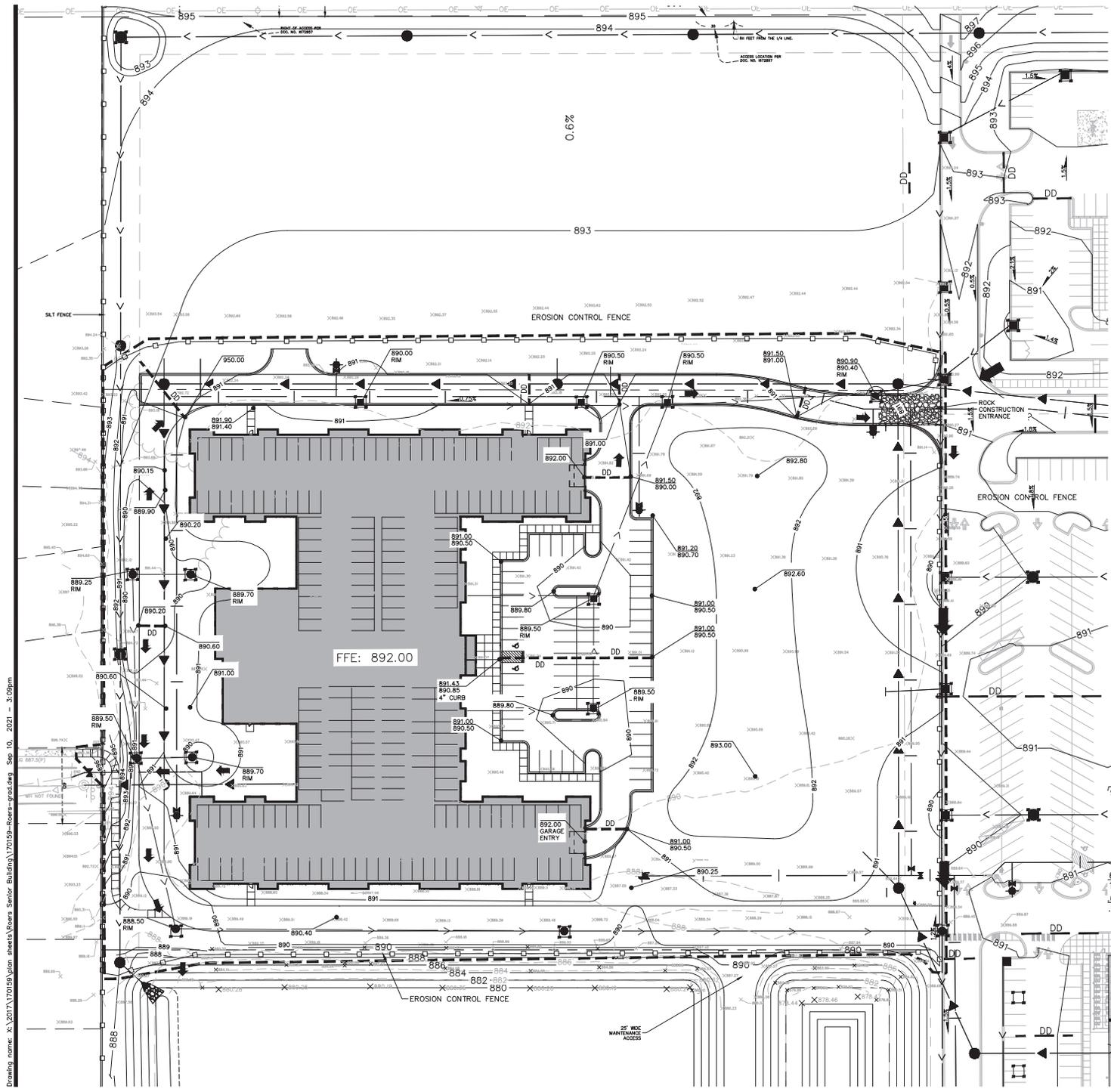


**Case File No. 21-0067**  
**Risor of Blaine**







**GRADING NOTES:**

1. ALL FINISHED GRADES SHALL SLOPE AWAY FROM PROPOSED BUILDINGS.
2. THE CONTRACTOR SHALL KEEP THE ADJACENT ROADWAYS FREE OF DEBRIS AND PREVENT THE OFF-SITE TRACKING OF SOIL IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY OF BLAINE AND COON CREEK WATERSHED DISTRICT.
3. NOTIFY COPHER STATE ONE CALL, AT (800)252-1166, 48 HOURS PRIOR TO START OF CONSTRUCTION.
4. ALL IMPROVEMENTS TO CONFORM WITH THE CITY OF BLAINE CONSTRUCTION STANDARD SPECIFICATIONS, LATEST EDITION.
5. ROCK CONSTRUCTION ENTRANCES SHALL BE PROVIDED AT ALL CONSTRUCTION ACCESS POINTS.
6. REFER TO GEOTECHNICAL REPORT AND PROJECT MANUAL, FOR SOIL CORRECTION REQUIREMENTS AND TESTING REQUIREMENTS.
7. STRIP TOPSOIL PRIOR TO ANY CONSTRUCTION. REUSE STOCKPILE ON SITE. STOCKPILE PERIMETERS MUST BE PROTECTED WITH SILT FENCE.
8. PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE TO MAKE SURE THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED ALL PLANS AND OTHER DOCUMENTS APPROVED BY ALL OF THE PERMITTING AUTHORITIES.
9. IMMEDIATELY FOLLOWING GRADING OF (3:1 OR GREATER) SIDE SLOPES AND DRAINAGE SWALES, WOOD FIBER BLANKET OR OTHER APPROVED SOIL STABILIZING METHOD (APPROVED BY ENGINEER) SHALL BE APPLIED OVER APPROVED SEED MIXTURE AND A MINIMUM OF 4" TOPSOIL.
10. THE GENERAL CONTRACTOR MUST DISCUSS Dewatering PLANS WITH ALL SUBCONTRACTORS TO VERIFY NPDES REQUIREMENTS. Dewatering IS REQUIRED DURING CONSTRUCTION, CONTRACTOR SHOULD CONSULT WITH EROSION CONTROL INSPECTOR AND ENGINEER TO DETERMINE APPROPRIATE METHOD. SEE Dewatering NOTES ON SHEET C-4.2.
11. REFER TO STORMWATER POLLUTION PREVENTION PLAN (SWPPP) FOR ALL EROSION AND SEDIMENT CONTROL DEVICE LOCATION, DESCRIPTIONS, NOTES AND DETAILS INCLUDING CONCRETE WASHOUT STATION INSTRUCTIONS.
12. REFER TO GEOTECHNICAL REPORT, GEOTECHNICAL REPORT SUPERSEDES ALL PLAN REQUIREMENTS.
13. REMOVE SURFACE VEGETATION, ROOT ZONES, TOPSOIL, EXISTING FILL AND ORGANIC SOILS.
14. EARTHWORK CONTRACTOR TO PROVIDE GROUNDWATER MANAGEMENT AS NECESSARY TO MAINTAIN OSHA COMPLIANT EXCAVATIONS AND TO FACILITATE REMOVAL OF THE UNSUITABLE SOILS AND PLACEMENT OF ENGINEERED FILL.
15. DOCUMENT BOTTOM ELEVATIONS AND COORDINATES VIA A GPS COLLECTOR AFTER UNSUITABLE SOILS ARE REMOVED ON A 50 FOOT GRID PATTERN. AT COMPLETION OF PROJECT, PROVIDE SITE PLAN WITH BOTTOM ELEVATIONS.
16. BACKFILL WITH ON-SITE SOILS WITH LESS THAN 2 PERCENT ORGANIC CONTENT IN LIFTS NOT EXCEEDING 8 INCHES AND COMPACTED TO AT LEAST 95 PERCENT OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY. SUITABLE SOILS TYPES CONSIST OF POORLY GRADED SAND (SP), POORLY GRADED SAND WITH SILT (SP-SM), SILTY SAND (SM), CLAYEY SAND (SC), LEAN CLAY (CL) AND SILT (ML).
17. MOISTURE CONTENT SHALL BE WITHIN 3% OF OPTIMUM MOISTURE CONTENT FOR SP, SP-SM AND WITHIN 1% BELOW TO 3% ABOVE FOR SM, SC, CL AND ML.
18. COMPACTION TESTS SHALL BE PERFORMED EVERY 2,500 SQUARE FEET AND NOT MORE THAN 2 FEET VERTICALLY. COLLECT ELEVATIONS AND COORDINATES FOR EACH COMPACTION TEST. AT COMPLETION OF PROJECT, PROVIDE SITE PLAN WITH COMPACTION TEST LOCATIONS.

**GRADING LEGEND:**

	EXISTING CONTOUR
	PROPOSED CONTOUR
	PROPOSED CONTOUR BY OTHERS
	PROPOSED SPOT ELEVATION
	FINISH FLOOR ELEVATION
	DIRECTION OF DRAINAGE
	EMERGENCY OVERFLOW ROUTING
	PROPOSED CATCH BASIN
	PROPOSED STORM SEWER
	PROPOSED LIMITS OF CONSTRUCTION
	PROPOSED EASEMENT
	PROPOSED PROPERTY LINE
	PROPOSED RIGHT-OF-WAY
	DRAINAGE DIVIDE
	INLET PROTECTION
	EROSION CONTROL FENCE
	ROCK CONSTRUCTION ENTRANCE

**ALLIANT**  
INCORPORATED

733 Marquette Ave, Ste 700  
Minneapolis, MN 55402  
612.758.3080 www  
612.758.3099 fax  
www.alliant-inc.com

**RORES - HAVENWOOD OF BLAINE**  
125TH AVE N (MAIN STREET) AND JEFFERSON ST. NE  
BLAINE, MINNESOTA

**PLANNING SUBMITTAL**  
GRADING DRAINAGE AND EROSION CONTROL PLAN

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed PROFESSIONAL ENGINEER under the laws of the State of MINNESOTA.

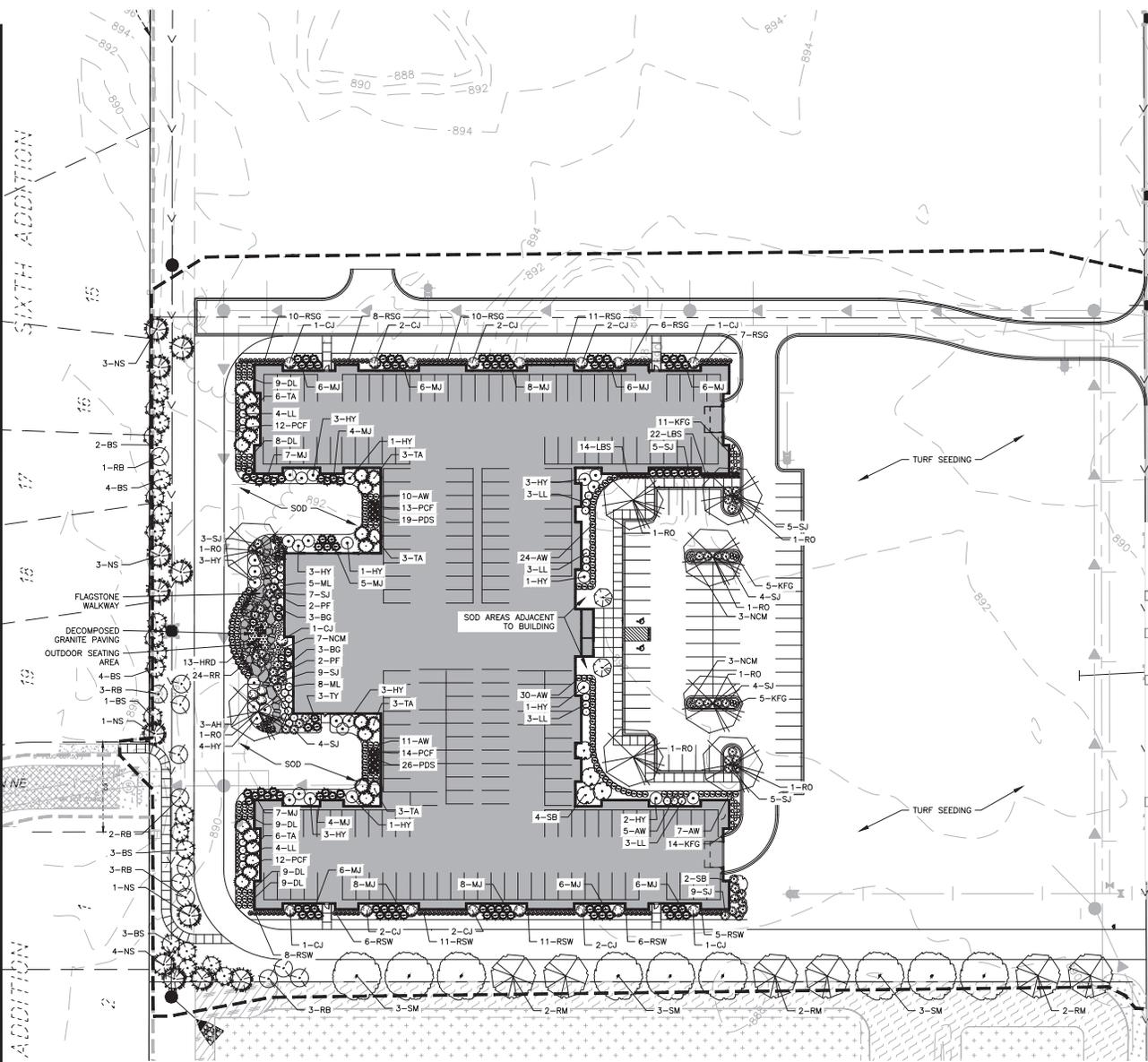
DATE	ISSUE
5-17-21	CITY PLANNING SUBMITTAL
5-27-21	CITY COMMENTS
6-8-21	CITY COMMENTS - INTERIM
5-10-21	CITY PLANNING SUBMITTAL

**PROJECT TEAM DATA**

DESIGNED:	WC
DRAWN:	MS
PROJECT NO.:	217-0159

**C-4.0**

Drawing name: X:\2017\170159\plan sheets\170159-rores-grad.dwg, Sep 10, 2021 - 3:08pm



**PLANTING NOTES:**

- INSTALL 4" MIN. TOP SOIL TO ALL SOO, SEED AND SHRUB AREAS. FINE GRADE ALL SOO AND SEED AREAS. INSTALL 12" TOP SOIL TO PERENNIAL AREAS.
- STAKE OR MARK ALL PLANT MATERIAL LOCATIONS PRIOR TO INSTALLATION. HAVE OWNERS REPRESENTATIVE APPROVE ALL STAKING PRIOR TO INSTALLATION.
- ALL SHRUB AREAS UNLESS SPECIFIED AS OTHER, TO BE MULCHED WITH 4" DEPTH OF DARK BROWN SHREDED HARDWOOD MULCH OVER FILTER FABRIC, UNLESS SPECIFIED AS OTHER. POLY-DEXER TO BE VALLEY VIEW BLACK DIAMOND OR APPROVED EQUAL.
- INSTALL 4"-8" DEPTH SHREDED HARDWOOD MULCH AROUND ROOT SAUCERS OF ALL TREES ISOLATED FROM PLANT BEDS. DO NOT PILE MULCH AGAINST TRUNK OF A PLANT OR TREE TRUNK. PILE MULCH AWAY FROM TREE ONE TO TWO INCHES.
- PLANT SOIL SHALL CONSIST OF 33% SELECT LOAMY TOPSOIL, 33% PEAT MOSS, 33% PIT RUN SAND.
- COMPLETELY QUANTIFY ALL WORK FOR A PERIOD OF ONE YEAR BEGINNING AT THE DATE OF ACCEPTANCE. MAKE ALL REPLACEMENTS PROMPTLY (AS PER DIRECTION OF OWNER).
- ALL MATERIAL SHALL COMPLY WITH THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK, AMERICAN ASSOCIATION OF NURSEMEN.
- ALL TREE TRUNKS SHALL BE WRAPPED WITH BROWN CREPE TREE WRAP. APPLY WRAP IN NOVEMBER AND REMOVE IN APRIL.
- CALL CONCRETE STATE ONE CALL AT 855-454-5000 OR 811 FOR LOCATING ALL UNDERGROUND UTILITIES AND AVOID DAMAGE TO UTILITIES DURING THE COURSE OF THE WORK.
- MAINTAIN ALL PLANT MATERIALS, INCLUDING MATERIALS, UNTIL THE TIME OF ACCEPTANCE.
- COORDINATE INSTALLATION WITH GENERAL CONTRACTOR.
- STAKING AND GUYING OF TREES OPTIONAL: MAINTAIN PLUMBNESS OF TREES FOR DURATION OF WARRANTY PERIOD.
- THE MAINLAND PLANT MATERIALS SHALL BE PROVIDED AS INDICATED BELOW:
  - ONE OVERSTORY TREE PER 5000 SF OF GFA OR 1 TREE FOR 100 LF OF SITE PERIMETER, WHICHEVER IS GREATER.
  - ONE CONTOUR TREE PER 2000 SF OF GFA OR 1 TREE PER 200 LF OF SITE PERIMETER, WHICHEVER IS GREATER.
  - ONE UNDERSTORY SHRUB PER 500 SF OF GFA OR 1 SHRUB PER 50 LF OF SITE PERIMETER, WHICHEVER IS GREATER.
  - ONE ORNAMENTAL TREE PER 2000 SF OF GFA OR 1 ORNAMENTAL TREE PER 200 LF OF SITE PERIMETER, WHICHEVER IS GREATER.

**LANDSCAPE REQUIREMENTS:**

CITY OF BLAINE LANDSCAPE ORDINANCE SECTION 33.08

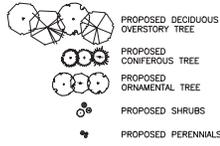
THE MAINLAND PLANT MATERIALS SHALL BE PROVIDED AS INDICATED BELOW:

LOT #	REQUIRED (MIN. SIZE)	PROVIDED
OVERSTORY TREE:	BLDG AREA: 5000 SF 40 (2" CAL.)	105 CALIF. INCHES 495 FEET
CONTOUR TREE:	40 (2" CAL.)	287 SHRUBS REQUIRED 304 FT. W. SHRUBS
UNDERSTORY SHRUB:	40 (2" CAL.)	90 CALIF. INCHES

**LANDSCAPE SCHEDULE:**

QUANTITY	KEY	COMMON NAME	SCIENTIFIC NAME	SIZE / ROOT TYPE	NOTES
<b>OVERSTORY TREES</b>					
12	BB	River Birch	Betula nigra	10" H. B&B	Clump form, 3-headers
6	RM	Autumn Blaze Red Maple	Acer freemanii 'Jeffersred'	7" cal. B&B	Straight Trunk, No V-Crotch
1	RD	Red Oak	Quercus rubra	7" cal. B&B	Straight Trunk, No V-Crotch
9	SM	Sugar Maple	Acer saccharum 'Nimbus'	7" cal. B&B	Straight Trunk, No V-Crotch
<b>EVERGREEN TREES</b>					
21	BS	Black Hills Spruce	Picea densata	12" H. B&B	Full Form
12	NS	Norway Spruce	Picea abies	12" H. B&B	Full Form
<b>ORNAMENTAL TREES</b>					
8	PF	Prairie Fire Crabapple	Malus 'Prairie Fire'	7" cal. B&B	Straight Trunk, No V-Crotch
6	SB	Autumn Brilliance Serviceberry	Amelanchier x grandifolia 'Autumn Brilliance'	5" H. B&B	Clump Form
24	TA	Trethyan Arborvitae	Thuja occidentalis 'Teddy'	5" H. B&B	Full Form
<b>SHRUBS</b>					
3	AH	American Hazelnut	Corylus americana	30" Height Cont.	Min Scans at spec. height
88	AW	Anthony waterer Spruce	Spirea x burbankii 'Anthony Waterer'	24" Height Cont.	Min Scans at spec. height
6	BS	Blue Globe Spruce	Picea pungens 'Globe'	30" Height Cont.	Min Scans at spec. height
17	CI	Charley Jay Elms	Syringa vulgaris 'Charles Jay'	48" Height Cont.	Min Scans at spec. height
56	DL	Deer Bush Honey suckle	Dieris lonicera	32" Height Cont.	Min Scans at spec. height
21	LI	Little Leaf Linden	Hydrangea paniculata 'Lime'	30" Height Cont.	Min Scans at spec. height
29	HY	Hydrangea Hydrangea	Hydrangea paniculata 'Thu'	30" Height Cont.	Min Scans at spec. height
13	ML	Mountain Light Anemone	Rhododendron 'Mountain Light'	30" Height Cont.	Min Scans at spec. height
203	MJ	Mini Lady Juniper	Juniperus chinensis 'Sea Green'	30" Height Cont.	Min Scans at spec. height
44	RR	Mojo Hammarberg Rose	Rosa 'Mojo Hammarberg'	24" Height Cont.	Min Scans at spec. height
50	SJ	Scandia Juniper	Juniperus sabina 'Scandia'	32" Height Cont.	Min Scans at spec. height
<b>PERENNIALS &amp; ORNAMENTAL GRASSES</b>					
35	KFG	Feather Reed Grass	Calamagrostis x acutifolia 'Yari Foester'	2 gal. cont.	
28	HRD	Heppes Reburns Dianthus	Heperobolus 'Happy Reburn'	1 gal. cont.	
36	LBS	Little Bluestem	Schizachyrium scoparium	1 gal. cont.	
45	PDS	Prairie Dogpaw	Sporobolus heterolepis	2 gal. cont.	
67	PKC	Purple Coneflower	Echinacea purpurea	1 gal. cont.	
13	NCM	Calamint	Calamintha nepeta ssp. nepeta	1 gal. cont.	
500	RSG	Red Switch Grass	Panicum virgatum 'Serenade'	1 gal. cont.	

**LEGEND:**



**SEED PLANTING NOTES:**

**PERENNIAL SEED MIX:** MN STATE SEED MIX 33-261. SEEDING RATE TO BE 14.5 LBS./ACRE (PURE LIVE SEED).

**NATIVE SEED MIX:** MN STATE SEED MIX 35-221 (DRY PRAIRIE GENERAL). SEEDING RATE TO BE 36.5 LBS./ACRE (PURE LIVE SEED).

APPLY SEED PER THE FOLLOWING MULCH SEEDED AREAS WITH M/2007 TYPE 3 (NOVA CERTIFIED SEED FRESH MULCH AT A RATE OF 1 TON PER ACRE WITHIN 48 HOURS OF SEEDING. MULCH SHOULD THEN BE DISC ANCHORED TO KEEP IT FROM BLOWING AWAY.

SEEDING SHALL BE APPLIED FROM APRIL 15 - JULY 30 ON SEPTEMBER 20 - FREEZE UP.

IF HYDROSEEDING UTILIZE APPROXIMATELY 500 GALLONS OF WATER FOR JOBS. RETIRE TO M/2007 SPEC. 3884 FOR PROPER INSTALLATION OF HYDRO-SEED. ALL NATIVE SEEDS USED ON THIS PROJECT SHALL BE CERTIFIED TO BE OF MINNESOTA ORIGIN BY THE MINNESOTA CROP IMPROVEMENT ASSOCIATION (MCA). SITE TO BE PREPARED BY LOOSENING TOPSOIL TO A MINIMUM DEPTH OF 3 INCHES. THE SITE TO BE HARROWED OR RAKED FOLLOWING SEEDING, AND THEN PAKED USING A CULTIVATOR OR EQUIVALENT. THE CONTRACTOR SHALL VERIFY DAMAGE, INCLUDING REPAIRING, RESEEDING, AND/OR EQUIPMENT. THE CONTRACTOR SHALL VERIFY DAMAGE, INCLUDING REPAIRING, RESEEDING, AND/OR EQUIPMENT, AS NECESSARY, BEFORE SIGNIFICANT DAMAGE OCCURS.

MAINTAIN SEEDED AREAS BY WATERING, REMULCHING AND REPLANTING AS NECESSARY TO ESTABLISH A UNIFORMLY DENSE STAND OF THE SPROUDED GRASSES UNTIL ACCEPTED. ANY AREAS FAILING TO ESTABLISH A STAND SHALL BE RESEEDED, HYDROSEEDING AND REMULCHING IMMEDIATELY FOR RESPECTIVE OVERSEEDING. RESEEDING SHALL CONFORM WITH THE MINNESOTA CROP IMPROVEMENT ASSOCIATION (MCA) SPECIFICATIONS.

THE CONTRACTOR SHALL REPAIR ANY DAMAGE TO THE WORK AREAS RESULTING FROM DROPPING AND/OR EQUIPMENT. THE CONTRACTOR SHALL VERIFY DAMAGE, INCLUDING REPAIRING, RESEEDING, AND/OR EQUIPMENT, AS NECESSARY, BEFORE SIGNIFICANT DAMAGE OCCURS.

REFER TO MN STATE SEED MIX MANUAL.

**2 SHRUB PLANTING DETAIL**  
NOT TO SCALE

**3 PERENNIAL PLANTING DETAIL**  
NOT TO SCALE

**1 TREE PLANTING DETAIL**  
NOT TO SCALE

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

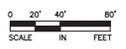
MARK HENRIKSON, P.L.A. ASLA  
5/19/21  
DATE (Issue No.)  
BY (Issue No.)  
QUALITY ASSURANCE/CONTROL

DATE	ISSUE
5-7-21	CITY PLANNING SUBMITTAL
5-27-21	CITY COMMENTS
6-8-21	CITY COMMENTS/SUBMITTAL
6-15-21	CITY PLANNING SUBMITTAL

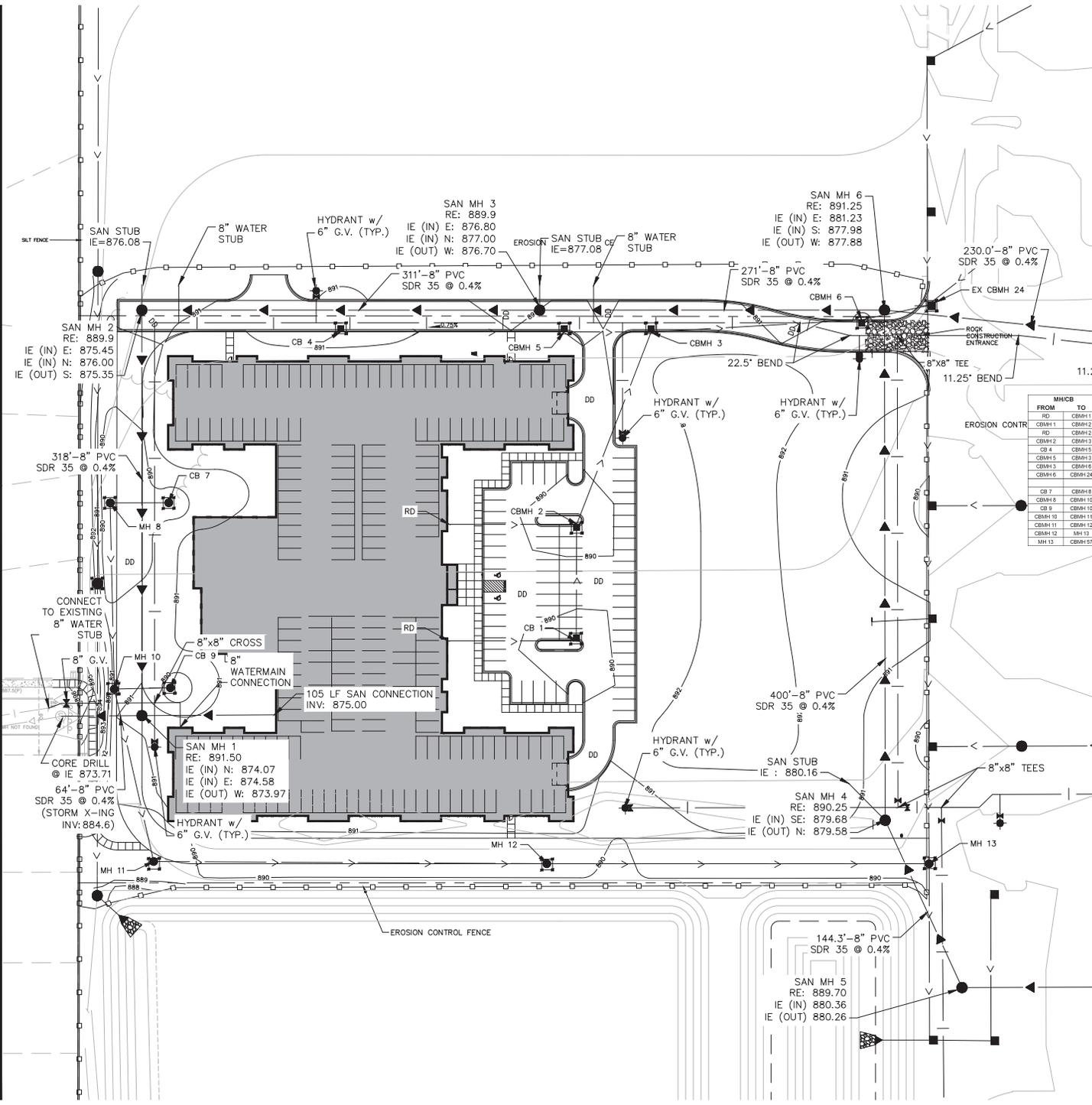
PROJECT TEAM DATA  
DESIGNED: MK  
DRAWN: MS  
PROJECT NO.: 217-0159

FOR REVIEW ONLY  
**PRELIMINARY**  
NOT FOR CONSTRUCTION

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



Drawing name: X:\2017\170159\plan sheets\Roers-utility\170159-Roers-utility.dwg Sep 10, 2021 3:09pm



- UTILITY NOTES:**
- EXISTING UTILITIES, SERVICE LOCATIONS AND ELEVATIONS SHALL BE VERIFIED IN FIELD PRIOR TO CONSTRUCTION.
  - MAINTAIN A MIN. 18" VERTICAL SEPARATION AT ALL PIPE CROSSINGS. LOWER WATERMAIN AS NECESSARY W/ BENDS AND FITTINGS. WATER AND SANITARY SEWER LINES TO MAINTAIN 10' HORIZONTAL SEPARATION.
  - CONTRACTOR IS RESPONSIBLE FOR ALL PERMITS PRIOR TO THE START OF CONSTRUCTION.
  - PROVIDE POLYSTYRENE INSULATION FOR ALL STORM SEWER AND WATERMAIN CROSSINGS WHERE VERTICAL OR HORIZONTAL SEPARATION IS LESS THAN 3'.
  - ALL UTILITY WORK WITHIN THE R.O.W. SHALL COMPLY WITH THE CITY ENGINEERING GUIDELINES.
  - NOTIFY GOPHER STATE ONE CALL 48 HOURS IN ADVANCE OF ANY UTILITY WORK.
  - PROVIDE TEMPORARY TRAFFIC CONTROL IN COMPLIANCE WITH MNDOT "TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS-FIELD MANUAL" LATEST REVISION, FOR ANY CONSTRUCTION WITHIN PUBLIC R.O.W.
  - ALL STORM SEWER CASTINGS SHALL BE NENAH OR APPROVED EQUAL.
  - WATERMAIN, SERVICES, AND VALVES SHALL BE INSTALLED WITH MINIMUM 7.5" OF COVER.
  - WATER SERVICES MAY BE PLACED IN SAME TRENCH AS SEWER SERVICES PROVIDED THAT A 24" VERTICAL & A 36" HORIZONTAL SEPARATION ARE MAINTAINED.
  - ALL 6" AND 8" WATERMAIN SHALL BE PVC C900.
  - PIPE LENGTHS LISTED IN SCHEDULE ARE MEASURED FROM CENTER TO CENTER OF SHOWN STRUCTURES.
  - ROOF DRAINS (RD) TO BE CONSTRUCTED PER ARCHITECTURAL PLANS. CONTRACTOR TO TIE ROOF DRAINS TO PROVIDED STORMSEWER MANHOLES.
  - HYDRANT GATE VALVES SHALL NOT BE PLACED IN THE CURB.
  - ALL SANITARY SEWER MANHOLES SHALL BE 48" DIAMETER W/ NENAH R-1642 CASTINGS (OR APPROVED EQUAL). SEE DETAIL SHEET.
  - MANHOLE 3A FOR POTENTIAL FUTURE CROSSING UNDER CSAH 14.
  - CONTRACTOR TO COMPLETE DENERGIZING AS NEEDED FOR ALL UTILITY INSTALLATION.
  - SANITARY SEWER SERVICE SHALL BE SCHEDULE 40 PVC WITH SERVICE CLEANOUTS REQUIRED EVERY 100 FEET AND AT CHANGES IN DIRECTIONS. SINGLE LID COVER SHALL BE "TORQ" TYPE "A", STAMPED "SEWER C.O." TO DESIGNATE USE. CLEANOUTS SHALL BE CONSTRUCTED PER CITY OF BLAINE STANDARD DETAIL PLATE NO. SSS-8.
  - NOTE ON UTILITY PLANS: CONTACT CITY OF BLAINE ENGINEERING DEPARTMENT AT (763) 785-6172 FOR INSPECTION OF ALL UTILITY WORK.

**STORMSEWER SCHEDULE:**

FROM	TO	P. DIA. [IN]	P. SLOPE S [FT/FT]	P. TYPE	PIPE LENGTH [FT]	INVERT ELEV.	TO INVERT ELEV.	STR. TYPE	CAST TYPE	BUILD [FT]	PIPE CLASS	
RD	CBMH 1	12	0.0050	HDPE	100.0	888.50	888.50	9	9	4.00	N-12	
RD	CBMH 2	12	0.0050	HDPE	69.0	884.50	884.05	48	R-3067-V	6.00	N-12	
RD	CBMH 2	12	0.0200	HDPE	100.0	888.50	884.50	890.50	48	R-3067-V	4.00	N-12
CBMH 2	CBMH 3	12	0.0040	HDPE	91.7	884.05	883.40	890.50	48	R-3067-V	6.45	N-12
CB 4	CBMH 5	12	0.0040	HDPE	175.3	888.00	885.30	890.00	2X3	R-3067-V	4.00	N-12
CBMH 5	CBMH 3	12	0.0040	HDPE	68.3	885.30	885.03	890.50	48	R-3067-V	5.20	N-12
CBMH 5	CBMH 6	12	0.0040	HDPE	195.4	883.40	882.74	890.50	48	R-3067-V	7.10	N-12
CBMH 6	CBMH 24	18	0.0040	HDPE	53.1	882.74	882.53	890.90	48	R-3067-V	8.16	N-12
CB 7	CBMH 8	12	0.0040	HDPE	48.0	889.70	889.52	889.70	2X3	R-4342	4.00	N-12
CBMH 8	CBMH 10	12	0.0040	HDPE	146.0	885.42	884.83	889.25	48	R-1542	3.83	N-12
CB 9	CBMH 10	12	0.0050	HDPE	44.0	889.70	889.44	889.70	2X3	R-4342	4.00	N-12
CBMH 10	CBMH 11	12	0.0055	HDPE	138.7	884.73	883.97	891.00	48	R-1642	6.27	N-12
CBMH 11	CBMH 12	12	0.0055	HDPE	308.5	883.87	882.17	888.90	48	R-4342	4.63	N-12
CBMH 12	MH 13	12	0.0055	HDPE	200.0	882.07	880.42	890.50	48	R-1542	8.43	N-12
MH 13	CBMH 27	48	0.0031	HDPE	138.3	888.42	879.99	889.00	72	R-1642	8.98	N-12

**UTILITY LEGEND:**

- >—> PROPOSED STORM SEWER
- >—> PROPOSED SANITARY SEWER
- >—> PROPOSED WATERMAIN
- >—> PROPOSED STORM CATCH BASIN/MANHOLE
- >—> PROPOSED SANITARY MANHOLE
- >—> PROPOSED BUTTERFLY/GATE VALVE
- >—> PROPOSED POST INDICATOR VALVE
- >—> PROPOSED REDUCE
- >—> PROPOSED HYDRANT
- >—> PROPOSED RRAP (REFER TO DETAIL FOR QUANTITIES)
- >—> EXISTING GATE VALVE
- >—> EXISTING HYDRANT
- >—> EXISTING WATERMAIN
- >—> EXISTING STORM MANHOLE
- >—> EXISTING STORM SEWER
- >—> EXISTING SANITARY MANHOLE
- >—> EXISTING SANITARY SEWER

**PROJECT TEAM DATA**

DESIGNED: [blank] / [blank]  
 DRAWN: [blank] / [blank]  
 PROJECT NO: 217-0189

**QUALITY ASSURANCE/CONTROL**

DATE: [blank] ISSUE: [blank]  
 5-27-21 CITY PLANNING SUBMITTAL  
 8-27-21 CITY COMMENTS  
 9-10-21 CITY COMMENTS - WATERMAIN  
 9-10-21 CITY PLANNING SUBMITTAL

**C-5.0**

**ALLIANT**  
 733 Marquette Ave, Ste 700  
 Minneapolis, MN 55402  
 612.758.3080 www  
 612.758.3099 fax  
 www.alliant-inc.com

**ROERS - HAVENWOOD OF BLAINE**  
 125TH AVE N. (MAIN STREET) AND JEFFERSON ST. NE  
 BLAINE, MINNESOTA

**PLANNING SUBMITTAL**

**UTILITY PLAN**

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed PROFESSIONAL ENGINEER under the laws of the State of MINNESOTA.

8/19/21  
 Date License No.  
 [blank] [blank]

**QUALITY ASSURANCE/CONTROL**

BY DATE  
 [blank] [blank]

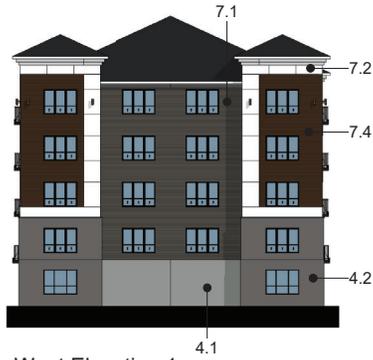
**PROJECT TEAM DATA**

DESIGNED: [blank] / [blank]  
 DRAWN: [blank] / [blank]  
 PROJECT NO: 217-0189

**C-5.0**



Exterior Material Key	
Material Mark	Description
4.1	Precast Panel with Formliner Pattern: RECKLI Ob
4.2	Souix City Brick - Vintage Black Velour
5.2	Aluminum Balcony - Color: Black
7.1	CFB Alternating Lap Siding - Color: Benjamin Moore Kendall Charcoal
7.2	CFB Panel - Color: White
7.3	CFB Lap - Color: BM Wrought Iron
7.4	CFB Lap - Woodtone Roasted Walnut
8.1	Vinyl Window - Color: Black
8.2	Glazing



① West Elevation 1  
1" = 30'-0"



② South Elevation 1  
1" = 30'-0"



③ West Elevation 2  
1" = 30'-0"



④ North Elevation 3  
1" = 30'-0"



⑤ West Elevation 3  
1" = 30'-0"

### Exterior Material Key

Material Mark	Description
4.1	Precast Panel with Formliner Pattern: RECKLI Ob
4.2	Souix City Brick - Vintage Black Velour
5.2	Aluminum Balcony - Color: Black
7.1	CFB Alternating Lap Siding - Color: Benjamin Moore Kendall Charcoal
7.2	CFB Panel - Color: White
7.3	CFB Lap - Color: BM Wrought Iron
7.4	CFB Lap - Woodtone Roasted Walnut
8.1	Vinyl Window - Color: Black
8.2	Glazing



① South Elevation 2  
1" = 30'-0"



② East Elevation 1  
1" = 30'-0"



③ North Elevation - 1  
1" = 30'-0"

Exterior Material Key	
Material Mark	Description
4.1	Precast Panel with Formliner Pattern: RECKLI Ob
4.2	Souix City Brick - Vintage Black Velour
5.2	Aluminum Balcony - Color: Black
7.1	CFB Alternating Lap Siding - Color: Benjamin Moore Kendall Charcoal
7.2	CFB Panel - Color: White
7.3	CFB Lap - Color: BM Wrought Iron
7.4	CFB Lap - Woodtone Roasted Walnut
8.1	Vinyl Window - Color: Black
8.2	Glazing

**BLAINE RISOR ACTIVE ADULT (55+) MULTIFAMILY PROJECT- 184 UNITS**



4 4

**CUP Amendment**  
**HyVee Retail node at Main Street and Jefferson Street, Blaine, MN 55449**  
**Project Narrative**  
**September 10, 2021**

**Developer:** Roers Companies: 110 Cheshire Lane, Suite 120 Minnetonka, MN 55305

**Architect:** Kaas Wilson Architects

**Engineering:** Alliant Engineering





## 1. DEVELOPER BACKGROUND

Roers Companies is a fully integrated real estate development and property management company with assets operating and under construction totaling over \$1 Billion. Based in Minnetonka, Minnesota, the company builds and operates communities across the Midwest with over 48 assets spread across Minnesota, Iowa, North Dakota, South Dakota, and Wisconsin. They take pride in the communities they build and seek to build long term relationships with the cities and neighborhood they invest in. Because of this focus on owning their projects after construction, Roers is very intentional about the use of the highest quality materials, finishes, and appliances in the construction of their buildings and in the provision of a well-managed, attractive, and secure resident experience during operation.

## 2. PROJECT VISION

Roers Companies is proposing a new construction, rental housing community in Blaine, Minnesota. This 184 unit active adult community would be in close proximity to a range of new developments including retail and convenience. The primary retail node is the approved HyVee development, which is at the intersection of Jefferson Street and 125<sup>th</sup> Avenue. Residents of this rental housing project will have immediate access to 125<sup>th</sup> Avenue without impacting existing single-family residential areas and will have a quick and direct approach onto highway 65 from 125th. With these positive conditions, Roers is confident this location will serve Blaine's growing 55+ high density housing demand very well and will lease quickly.

The project as it is currently envisioned will include an H Shaped four story wood framed, pitched roofed apartment building constructed over a one-story parking garage that will be partially below grade. The apartments will consist of a mix of one, One plus Den, and two bedroom units all with numerous high-end upgrades such as: granite countertops, stainless steel appliances, walk in closets, full size washers and dryers, etc. Roers intends to include an amenity rich community to help foster a sense of community. The planned community amenities for this market rate project include:

- Fitness Center- An approximate 1,000 SF fitness center with state of the art equipment overlooking the outdoor pool/courtyard area.
- Community Lounge- Large open shared community lounge that can accommodate private events (birthday, holiday, and other event parties) and overlooks the outdoor pool/courtyard area to engage residents and create a sense of community.
- Heated Parking- Enclosed parking will be available for resident use in the underground heated garage.
- Outdoor Patio- An outdoor patio area will be situated near the pool and have outdoor seating and grill stations to encourage outdoor resident engagement.
- Coffee Bar- A gourmet coffee machine will be provided for residents to use for residents with on the go lifestyles and also helps brings residents to common areas to further the community engagement.





- Pet Spa- A large majority of our residents have pets and this amenity space will include a stand up pet wash station, dryer, as well as treats for their loved ones.
- Indoor Pool- An Indoor pool is currently planned and will be available for the residents to use year round.
- Pickleball Court- A pickleball court is currently planned for resident use aligning with current trends for active adult residents.





Swing Traffic Solutions

May 20, 2021

**To: Jeff Koch, Roers Companies**

**From: Vernon Swing, PE**

**Re: Trip Generation and Parking Analysis for Havenwood of Blaine, Blaine, MN**

Per your request, Swing Traffic Solutions, LLC has conducted a trip generation and parking demand analysis for the proposed Havenwood of Blaine development in Blaine, MN. The site is located on the south side of 125<sup>th</sup> Avenue NE and on the west side of Jefferson Street NE. The proposed plan will create a 187-unit continuing care senior residential community and will include 203 parking spaces, 86 of which will be in an underground garage and 117 of which will be surface spaces. The purpose of this study is to estimate the number of trips the site will generate, and to estimate the peak parking demands for the proposed use and determine if sufficient parking capacity will be provided with the development.

**Trip Generation**

The trip generation for the proposed Havenwood of Blaine has been estimated based on the methodology described by the Institute of Transportation Engineers (ITE) in *Trip Generation*, 10<sup>th</sup> Edition. The proposed use corresponds with ITE Land Use Codes 255, Continuing Care Retirement Community. Table 1 summarizes the findings based on the number units and assumes conditions consistent with suburban areas.

**Table 1**  
**Trip Generation – Continuing Care Community**

Land Use	ITE Code	AM Peak Hour Trips		PM Peak Hour Trips	
		Enter	Exit	Enter	Exit
Continuing Care Retirement Community	255	17 Trips	9 Trips	12 Trips	18 Trips
<b>TOTAL Trips</b>		<b>26 Trips</b>		<b>30 Trips</b>	

As shown in Table 1, the new use is estimated to generate 26 trips, 17 trips entering and 9 trips exiting trips during the AM traffic peak hour time, and 30 trips, 12 entering and 18 exiting during the PM traffic peak time. Based on the results reported in Table 1, the traffic impacts of this development are minimal.

**Parking Demand**

The parking demand forecast for the proposed Havenwood of Blaine continuing care retirement community development utilized *Parking Generation*, 5th Edition, published by ITE, the Institute of Transportation Engineers. The ITE information for Land Use Code 255 associated with Continuing Care



### Swing Traffic Solutions

Retirement Communities indicates the number of parking spaces needed to address the demand associated with this land use can be estimated based on the number of dwelling units or on the number of occupied dwelling units included with the project. As the number of occupied dwelling units is unknown at this time, the number of dwelling units was used for this estimate. In this case, there are 187 residential units.

The parking demand calculation includes two methods. The first method is based on a rate of parking demand per “unit” determined from a weighted average of collected data. The second method is based on a fitted curve equation generated to fit the collected data. ITE recommendations as to the appropriate method are as follows:

From ITE:

“When the data plot includes at least 20 points and when a fitted curve is provided the fitted curve equation should be used if the R square value is 0.75 or greater.

Coefficient of Determination (R squared )— the percent of the variance in the number of parked vehicles associated with the variance in the independent variable value. This value is presented for every fitted curve equation. If the R squared value is 0.75, then 75 percent of the variance in the number of parked vehicles is accounted for by the variance in the size of the independent variable. As the R squared value approaches 1.0 the better the fit; as the R squared value approaches zero, the worse the fit.”

In this case, there are only 4 data points but the fitted curve equation was chosen as the regression analysis resulted in the R squared value of 0.99 (nearly perfect) indicating this is the most accurate method for estimating demand (see attached sheet from ITE). The Parking Demand is calculated as follows, with P representing Parking Demand, and X representing the number of bedrooms:

$$\begin{aligned} \ln(P) &= 0.95\ln(X) + 0.32 \\ P &= 198 \text{ Spaces} \end{aligned}$$

As mentioned earlier the proposed development is planning to provide 203 parking spaces, exceeding the anticipated peak demand calculated at 198 spaces.

### Conclusion

In conclusion, the development will generate new traffic, however, the roadway system providing access to this area has sufficient capacity to handle the increase in traffic and the development will have a minimal impact on the surrounding roadway system. Also, the proposed Havenwood of Blaine development along has sufficient parking for the anticipated demand. The parking supplied as part of the overall development exceeds the anticipated needs. Please contact Vernon Swing at [vswingtraffic@gmail.com](mailto:vswingtraffic@gmail.com) or 612-968-4142 with any questions.

### Attachment: ITE Parking Demand Sheet



**STS**

Swing Traffic Solutions

# Continuing Care Retirement Community (255)

**Peak Period Parking Demand vs: Dwelling Units**

**On a: Weekday (Monday - Friday)**

**Setting/Location: General Urban/Suburban**

Peak Period of Parking Demand: 8:00 a.m. - 4:00 p.m.

Number of Studies: 4

Avg. Num. of Dwelling Units: 162

**Peak Period Parking Demand per Dwelling Unit**

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
1.09	1.02 - 1.19	1.05 / 1.19	***	0.08 ( 7% )

**Data Plot and Equation**

*Caution – Small Sample Size*

