus, with 3 pounds of commercial fertilizer added per cubic yard. See planting details for depth of planting soil.
10. Place plants according to layout with proper nominal spacing. Plants shown on Plant Schedule are for this sheet only. For discrepancy between the number of plants on the Schedule and the number shown on the Drawing, the Drawing shall govern.
11. Plant material shall conform to the American Association of Nurserymen Standards and be of hardy stock, free from disease, infestation, damage, and disfigouration. The Landscape Architect or designated representative reserves the right to reject any/all plant material not meeting these standards at the Contractor's cost.
12. Any substitutions of plant genus, species and/or variety, or planting size shall be approved by Landscape Architect of record prior to purchase and installation.
13. Reserved.
14. Edge planting beds with 3-inch, $\frac{1}{8}$" thick, black, commercial grade steel edging (Sur-Loc or approved equal) except where adjacent to curbing, walks or buildings.
15. Install 4 inch depth of triple-shredded hardwood mulch in Shrub Bed Areas.
16. Install 2 to 3 inch depth of triple-shredded hardwood mulch in Perennial Bed Areas.
17. Install a 4-foot diameter triple-shredded hardwood mulch dish around trees not placed within a Shrub or Perennial Planting Bed. Edging is not required.
18. Install 2 to 3 inch (nominal size) grey trap rock to a depth of 4 inches in all planting beds unless noted otherwise. Landscape fabric shall be installed under all areas of rock mulch. Secure all edges and seams of fabric with 6-inch landscape staples.
19. All existing deciduous/coniferous trees are to be trimmed of dead wood and pruned to a natural uniform shape.
20. Irrigation is 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.
21. All plant material shall have a 1-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.

PLANT SCHEDULE - TREE PLAN

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	MATURE SIZE	PLANTING SIZE	ROOT CONDITION
DECIDUOUS TREES						
	ACER	24	Acer rubrum 'Franksred' / Red Sunset® Maple	40`H x 30`W	2.5" CAL.	B & B
	GINK	28	Ginkgo biloba `Princeton Sentry` / Princeton Sentry Ginkgo	40`H x 30`W	2.5"Cal	B & B
	GTSK	23	Gleditsia triacanthos `Skyline` / Skyline Honeylocust	40`H x 30`W	2.5"Cal	B & B
	QUWA	12	Quercus x warei `Regal Prince` / Regal Prince Oak	50`H x 25`W	2.5" CAL.	B & B
EVERGREEN TREES						
	PIAB	7	Picea abies / Norway Spruce	50`H x 30`W	6` Ht.	B & B
	PIDE	8	Picea glauca `Densata` / Black Hills Spruce	45`H x 20`W	8` HT	B & B

LEGEND

Sod area

Rock mulch

PL202400150
PL2024-150

DEVELOPER

THE LUTHER COMPANY, LLLP.
3701 ALABAMA AVENUE SOUTH
ST. LOUIS PARK, MN
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MUNICIPALITY

BLOOMINGTON

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LUTHER BLOOMINGTON KIA

BLOOMINGTON, MN

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Minneapolis, MN 55401

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

FILE NAME	L201LUT061.DWG
PROJECT NO.	LUT23061

TREE PLAN

L2.1

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

NORTH

0 30 60

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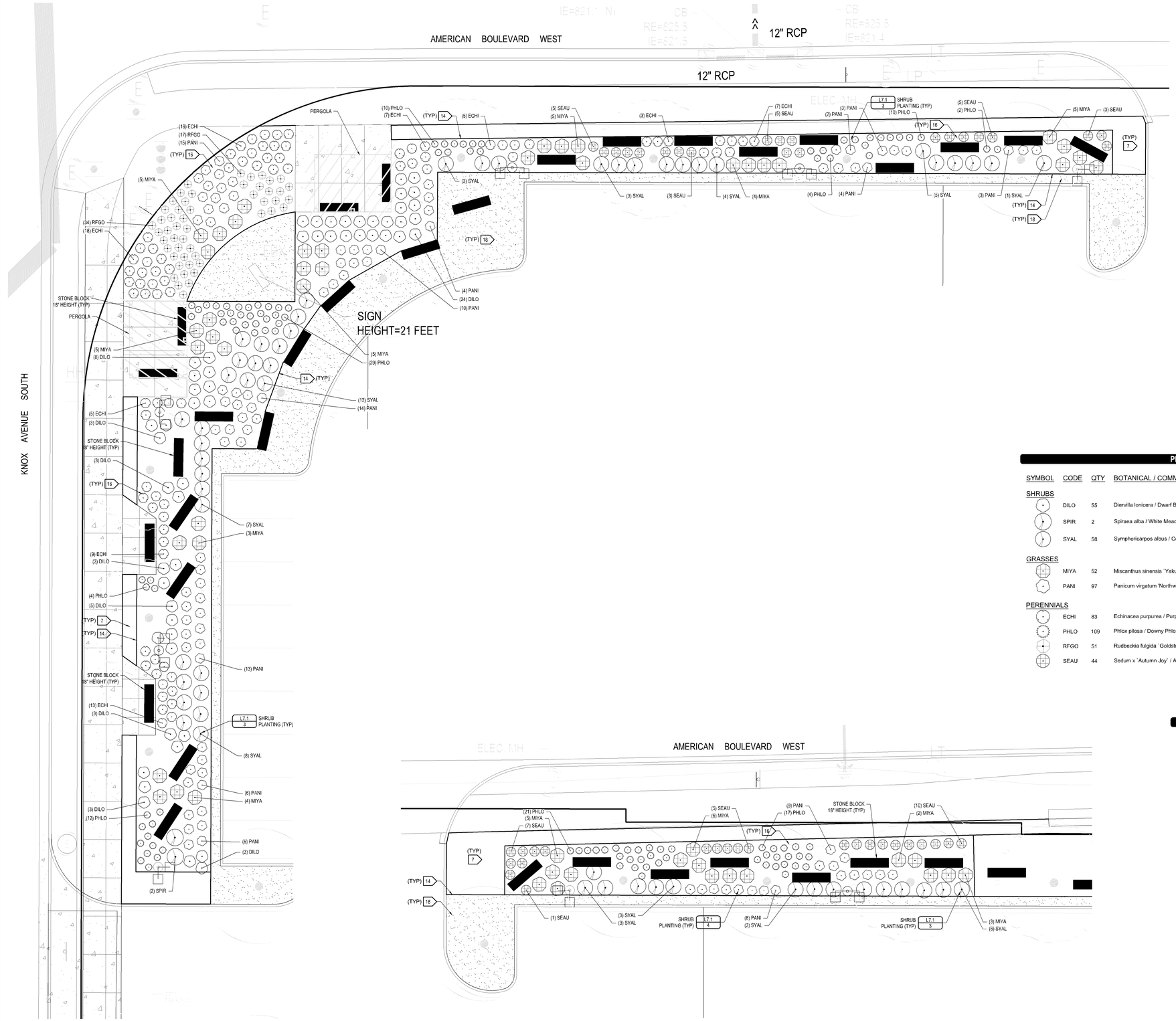

1 ENLARGED PLAN
NORTH BOULEVARD

2 ENLARGED PLAN
NORTH BOULEVARD

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LANDSCAPE NOTES

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PLANT SCHEDULE - NORTH BOULEVARD

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	MATURE SIZE	PLANTING SIZE	ROOT CONDITION
SHRUBS						
	DILO	55	Diervilla lonicera / Dwarf Bush Honeysuckle	4`H x 3`W	#3 Cont.	POT
	SPIR	2	Spiraea alba / White Meadowsweet	4`H x 4`W	2 GAL.	POT
	SYAL	58	Symphoricarpos albus / Common White Snowberry	4`H x 4`W	2 GAL.	POT
GRASSES						
	MIYA	52	Miscanthus sinensis `Yaku Jima` / Yaku Jima Dwarf Maiden Grass	4`H x 4`W	1 GAL.	POT
	PANI	97	Panicum virgatum 'Northwind' / Northwind Switch Grass	4`H x 2`W	1 GAL.	POT
PERENNIALS						
	ECHI	83	Echinacea purpurea / Purple Coneflower	3`H x 3`W	1 GAL.	POT
	PHLO	109	Phlox pilosa / Downy Phlox	2`H x 2`W	1 GAL.	POT
	RFGO	51	Rudbeckia fulgida `Goldstrum` / Black Eyed Susan	3`H x 2`W	1 GAL.	POT
	SEAU	44	Sedum x `Autumn Joy` / Autumn Joy Sedum	3`H x 2`W	1 GAL.	POT

LEGEND

Sod area

Rock mulch

Know what's Below. Call before you dig.

NORTH

0 10 20

DEVELOPER

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ST. LOUIS PARK, MN
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09.09.2024

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From Site to Finish

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Suite 513
Minneapolis, MN 55401

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

FILE NAME L201LUT061.DWG

PROJECT NO. LUT23061

LANDSCAPE PLAN
NORTH BOULEVARD
L2.2

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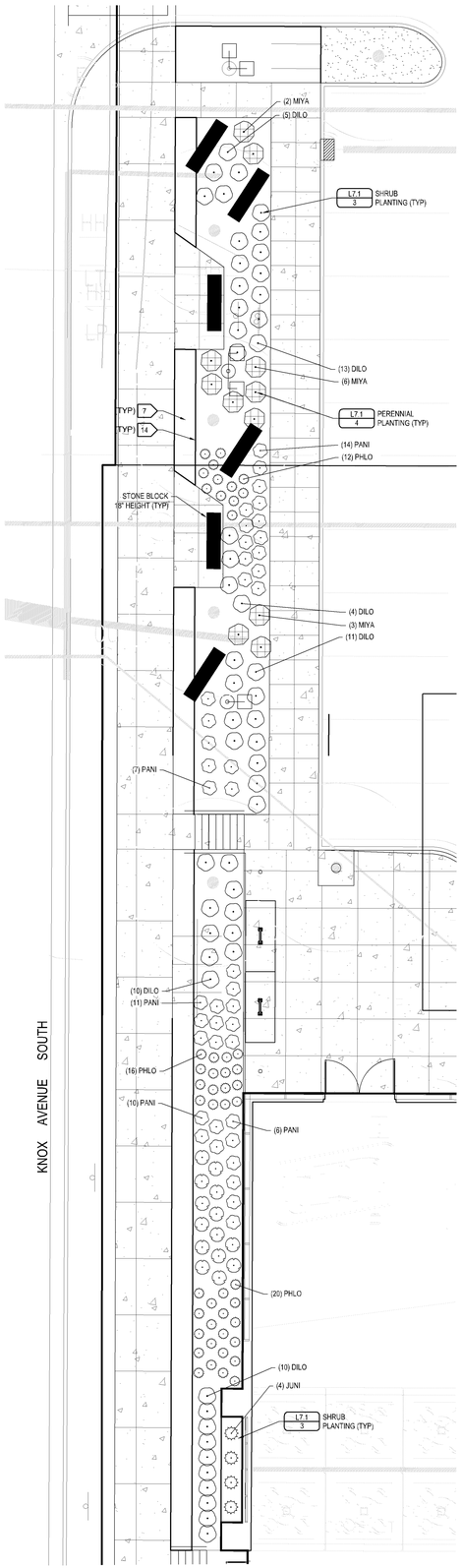
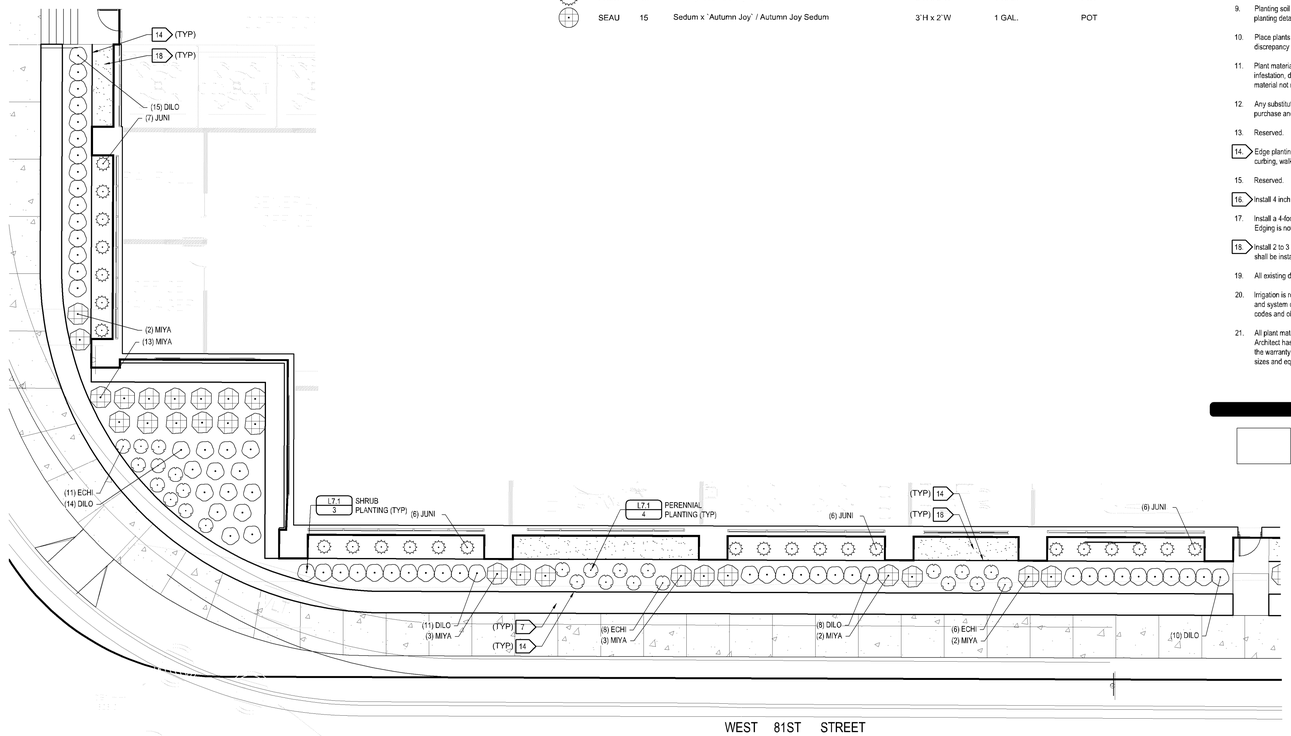
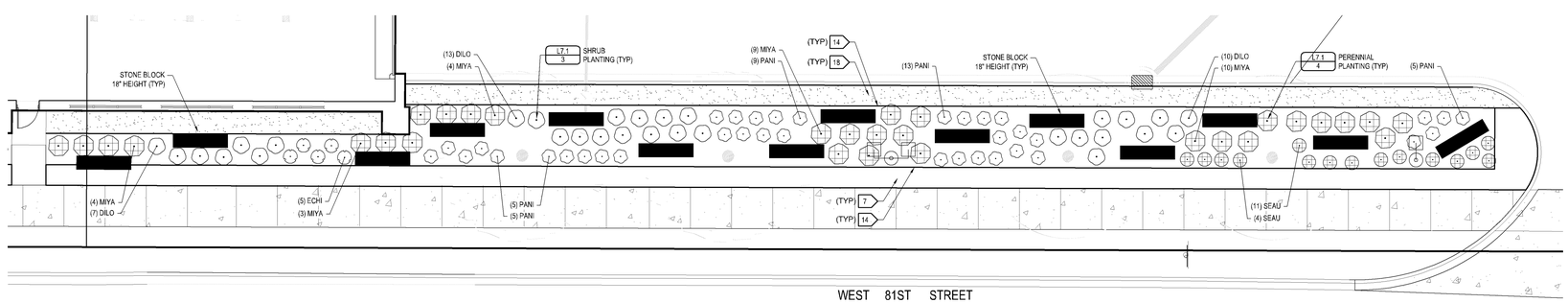


1 ENLARGED PLAN
SOUTH BOULEVARD



2 ENLARGED PLAN
SOUTH BOULEVARD



3 ENLAGED PLAN
SOUTH BOULEVARD

PLANT SCHEDULE - NORTH BOULEVARD

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	MATURE SIZE	PLANTING SIZE	ROOT CONDITION
SHRUBS						
	DILO	141	Diervilla lonicera / Dwarf Bush Honeysuckle	4`H x 3`W	#3 Cont.	POT
	JUNI	29	Juniperus scopulorum 'Blue Arrow' / Blue Arrow Juniper	12'H x 2'W	3 GAL.	POT
GRASSES						
	MIYA	66	Miscanthus sinensis `Yaku Jima` / Yaku Jima Dwarf Maiden Grass	4`H x 4`W	1 GAL.	POT
	PANI	79	Panicum virgatum 'Northwind' / Northwind Switch Grass	4`H x 2`W	1 GAL.	POT
PERENNIALS						
	ECHI	44	Echinacea purpurea / Purple Coneflower	3`H x 3`W	1 GAL.	POT
	PHLO	48	Phlox pilosa / Downy Phlox	2`H x 2`W	1 GAL.	POT
	SEAU	15	Sedum x `Autumn Joy` / Autumn Joy Sedum	3`H x 2`W	1 GAL.	POT

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. Reserved.
5. Reserved.
6. Reserved.
7. Import off site topsoil for all sod areas. Spread topsoil to a minimum depth of (4) inches over all proposed sod areas. Coordinate with grading contractor to ensure final design grades are met.
8. Repair any and all areas disturbed beyond the project area. Repair with sod if existing area is manicured turf. Repair with seed if existing area is unmowed or unmanicured grass. Rake area to be repaired and add topsoil as defined in Note 7 prior to final sod or seed repair.
9. Planting soil shall consist of 4 parts topsoil to 1 part peat humus, with 3 pounds of commercial fertilizer added per cubic yard. See planting details for depth of planting soil.
10. Place plants according to layout with proper nominal spacing. Plants shown on Plant Schedule are for this sheet only. For discrepancy between the number of plants on the Schedule and the number shown on the Drawing, the Drawing shall govern.
11. Plant material shall conform to the American Association of Nurserymen Standards and be of hardy stock, free from disease, infestation, damage, and disfiguration. The Landscape Architect or designated representative reserves the right to reject any/all plant material not meeting these standards at the Contractor's cost.
12. Any substitutions of plant genus, species and/or variety, or planting size shall be approved by Landscape Architect of record prior to purchase and installation.
13. Reserved.
14. Edge planting beds with 3-inch, $\frac{1}{8}$" thick, black, commercial grade steel edging (Sur-Loc or approved equal) except where adjacent to curbing, walks or buildings.
15. Reserved.
16. Install 4 inch depth of triple-shredded hardwood mulch in planting bed areas.
17. Install a 4-foot diameter triple-shredded hardwood mulch dish around trees not placed within a Shrub or Perennial Planting Bed. Edging is not required.
18. Install 2 to 3 inch (nominal size) grey trap rock to a depth of 4 inches in all planting beds unless noted otherwise. Landscape fabric shall be installed under all areas of rock mulch. Secure all edges and seams of fabric with 6-inch landscape staples.
19. All existing deciduous/coniferous trees are to be trimmed of dead wood and pruned to a natural uniform shape.
20. Irrigation is 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.
21. All plant material shall have a 1-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.

LEGEND

Sod area

Rock mulch

DEVELOPER

THE LUTHER COMPANY, LLLP.
3701 ALABAMA AVENUE SOUTH
ST. LOUIS PARK, MN
TEL (952)258-8600 - FAX (952) 258-8600

MUNICIPALITY

BLOOMINGTON

PROJECT

LUTHER BLOOMINGTON KIA

BLOOMINGTON, MN

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LANDSCAPE PLAN
SOUTH BOULEVARD
L2.3

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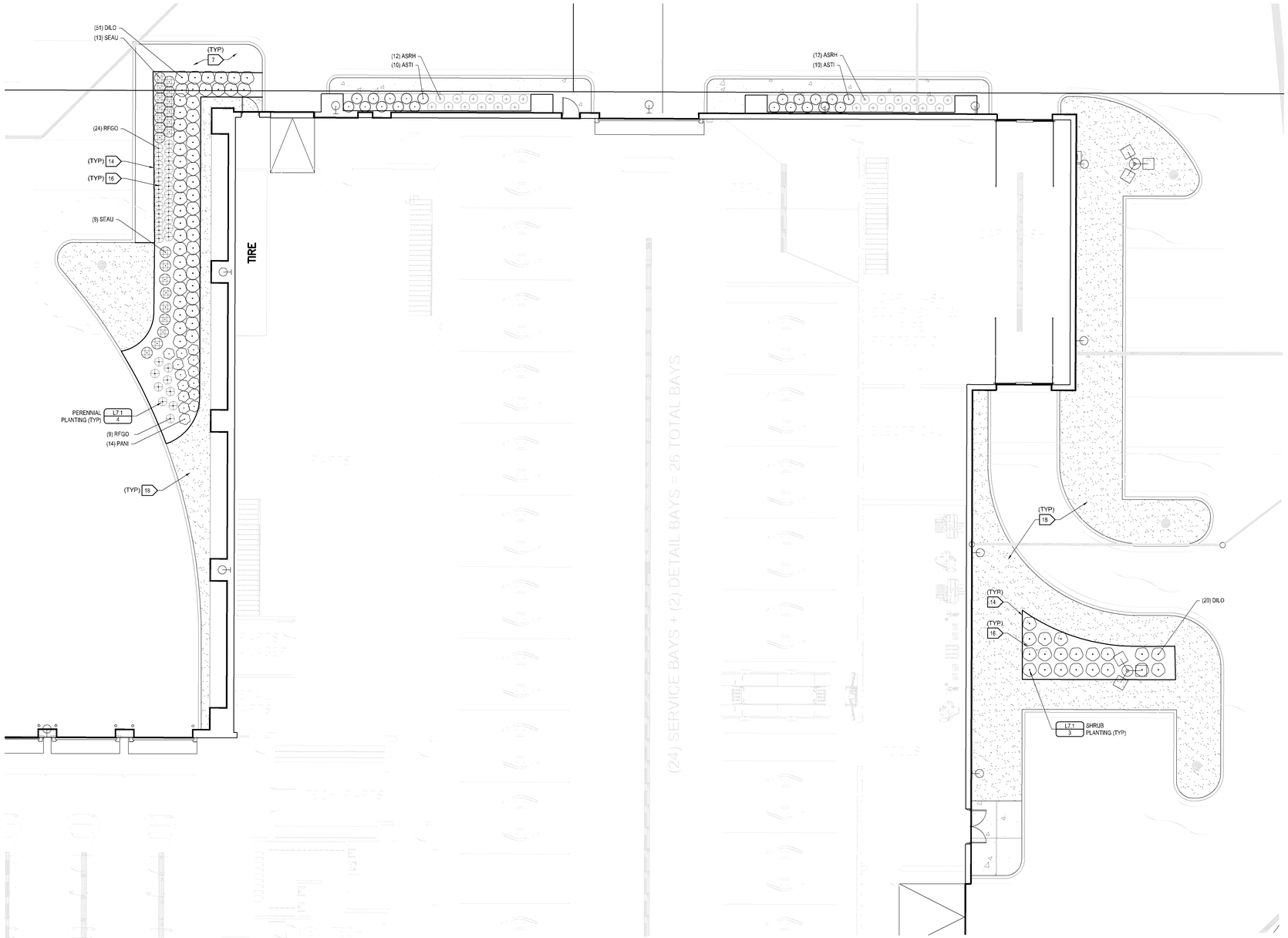
PLANT SCHEDULE - BUILDING

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	MATURE SIZE	PLANTING SIZE	ROOT CONDITION
SHRUBS						
	DILO	71	Diervilla lonicera / Dwarf Bush Honeysuckle	4`H x 3`W	#3 Cont.	POT
GRASSES						
	PANI	14	Panicum virgatum 'Northwind' / Northwind Switch Grass	4`H x 2`W	1 GAL.	POT
PERENNIALS						
	ASTI	20	Astilbe x arendsii `Deutschland` / Deutschland False Spiraea	2`H x 2`W	1 GAL.	POT
	ASRH	24	Astilbe x arendsii `Rheinland` / Rhineland False Spiraea	2`H x 2`W	1 GAL.	POT
	RFGO	33	Rudbeckia fulgida `Goldstrum` / Black Eyed Susan	3`H x 2`W	1 GAL.	POT
	SEAU	22	Sedum x `Autumn Joy` / Autumn Joy Sedum	3`H x 2`W	1 GAL.	POT



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MUNICIPALITY

BLOOMINGTON

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LUTHER BLOOMINGTON KIA

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LANDSCAPE PLAN
BUILDING
L2.4

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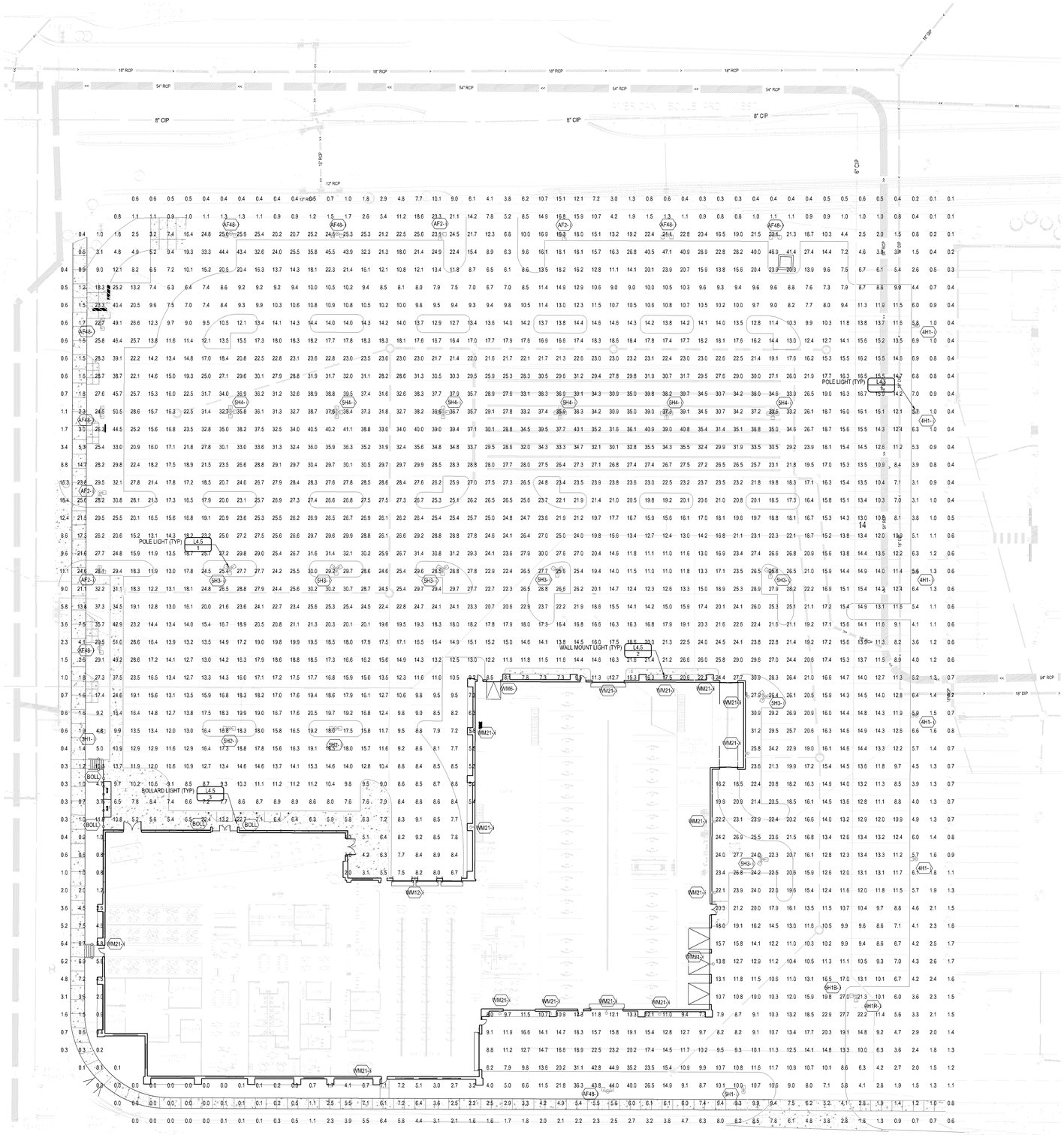

GENERAL NOTES

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 light pole base.
4. Calculations based on LSI lighting fixtures. Any substitutions need to meet city code requirements.

   Existing light pole and luminaire.

   All existing light poles shall be replaced with bronze poles. All proposed light poles shall be bronze.
7. Quantities shown are for this sheet only.

BLOOMINGTON CODE REQUIREMENTS

33' - maximum pole height
10:1 - maximin uniformity ratio (50% reduction for perimeter 25')
2.0 fc - minimum foot candles (pavement surface)
2.0 fc - maximum foot candles (at property line)
16.0 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)

LEGEND

EEE — Luminaire callout

LUMINAIRE SCHEDULE

CALLOUT	SYMBOL	QUANTITY	MOUNTING	MODEL	MOUNTING HEIGHT
3H1- M		1	POLE	LSI INDUSTRIES, INC., MRM-LED-48L-SIL-3-50-70CRI-IL	25'
4H1- M		5	POLE	LSI INDUSTRIES, INC., MRM-LED-48L-SIL-4-50-70CRI-IL	25'
4H1R- M		1	POLE	LSI INDUSTRIES, INC., MRM-LED-48L-SIL-RC-50-70CRI	25'
5H1B- M		1	POLE	LSI INDUSTRIES, INC., MRM-LED-36L-SIL-5W-50-70CRI	25'
5H1- M		1	POLE	LSI INDUSTRIES, INC., MRM-LED-48L-SIL-5W-50-70CRI	25'
5H2- M		2	POLE	LSI INDUSTRIES, INC., MRM-LED-48L-SIL-5W-50-70CRI	25'
5H3- M		7	POLE	LSI INDUSTRIES, INC., MRM-LED-48L-SIL-5W-50-70CRI	25'
5H4- M		6	POLE	LSI INDUSTRIES, INC., MRM-LED-48L-SIL-5W-50-70CRI	25'
AF2- M		4	POLE	LSI INDUSTRIES, INC., MRM-LED-48L-SIL-FTA-50-70CRI-IL	25'
AF4B- M		16	POLE	LSI INDUSTRIES, INC., MRM-LED-48L-SIL-FTA-50-70CRI-IL	25'
BOLL-M		4	POLE	LSI INDUSTRIES, INC., MRB-LED-30L-ACR-S-50-HSS	3'-6"
WM6- M		1	WALL	LSI INDUSTRIES, INC., XWM-I-LED-06L-50	18'

DEVELOPER

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MUNICIPALITY

BLOOMINGTON

PROJECT

LUTHER BLOOMINGTON KIA

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PHOTOMETRICS
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LEGEND

Calculation Area Boundary

EEE — Luminaire callout

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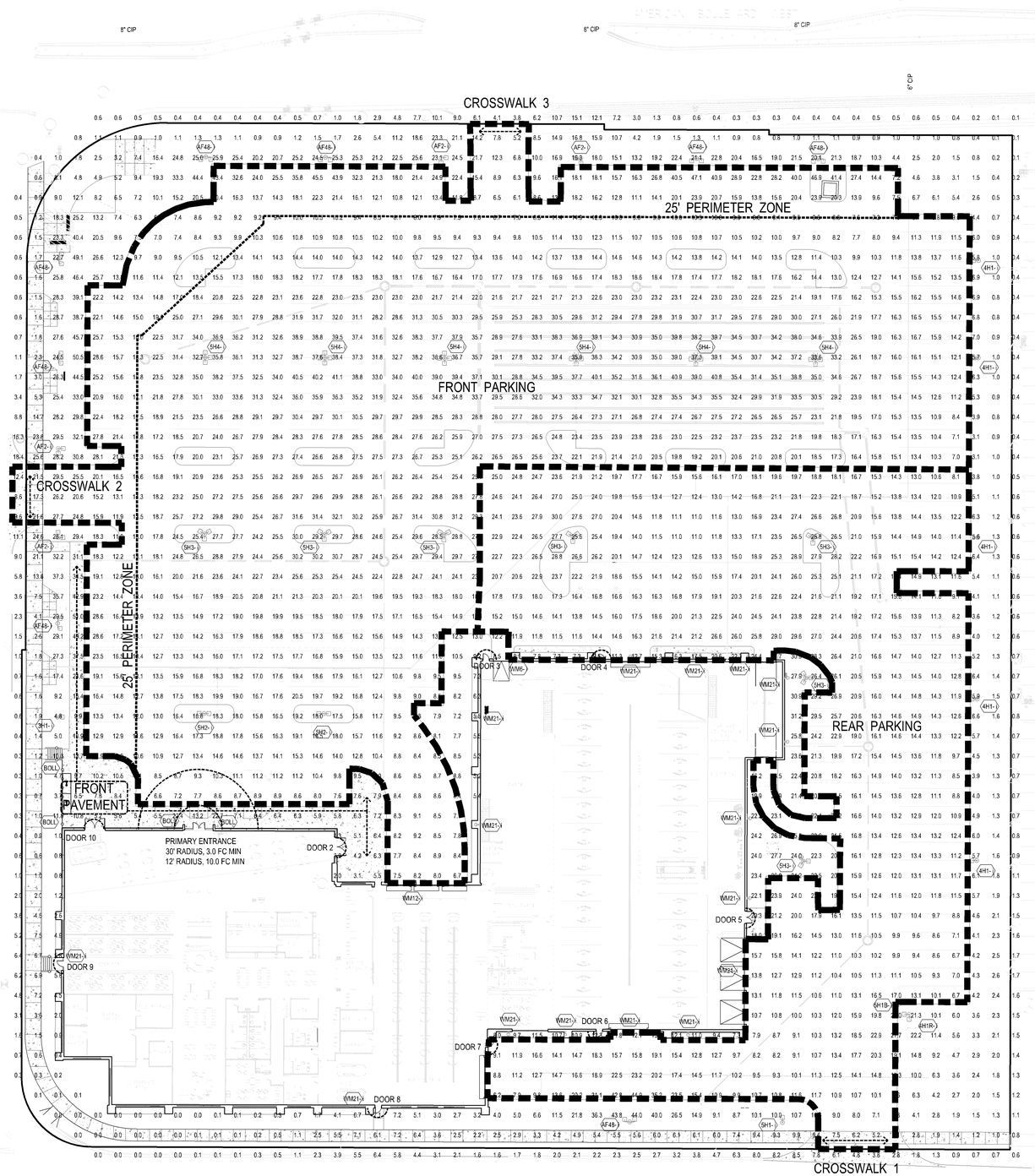

CALCULATIONS

EAST PROPERTY LINE

AVERAGE FOOT-CANDLES	0.85
MAXIMUM FOOT-CANDLES	1.9
MINIMUM FOOT-CANDLES	0.1
MINIMUM TO MAXIMUM FC RATIO	0.05
MAXIMUM TO MINIMUM FC RATIO	21.3
AVERAGE TO MINIMUM FC RATIO	9.65

MAIN ENTRANCE 12' RADIUS

AVERAGE FOOT-CANDLES	18.13
MAXIMUM FOOT-CANDLES	20.8
MINIMUM FOOT-CANDLES	13.5
MAXIMUM TO MINIMUM FC RATIO	1.55
AVERAGE TO MINIMUM FC RATIO	1.35

25' PERIMETER ZONE

AVERAGE FOOT-CANDLES	17.52
MAXIMUM FOOT-CANDLES	43.1
MINIMUM FOOT-CANDLES	6
MAXIMUM TO MINIMUM FC RATIO	7.13
AVERAGE TO MINIMUM FC RATIO	2.9

FRONT PAVEMENT

AVERAGE FOOT-CANDLES	15.22
MAXIMUM FOOT-CANDLES	46.9
MINIMUM FOOT-CANDLES	2.3
MAXIMUM TO MINIMUM FC RATIO	20.14
AVERAGE TO MINIMUM FC RATIO	6.54

REAR PARKING

AVERAGE FOOT-CANDLES	16.41
MAXIMUM FOOT-CANDLES	35.4
MINIMUM FOOT-CANDLES	4
MAXIMUM TO MINIMUM FC RATIO	8.83
AVERAGE TO MINIMUM FC RATIO	4.1

FRONT PARKING

AVERAGE FOOT-CANDLES	20.63
MAXIMUM FOOT-CANDLES	40.5
MINIMUM FOOT-CANDLES	4.3
MAXIMUM TO MINIMUM FC RATIO	9.35
AVERAGE TO MINIMUM FC RATIO	4.76

PRIMARY ENTRANCE

AVERAGE FOOT-CANDLES	10.1
MAXIMUM FOOT-CANDLES	21.1
MINIMUM FOOT-CANDLES	5.2
MAXIMUM TO MINIMUM FC RATIO	4.05
AVERAGE TO MINIMUM FC RATIO	1.93

DOOR 2

AVERAGE FOOT-CANDLES	3.6
MAXIMUM FOOT-CANDLES	3.6
MINIMUM FOOT-CANDLES	3.6
MAXIMUM TO MINIMUM FC RATIO	1
AVERAGE TO MINIMUM FC RATIO	1

DOOR 3

AVERAGE FOOT-CANDLES	8.2
MAXIMUM FOOT-CANDLES	8.2
MINIMUM FOOT-CANDLES	8.2
MAXIMUM TO MINIMUM FC RATIO	1
AVERAGE TO MINIMUM FC RATIO	1

DOOR 4

AVERAGE FOOT-CANDLES	10.47
MAXIMUM FOOT-CANDLES	10.5
MINIMUM FOOT-CANDLES	10.5
MAXIMUM TO MINIMUM FC RATIO	1
AVERAGE TO MINIMUM FC RATIO	1

DOOR 5

AVERAGE FOOT-CANDLES	16.4
MAXIMUM FOOT-CANDLES	16.4
MINIMUM FOOT-CANDLES	16.4
MAXIMUM TO MINIMUM FC RATIO	1
AVERAGE TO MINIMUM FC RATIO	1

DOOR 6

AVERAGE FOOT-CANDLES	11.61
MAXIMUM FOOT-CANDLES	11.6
MINIMUM FOOT-CANDLES	11.6
MAXIMUM TO MINIMUM FC RATIO	1
AVERAGE TO MINIMUM FC RATIO	1

DOOR 7

AVERAGE FOOT-CANDLES	9.91
MAXIMUM FOOT-CANDLES	9.9
MINIMUM FOOT-CANDLES	9.9
MAXIMUM TO MINIMUM FC RATIO	1
AVERAGE TO MINIMUM FC RATIO	1

DOOR 8

AVERAGE FOOT-CANDLES	6.89
MAXIMUM FOOT-CANDLES	6.9
MINIMUM FOOT-CANDLES	6.9
MAXIMUM TO MINIMUM FC RATIO	1
AVERAGE TO MINIMUM FC RATIO	1

DOOR 9

AVERAGE FOOT-CANDLES	6.58
MAXIMUM FOOT-CANDLES	6.6
MINIMUM FOOT-CANDLES	6.6
MAXIMUM TO MINIMUM FC RATIO	1
AVERAGE TO MINIMUM FC RATIO	1

DOOR 10

AVERAGE FOOT-CANDLES	3.99
MAXIMUM FOOT-CANDLES	4
MINIMUM FOOT-CANDLES	4
MAXIMUM TO MINIMUM FC RATIO	1
AVERAGE TO MINIMUM FC RATIO	1

CROSSWALK 1

AVERAGE FOOT-CANDLES	6.63
MAXIMUM FOOT-CANDLES	9.8
MINIMUM FOOT-CANDLES	4
MINIMUM TO MAXIMUM FC RATIO	0.4
MAXIMUM TO MINIMUM FC RATIO	2.47
AVERAGE TO MINIMUM FC RATIO	1.68

CROSSWALK 2

AVERAGE FOOT-CANDLES	19.25
MAXIMUM FOOT-CANDLES	22.5
MINIMUM FOOT-CANDLES	16.7
MINIMUM TO MAXIMUM FC RATIO	0.74
MAXIMUM TO MINIMUM FC RATIO	1.35
AVERAGE TO MINIMUM FC RATIO	1.15

CROSSWALK 3

AVERAGE FOOT-CANDLES	6.54
MAXIMUM FOOT-CANDLES	8.9
MINIMUM FOOT-CANDLES	4.8
MINIMUM TO MAXIMUM FC RATIO	0.54
MAXIMUM TO MINIMUM FC RATIO	1.84
AVERAGE TO MINIMUM FC RATIO	1.35

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INITIAL VALUES CALCULATIONS

L4.2

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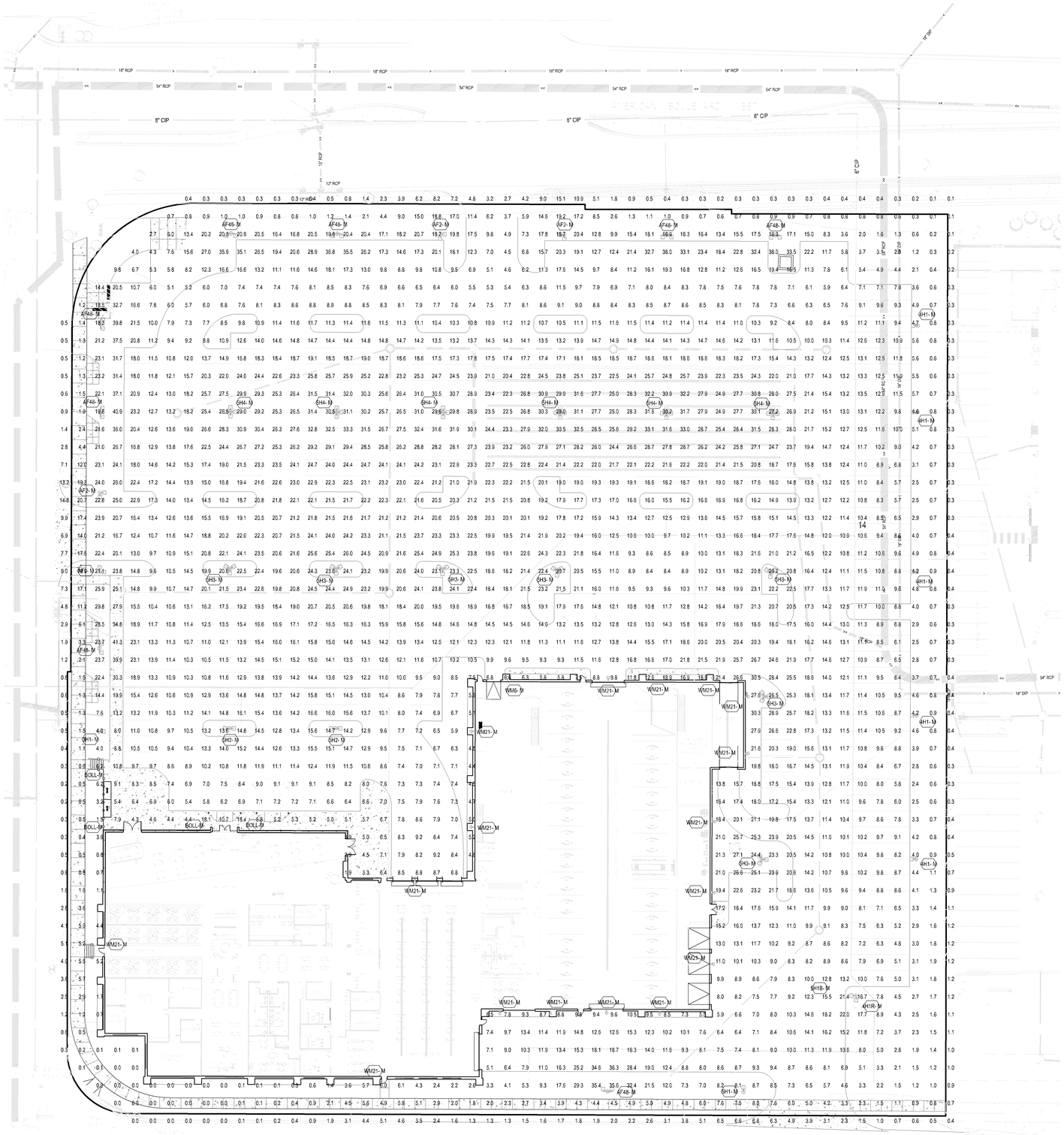

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1. Coordinate with electrical contractor to provide conduits for site lighting.
2. Light pole base shall be designed and provided by others. All bases in green space shall be eight (8") inch height. All bases in pavement shall be thirty-six (36") inch height.
3. Mounting height listed in luminaire schedule includes height of light pole base.
4. Calculations based on LSI lighting fixtures. Any substitutions need to meet city code requirements.

   Existing light pole and luminaire.

   All existing light poles shall be replaced with bronze poles. All proposed light poles shall be bronze.
7. Quantities shown are for this sheet only.

BLOOMINGTON CODE REQUIREMENTS

33' - maximum pole height
10:1 - maximin 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)

LEGEND

EEE — Luminaire callout

LUMINAIRE SCHEDULE

CALLOUT	SYMBOL	QUANTITY	MOUNTING	MODEL	MOUNTING HEIGHT
3H1- M		1	POLE	LSI INDUSTRIES, INC., MRM-LED-48L-SIL-3-50-70CRI-IL	25'
4H1- M		5	POLE	LSI INDUSTRIES, INC., MRM-LED-48L-SIL-4-50-70CRI-IL	25'
4H1R- M		1	POLE	LSI INDUSTRIES, INC., MRM-LED-48L-SIL-RC-50-70CRI	25'
5H1B- M		1	POLE	LSI INDUSTRIES, INC., MRM-LED-36L-SIL-5W-50-70CRI	25'
5H1- M		1	POLE	LSI INDUSTRIES, INC., MRM-LED-48L-SIL-5W-50-70CRI	25'
5H2- M		2	POLE	LSI INDUSTRIES, INC., MRM-LED-48L-SIL-5W-50-70CRI	25'
5H3- M		7	POLE	LSI INDUSTRIES, INC., MRM-LED-48L-SIL-5W-50-70CRI	25'
5H4- M		6	POLE	LSI INDUSTRIES, INC., MRM-LED-48L-SIL-5W-50-70CRI	25'
AF2- M		4	POLE	LSI INDUSTRIES, INC., MRM-LED-48L-SIL-FTA-50-70CRI-IL	25'
AF48- M		16	POLE	LSI INDUSTRIES, INC., MRM-LED-48L-SIL-FTA-50-70CRI-IL	25'
BOLL-M		4	POLE	LSI INDUSTRIES, INC., MRB-LED-30L-ACR-S-50-HSS	3'-6"
WM6- M		1	WALL	LSI INDUSTRIES, INC., XWM-4-LED-06L-50	18'
WM21- M		18	WALL	LSI INDUSTRIES, INC., XWM-4-LED-21L-50	18'

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DEVELOPER

THE LUTHER COMPANY, LLLP.
3701 ALABAMA AVENUE SOUTH
ST. LOUIS PARK, MN
TEL (952)258-8800 - FAX (952) 258-8500

MUNICIPALITY

BLOOMINGTON

PROJECT

LUTHER BLOOMINGTON KIA

BLOOMINGTON, MN

ISSUE / REVISION HISTORY

CONTACT ENGINEER FOR ANY PRIOR HISTORY

DATE	ISSUE / REVISION	REVIEW
07 FEB 2024	DRC SUBMITTAL	SES
05 AUG 2024	CLIENT REVIEW	SES
14 AUG 2024	CITY SUBMITTAL	SES
09 SEP 2024	CITY RESUBMITTAL	SES

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09.09.2024

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From Site to Finish

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

FILE NAME	L403LUT061.DWG
PROJECT NO.	LUT23061

PHOTOMETRICS MAINTAINED VALUES

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

NORTH

0 30 60

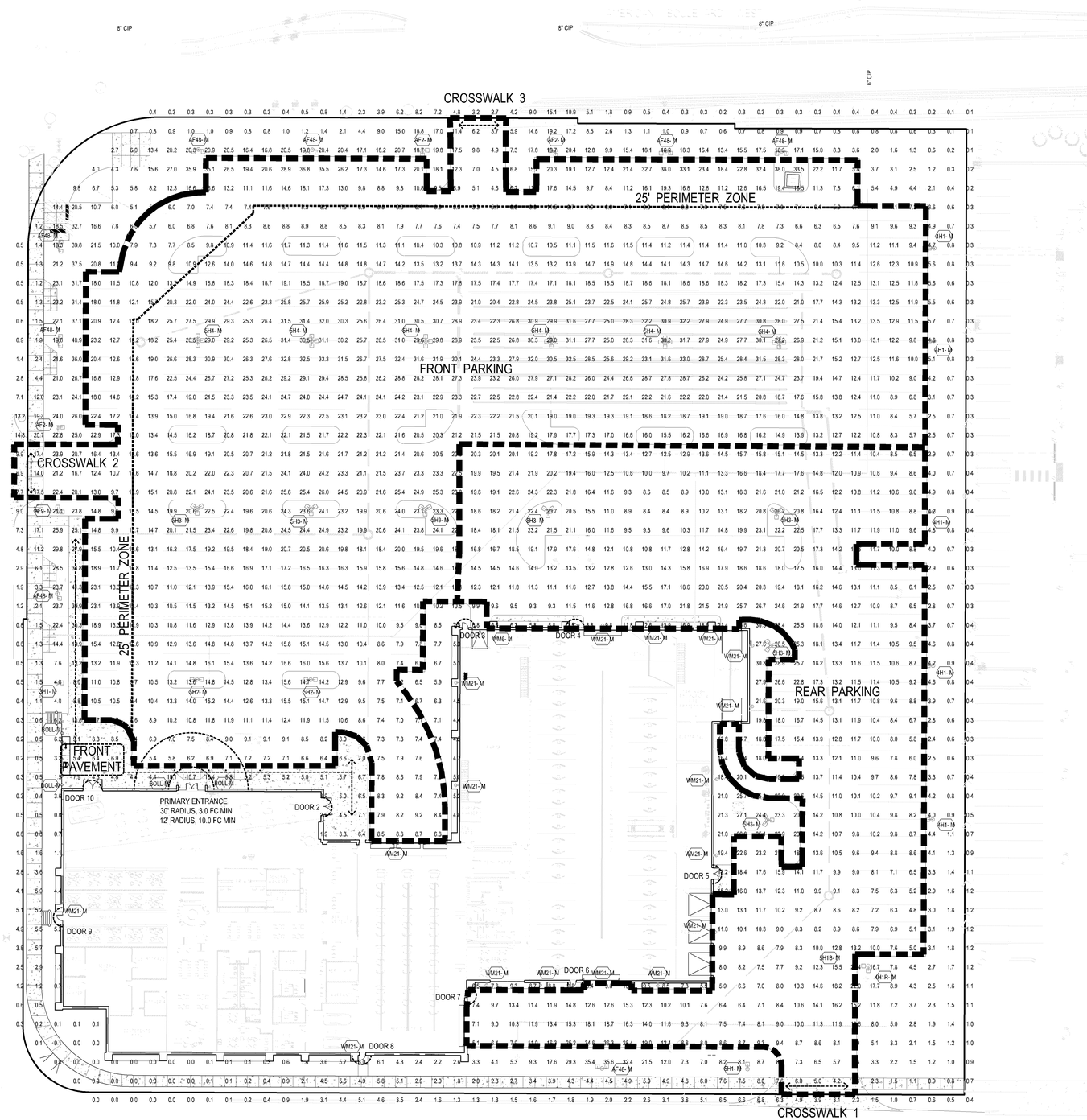
LEGEND

Calculation Area Boundary

EEE — Luminaire callout

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 light pole base.
4. Calculations based on LSI lighting fixtures. Any substitutions need to meet city code requirements.



CALCULATIONS

EAST PROPERTY LINE

AVERAGE FOOT-CANDLES	0.58
MAXIMUM FOOT-CANDLES	1.4
MINIMUM FOOT-CANDLES	0.1
MINIMUM TO MAXIMUM FC RATIO	0.05
MAXIMUM TO MINIMUM FC RATIO	19.75
AVERAGE TO MINIMUM FC RATIO	8.28

MAIN ENTRANCE 12' RADIUS

AVERAGE FOOT-CANDLES	14.96
MAXIMUM FOOT-CANDLES	17.3
MINIMUM FOOT-CANDLES	10.9
MAXIMUM TO MINIMUM FC RATIO	1.59
AVERAGE TO MINIMUM FC RATIO	1.37

25' PERIMETER ZONE

AVERAGE FOOT-CANDLES	14.23
MAXIMUM FOOT-CANDLES	34.9
MINIMUM FOOT-CANDLES	4.6
MAXIMUM TO MINIMUM FC RATIO	7.57
AVERAGE TO MINIMUM FC RATIO	3.09

FRONT PAVEMENT

AVERAGE FOOT-CANDLES	10.27
MAXIMUM FOOT-CANDLES	36
MINIMUM FOOT-CANDLES	2.5
MAXIMUM TO MINIMUM FC RATIO	14.61
AVERAGE TO MINIMUM FC RATIO	4.17

REAR PARKING

AVERAGE FOOT-CANDLES	13.32
MAXIMUM FOOT-CANDLES	29.7
MINIMUM FOOT-CANDLES	3.2
MAXIMUM TO MINIMUM FC RATIO	9.2
AVERAGE TO MINIMUM FC RATIO	4.12

FRONT PARKING

AVERAGE FOOT-CANDLES	16.82
MAXIMUM FOOT-CANDLES	32.8
MINIMUM FOOT-CANDLES	3.2
MAXIMUM TO MINIMUM FC RATIO	10.18
AVERAGE TO MINIMUM FC RATIO	5.21

PRIMARY ENTRANCE

AVERAGE FOOT-CANDLES	7.94
MAXIMUM FOOT-CANDLES	17.1
MINIMUM FOOT-CANDLES	4.2
MAXIMUM TO MINIMUM FC RATIO	4.05
AVERAGE TO MINIMUM FC RATIO	1.88

DOOR 2

AVERAGE FOOT-CANDLES	3.53
MAXIMUM FOOT-CANDLES	3.5
MINIMUM FOOT-CANDLES	3.5
MAXIMUM TO MINIMUM FC RATIO	1
AVERAGE TO MINIMUM FC RATIO	1

DOOR 3

AVERAGE FOOT-CANDLES	6.81
MAXIMUM FOOT-CANDLES	6.8
MINIMUM FOOT-CANDLES	6.8
MAXIMUM TO MINIMUM FC RATIO	1
AVERAGE TO MINIMUM FC RATIO	1

DOOR 4

AVERAGE FOOT-CANDLES	8.33
MAXIMUM FOOT-CANDLES	8.3
MINIMUM FOOT-CANDLES	8.3
MAXIMUM TO MINIMUM FC RATIO	1
AVERAGE TO MINIMUM FC RATIO	1

DOOR 5

AVERAGE FOOT-CANDLES	14.16
MAXIMUM FOOT-CANDLES	14.2
MINIMUM FOOT-CANDLES	14.2
MAXIMUM TO MINIMUM FC RATIO	1
AVERAGE TO MINIMUM FC RATIO	1

DOOR 6

AVERAGE FOOT-CANDLES	10.78
MAXIMUM FOOT-CANDLES	10.8
MINIMUM FOOT-CANDLES	10.8
MAXIMUM TO MINIMUM FC RATIO	1
AVERAGE TO MINIMUM FC RATIO	1

DOOR 7

AVERAGE FOOT-CANDLES	8.09
MAXIMUM FOOT-CANDLES	8.1
MINIMUM FOOT-CANDLES	8.1
MAXIMUM TO MINIMUM FC RATIO	1
AVERAGE TO MINIMUM FC RATIO	1

DOOR 8

AVERAGE FOOT-CANDLES	5.1
MAXIMUM FOOT-CANDLES	5.1
MINIMUM FOOT-CANDLES	5.1
MAXIMUM TO MINIMUM FC RATIO	1
AVERAGE TO MINIMUM FC RATIO	1

DOOR 9

AVERAGE FOOT-CANDLES	5.06
MAXIMUM FOOT-CANDLES	5.1
MINIMUM FOOT-CANDLES	5.1
MAXIMUM TO MINIMUM FC RATIO	1
AVERAGE TO MINIMUM FC RATIO	1

DOOR 10

AVERAGE FOOT-CANDLES	3.55
MAXIMUM FOOT-CANDLES	3.6
MINIMUM FOOT-CANDLES	3.6
MAXIMUM TO MINIMUM FC RATIO	1
AVERAGE TO MINIMUM FC RATIO	1

CROSSWALK 1

AVERAGE FOOT-CANDLES	5.43
MAXIMUM FOOT-CANDLES	7.7
MINIMUM FOOT-CANDLES	3.5
MINIMUM TO MAXIMUM FC RATIO	0.46
MAXIMUM TO MINIMUM FC RATIO	2.16
AVERAGE TO MINIMUM FC RATIO	1.53

CROSSWALK 2

AVERAGE FOOT-CANDLES	13.97
MAXIMUM FOOT-CANDLES	16.7
MINIMUM FOOT-CANDLES	12
MINIMUM TO MAXIMUM FC RATIO	0.72
MAXIMUM TO MINIMUM FC RATIO	1.39
AVERAGE TO MINIMUM FC RATIO	1.16

CROSSWALK 3

AVERAGE FOOT-CANDLES	5.44
MAXIMUM FOOT-CANDLES	8.9
MINIMUM FOOT-CANDLES	3.5
MINIMUM TO MAXIMUM FC RATIO	0.39
MAXIMUM TO MINIMUM FC RATIO	2.55
AVERAGE TO MINIMUM FC RATIO	1.55

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MUNICIPALITY

BLOOMINGTON

PROJECT

LUTHER BLOOMINGTON KIA

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From Site to Finish

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Minneapolis, MN 55401

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

FILE NAME	L404LUT061.DWG
PROJECT NO.	LUT23061

MAINTAINED VALUES CALCULATIONS

L4.4

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Catalog #: _____ Project: _____

Prepared By: _____ Date: _____ Type: _____

Mirada Bollard (MRB)

Low Level Lighting

IP66

OVERVIEW	
Lumen Package	1,000 - 3,000
Wattage Range	23 - 38
Efficacy Range (LPW)	72 - 84
Weight lbs (kg)	40 (18)

QUICK LINKS

Ordering Guide Performance Photometrics Dimensions

FEATURES & SPECIFICATIONS

Construction

- Precision 2pc die-cast aluminum head maintains durability and consistency while providing vandal resistance, effective heat dissipation, and superior aesthetics.
- 8-5/8" OD one-piece extruded aluminum heavy wall .322 inch thick seamless shaft. Various heights are available in 6" increments starting at a minimum of 26" (maximum height is 62").
- Lower housing attaches to cast aluminum universal base plate with four stainless steel roll pins. Accommodates 4.5" - 6" bolt circles.
- Optional roughneck zinc plated steel base plate (.375" thick) with welded U shaped reinforcement. 3/8" diameter 302 stainless steel roll pins with 10,000 lb. shear load.
- IP66 rated Optical and Driver compartment protects integral components from harsh environments.
- Fixtures are finished with LSI's DuraGrip® polyester powder coat finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling. Other standard LSI finishes available. Consult factory.
- Luminaire is proudly manufactured in the U.S. of U.S. and imported parts.
- Shipping weight: 40 lbs in carton.

Optical System

- Available in two optical distributions, symmetrical and asymmetrical.
- High transmission clear flat acrylic lens seals the luminaire's optical chamber to IP66.
- Available in 5000K, 4000K, 3000K, and 2700K color temperatures per ANSI C78.377. Also available in Phosphor Converted Amber. Consult Factory for other color temperature requirements.
- Minimum CRI of 70.

Electrical

- High-performance programmable driver features over-voltage, under-voltage, short-circuit and over temperature protection. Custom lumen and wattage packages available.
- 0-10V dimming (10% - 100%) standard.
- Standard Universal Voltage (120-277 Vac) Input 50/60 Hz. Optional High Voltage 347-480 Vac Input available.
- L91 Calculated Life: >100k Hours calculated @ 25°C per IESNA TM-21-11.
- Total harmonic distortion: <20%.
- Operating temperature: -40°C to +50°C (-40°F to +122°F); Cold-weather emergency battery backup rated for -20°C minimum ambient.
- Power factor: >.90.
- Input power stays constant over life.
- High-efficacy LEDs with integrated circuit board mount to the housing to maximize heat dissipation and promote long life.
- Driver components are fully encased in potting long material for moisture resistance. Driver complies with FCC standards. Driver and key electronic components can easily be accessed.
- Electrical components are mounted on a removable power tray.
- Field replaceable surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).
- Optional 120v-277v integral emergency battery pack is available. The 90- minute batteries provide constant power to the LED system, ensuring code compliance. A test switch/indicator button is installed on the housing for ease of maintenance.

Installation

- Easy leveling even in uneven areas and full 360-degree rotation for precise alignment during installation.
- Base plate installs with four heavy-duty 3/8" x 10" galvanized steel anchor bolts.
- Base plate attaches to lower extruded housing via four stainless steel roll pins.

Warranty

- LSI luminaires carry a 5-year limited warranty. Refer to https://www.lsiindustries.com/resources/terms-and-warranty.aspx for more information.

Listings

- Listings
- Listed to UL 1598 and UL 8750.
- RoHS Compliant.
- Meets Buy American Act requirements.
- Suitable for wet locations.
- IP66 rated Driver compartment and IP66 rated optical chamber per IEC 60598.
- IDA compliant; with 3000K or 2700K color temperature selection.

3 **LSI BOLLARD LIGHT**

NO SCALE

Catalog # : _____ Project : _____ Type : _____

Prepared By : _____ Date : _____

Mirada Medium Wall Sconce (XWM)

Outdoor Wall Sconce

IK08

OVERVIEW	
Lumen Package (lm)	3,000 - 21,000
Wattage Range (W)	23 - 175
Efficacy Range (LPW)	125 - 158
Weight lbs (kg)	27 (12.2)

QUICK LINKS

Ordering Guide Performance Photometrics Dimensions

FEATURES & SPECIFICATIONS

Construction

- Rugged die-cast aluminum housing contains factory prewired driver and optical unit. Hinged die-cast aluminum wiring access door located underneath.
- Galvanized-steel universal wall mount bracket comes standard with hinging mechanism to easily access the junction box wire connections without removing the luminaire.
- Optional pole-mounting bracket (XPMA) permits mounting to standard poles.
- Fixtures are finished with LSI's DuraGrip® polyester powder coat finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling. Other standard LSI finishes available. Consult factory.
- Max shipping weight: 30lbs in carton

Optical System

- State-of-the-Art one piece silicone optic provides industry leading optical control while also acting as an integrated gasket reducing system complexity and improving fixture reliability.
- Proprietary silicone refractor optics provide exceptional coverage and uniformity in Types 2, 3, and Forward Throw (FT) distributions.
- Silicone optical material does not yellow or crack with age and provides a typical light transmittance of 93%.
- Zero uplight.
- Available in 5000K, 4000K and 3000K color temperatures per ANSI C78.377. Also Available in Phosphor Converted Amber with Peak intensity at 610nm.
- Minimum CRI of 70.

Electrical

- High-performance programmable driver features over-voltage, under-voltage, short-circuit and over temperature protection. Custom lumen and wattage packages available.
- 0-10V dimming (10% - 100%) standard.
- Standard Universal Voltage (120-277 Vac) Input 50/60 Hz or optional High Voltage (347-480 Vac).
- L80 Calculated Life: >100k Hours
- Total harmonic distortion: <20%
- 3L to 12L operating temperature: -40°C to +50°C (-40°F to +122°F)
- 15L operating temperature: -40°C to +45°C (-40°F to +113°F).
- 18L operating temperature: -40°C to +40°C (-40°F to +104°F).
- 21L operating temperature: -40°C to +35°C (-40°F to + 95°F).
- Power factor: >.90
- Input power stays constant over life.
- Optional 10kV surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).
- High-efficacy LEDs mounted to metal-core circuit board to maximize heat dissipation
- Components are fully encased in potting material for moisture resistance. Driver complies with FCC standards. Driver and key electronic components can easily be accessed via hinged door.
- Optional integral emergency battery pack provides 90-minutes of constant power to the LED system, ensuring code compliance. A test switch/indicator button is installed on the housing for ease of maintenance. The fixture delivers 1500 lumens during emergency mode.

Controls

- Integral passive infrared Bluetooth™ motion sensor options. Fixtures operate independently and can be commissioned via an iOS or Android configuration app. Updates and modifications to the control strategy are easily implemented via an intuitive app.
- LSI's AirLink™ Blue lighting control system is a simple feature rich wireless Bluetooth mesh network. The integrated fixture sensor module provides wireless control of grouped fixtures based on motion sensors, daylight or a fully customizable schedule.

Installation

- Universal wall mounting plate easily mounts directly to 4" octagonal or square junction box.
- 2 fasteners secure the hinged door underneath the housing and provide quick & easy access to the electrical compartment for installing/servicing.
- Optional terminal block accepts up to 12 ga wire.

Warranty

- LSI luminaires carry a 5-year limited warranty. Refer to https://www.lsicorp.com/resources/terms-conditions-warranty/ for more information.
- 1 Year warranty on Battery Back-up option.

Listings

- Listed to UL 1598 and UL 8750.
- Meets Buy American Act requirements.
- IDA compliant; with 3000K or lower color temperature selection.
- Title 24 Compliant; see local ordinance for qualification information.
- Suitable for wet Locations.
- IP65 rated luminaire per IEC 60598.
- 3G rated for ANSI C136.31 high vibration applications when pole mounted (using optional XPMA bracket) or wall mounted.
- IK08 rated luminiare per IEC 66262 mechanical impact code
- DesignLights Consortium® (DLC) Premium qualified product. Not all versions of this product may be DLC Premium qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

2 **LSI WALL MOUNT LIGHT**

NO SCALE

Catalog # : _____ Project : _____ Type : _____

Prepared By : _____ Date : _____

Mirada Large (MRL)

Outdoor LED Area Light

IP66 IK08

OVERVIEW	
Lumen Package	40,000 - 78,000
Wattage Range	286 - 648
Efficacy Range (LPW)	115 - 154
Weight lbs(kg)	60 (27.2)

QUICK LINKS

Ordering Guide Performance Photometrics Dimensions

FEATURES & SPECIFICATIONS

Construction

- Rugged die-cast aluminum housing, optical frame, and driver access cover.
- Fixtures are finished with LSI's DuraGrip® polyester powder coat finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling. Other standard LSI finishes available. Consult factory.
- Shipping weight: 68 lbs in carton.

Optical System

- State-of-the-Art one piece silicone optic sheet delivers industry leading optical control with an integrated gasket to provide IP66 rated sealed optical chamber in 1 component.
- Proprietary silicone refractor optics provide exceptional coverage and uniformity in IES Types 2, 3, 5W, FT, FTA and AM.
- Silicone optical material does not yellow or crack with age and provides a typical light transmittance of 93%.
- Zero uplight.
- Available in 5000K, 4000K, and 3000K color temperatures per ANSI C78.377. Also Available in Phosphor Converted Amber with Peak intensity at 610nm.
- Minimum CRI of 70.
- Integral louver (IL) and integral half louver (IH) options available for enhanced back-light control.

Electrical

- High-performance programmable driver features over-voltage, under-voltage, short-circuit and over temperature protection. Custom lumen and wattage packages available.
- 0-10V dimming (10% - 100%) standard.
- Standard Universal Voltage (120-277 Vac) Input 50/60 Hz or optional High Voltage (347-480 Vac).
- L90 Calculated Life: >100k Hours (See Lumen Maintenance chart)
- Total harmonic distortion: <20%
- Operating temperature: -40°C to +50°C (-40°F to +122°F). 65L and 78L lumen packages rated to +40°C.
- Power factor: >.90
- Input power stays constant over life.
- Field replaceable 10kV surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).
- High-efficacy LEDs mounted to metal-core circuit board to maximize heat dissipation
- Components are fully encased in potting material for moisture resistance. Driver complies with FCC standards. Driver and key electronic components can easily be accessed.

Controls

- Optional integral passive infrared Bluetooth™ motion and photocell sensor (see page 5 for more details). Fixtures operate independently and can be commissioned via iOS or Android configuration app.
- LSI's AirLink™ wireless control system options reduce energy and maintenance costs while optimizing light quality 24/7. (see controls section for more details).

Installation

- Designed to mount to square or round poles.
- A single fastener secures the hinged door, underneath the housing and provides quick & easy access to the electrical compartment for installing/servicing.
- Included terminal block accepts up to 12 ga. wire.
- Utilizes both B3 and B5 drill patterns for easy fastening of LSI products.

Warranty

- LSI luminaires carry a 5-year limited warranty. Refer to https://www.lsicorp.com/resources/terms-conditions-warranty/ for more information.

Listings

- Listed to UL 1598 and UL 8750.
- State of California Title 24 Compliant; with IMSBT, ALSC, or ALSCH Options.
- DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.
- Meets Buy American Act requirements.
- IDA compliant; with 3000K color temperature selection.
- Suitable for wet locations.
- IP66 rated Luminaire per IEC 60598.
- 3G rated for ANSI C136.31 high vibration applications are qualified.
- IK08 rated luminiare per IEC 66262 mechanical impact code

1 **LSI POLE LIGHT**

NO SCALE

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3701 ALABAMA AVENUE SOUTH
ST. LOUIS PARK, MN
TEL (952)258-8600 - FAX (952) 258-8600

MUNICIPALITY

BLOOMINGTON

PROJECT

LUTHER BLOOMINGTON KIA

BLOOMINGTON, MN

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CITY RESUBMITTAL
09.09.2024

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	L405LUT061.DWG
PROJECT NO.	LUT23061

LUMINAIRES

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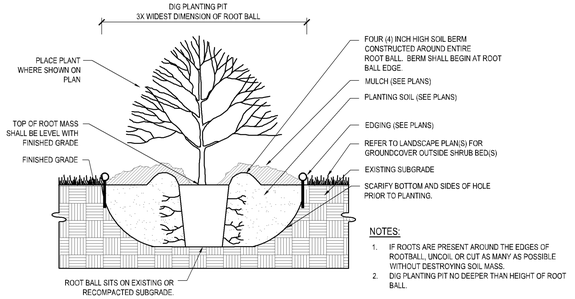
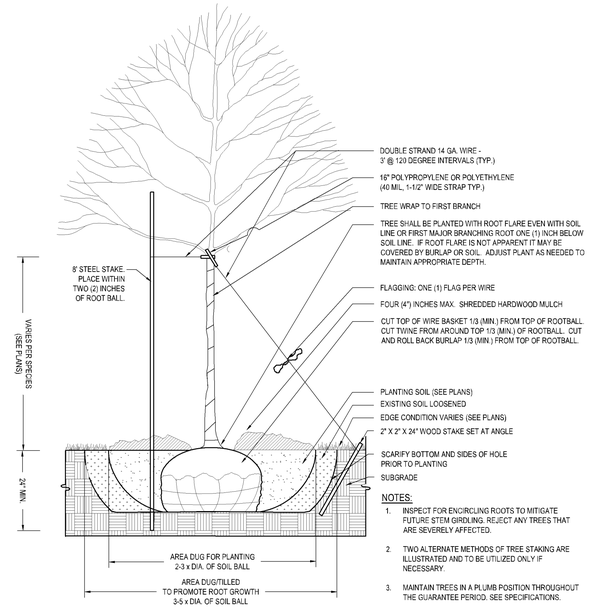


NOTES:

1. IF ROOTS ARE PRESENT AROUND THE EDGES OF ROOTBALL, UNCOIL OR CUT AS MANY AS POSSIBLE WITHOUT DESTROYING SOIL MASS.
2. DIG PLANTING PIT NO DEEPER THAN HEIGHT OF ROOT BALL.

3 SHRUB PLANTING

NO SCALE

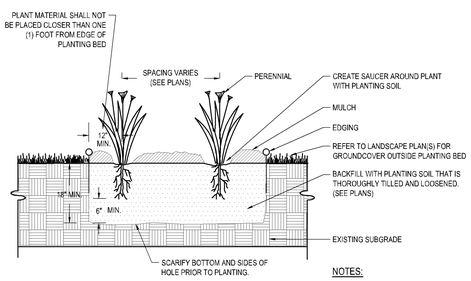


NOTES:

1. INSPECT FOR ENCIRCLING ROOTS TO MITIGATE FUTURE STEM GIRDLING. REJECT ANY TREES THAT ARE SEVERELY AFFECTED.
2. TWO ALTERNATE METHODS OF TREE STAKING ARE ILLUSTRATED AND TO BE UTILIZED ONLY IF NECESSARY.
3. MAINTAIN TREES IN A PLUMB POSITION THROUGHOUT THE GUARANTEE PERIOD. SEE SPECIFICATIONS.

1 DECIDUOUS TREE PLANTING

NO SCALE

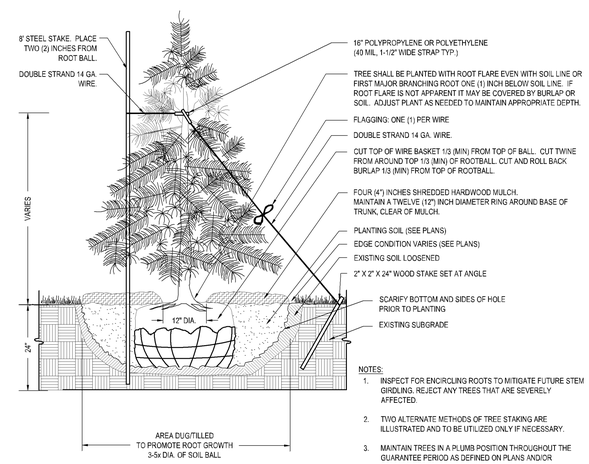


NOTES:

IF ROOTS ARE PRESENT AROUND THE EDGES OF ROOTBALL, UNCOIL OR CUT AS MANY AS POSSIBLE WITHOUT DESTROYING SOIL MASS.

4 PERENNIAL PLANTING

NO SCALE



NOTES:

1. INSPECT FOR ENCIRCLING ROOTS TO MITIGATE FUTURE STEM GIRDLING. REJECT ANY TREES THAT ARE SEVERELY AFFECTED.
2. TWO ALTERNATE METHODS OF TREE STAKING ARE ILLUSTRATED AND TO BE UTILIZED ONLY IF NECESSARY.
3. MAINTAIN TREES IN A PLUMB POSITION THROUGHOUT THE GUARANTEE PERIOD AS DEFINED ON PLANS AND/OR SPECIFICATIONS.

2 CONIFEROUS TREE PLANTING

NO SCALE

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

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DEVELOPER

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TEL (952)258-8600 - FAX (952) 258-8600

MUNICIPALITY

BLOOMINGTON

PROJECT

LUTHER BLOOMINGTON KIA

BLOOMINGTON, MN

ISSUE / REVISION HISTORY

CONTACT ENGINEER FOR ANY PRIOR HISTORY

DATE	ISSUE / REVISION	REVIEW
07 FEB 2024	DRC SUBMITTAL	SES
05 AUG 2024	CLIENT REVIEW	SES
14 AUG 2024	CITY SUBMITTAL	SES
09 SEP 2024	CITY RESUBMITTAL	SES

PL202400150
PL2024-150

CERTIFICATION

PRELIMINARY NOT FOR CONSTRUCTION

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.

CITY RESUBMITTAL
09.09.2024

LANDFORM
From Site to Finish

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FILE NAME L701LUT061.DWG

PROJECT NO. LUT23061

LANDSCAPE DETAILS

L7.1

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