AGENDA
Planning Commission Regular Meeting
Tuesday, August 27, 2024
6:30 PM
City Council Chambers, City Hall

1. **CALL TO ORDER/PLEDGE OF ALLEGIANCE**
2. **ADDITIONS TO AGENDA**
3. **AUDIENCE INPUT**
4. **CONSENT AGENDA**
   a. Minutes of the July 23, 2024 Regular Meeting
5. **OLD BUSINESS**
   a. Request by KJ Walk for approval of a PUD Final Site and Building Plan and a Major Amendment to the Rosewood Commons Planned Unit Development Agreement to allow for the construction of two commercial buildings with outdoor dining and a drive-through facility.
6. **PUBLIC HEARINGS**
   a. Request by Today's Life Childcare for a Site Plan Review
   b. Request by Kwik Trip for approval of a PUD Final Site and Building Plan and a Conditional Use Permit
   c. Request by David Weekley Homes for a Variance from the Rear Yard Setback Requirement for Principal Structures in the R-1 PUD - Low Density Traditional Residential Planned Unit Development Zoning District.
   d. Request by RGA Holdings, LLC to rezone 211 acres of land from AG-Agriculture to B2-Employment.
   e. Request by Independent School District 196 for approval of a rezoning, Conditional Use Permit, Preliminary and Final Plats, Site Plan and Building Design Review, and a Zoning Ordinance Text Amendment to allow for a school with various sports fields and play areas to be built on site.
7. **NEW BUSINESS**
8. **DISCUSSION**
9. **ADJOURNMENT**

ROSEMOUNT PLANNING COMMISSION
REGULAR MEETING PROCEEDINGS
JULY 23, 2024

CALL TO ORDER/PLEDGE OF ALLEGIANCE

Pursuant to due call and notice thereof a regular meeting of the Planning Commission was held on Tuesday, July 23, 2024, at 6:30 PM. in Rosemount Council Chambers, 2875 145th Street West.

Chairperson Kenninger called the meeting to order with Commissioners Reed, Rivera, Beadner, Ellis, and Whitman. Commissioner Buggi was absent.

Staff present included the following: Community Development (CD) Director Kienberger and Planner Hogan.

The Pledge of Allegiance was said.

ADDITIONS TO AGENDA

None.

AUDIENCE INPUT

Sally Wilkowske - 13579 Crossglenn Path Rosemount, MN 55068
CD Director Kienberger let Wilkowske know that she is welcome to the next City Council meeting to discuss her concerns.

CONSENT AGENDA

a. Minutes of the June 25, 2024 Regular Meeting

Commissioner Whitman requested that a sentence be added under the Public Hearing item c. stating, "Commissioner Whitman expressed concerns that there was not enough information in the record to make a decision regarding whether the 'unique circumstances' criterion had been met."

Motion by Kenninger **Second by** Reed

Motion to approve the Consent Agenda with the modification to Item C. within the Public Hearing Commissioner Comments.

Ayes: 6.
Nays: None. Motion Carried.

OLD BUSINESS

PUBLIC HEARINGS

a. Request by KJ Walk for approval of a PUD Final Site and Building Plan and a Major Amendment to the Rosewood Commons Planned Unit Development Agreement to allow for the construction of two commercial buildings with outdoor dining and a drive-through facility.

Planner Hogan presented the Planned Unit Development (PUD) final site and building plan and major amendment to the Rosewood Commons PUD for construction of two commercial buildings. The major amendment would include deviations from the code related to landscaping, exterior materials, and parking surface setbacks.

Commissioner Comments

Commissioner Reed asked if the use of the site is fixed or if the use can be changed, and about any signage placed on the site. Planner Hogan shared that the use just needs to be a permitted use under the MX-2 zoning district to be allowed within the site and buildings. Hogan noted that the applicant will have to apply for separate sign permits to the City to make sure the signage meets the requirements of the zoning district. Commissioner Whitman verified with Planner Hogan that the signage would go through a separate review process, not part of Planning Commission's approval. Commissioner Whitman asked for further information to support the outdoor dining area and drive-through facility standards as a condition of the applicant's approval. CD Director Kienberger deferred to the applicant to expand upon the users of the site, site development plans, and to provide findings on the required standards.

Chair Kenninger noted that the conditions were the same from last year's application, in which Planner Hogan verified the submitted materials were the same as last year's application from 2023. Chair Kenninger asked if there is an opportunity to re-evaluate the parking needed, therefore not requiring the setback to be reduced to zero feet (0'). Hogan deferred to the applicant for further information. Chair Kenninger and Commissioner Ellis discussed the audible noise regulations with Planner Hogan as it pertains to the outdoor restaurant patio. Commissioner Whitman shared his thoughts that there should be a design of a menu board and its location to give the Planning Commission a better idea of how that may impact standards. The Commission expressed they would like to see updated plans based on staff requests made in 2023 and from this meeting, reduced or eliminated parking in the north, additional landscaping, and the location of the menu board and speaker. CD Director Kienberger shared that the item could be continued to allow staff and the applicant to provide and make revisions to be presented at another future meeting. Commissioner Rivera and Reed expressed that they would be comfortable continuing the item for revisions before approval. Commissioner Whitman requested findings and facts that support all the standards set forth in order for Planning Commission to review and approve the project.

The Public Hearing opened at 6:57 p.m.

Warren Israelson, KJ Walk Inc. - 6001 Egan Drive, Ste 100, Savage, MN 55378

Israelson discussed with the Planning Commission about minimum parking, required landscaping, and the menu board location for the drive-through. The applicant shared that there are two interested tenants in the eastern building and there is not an interested tenant yet for the standalone sit-down restaurant. Israelson shared that the location of the drive-through menu board is unknown, but there will only be one drive-through for one of the restaurants.

The Public Hearing closed at 7:12 p.m.

Motion by Kenninger **Second by** Reed
Motion to close the Public Hearing.
Ayes: 6.
Nays: None. Motion Carried.

Motion by Kenninger **Second by** Beadner
Motion to continue the Item to the August 27, 2024 Planning Commission Meeting.
Ayes: 6.
Nays: None. Motion Carried.

NEW BUSINESS

None.

DISCUSSION

CD Director Kienberger and the Planning Commission acknowledged and thanked CD Technician Alysha Grant for her time working with the City before her next steps in her career.

Chair Kenninger shared that Frana was nominated as the Top Project of the Year and a finalist for Contractor of the Year award. Kenninger discussed the next meetings planned for the Commission.

ADJOURNMENT

There being no further business to come before the Planning Commission at the regular meeting, the meeting was adjourned at 7:24 p.m.

Respectfully submitted,

Alysha Grant
Community Development Technician

ROSEMOUNT MINNESOTA

EXECUTIVE SUMMARY

Planning Commission Regular Meeting: August 27, 2024
Tenative City Council Meeting: October 15, 2024

AGENDA ITEM:	Request by KJ Walk for approval of a PUD Final Site and Building Plan and a Major Amendment to the Rosewood Commons Planned Unit Development Agreement to allow for the construction of two commercial buildings with outdoor dining and a drive-through facility.	**AGENDA SECTION:** OLD BUSINESS
PREPARED BY:	Julia Hogan, Planner	**AGENDA NO.** 5.a.
ATTACHMENTS:	Site Location , Updated Site Plan, Updated Grading Plan, Updated Landscape Plan, Trash Encloser, Lighting Plan, Architectural Elevations , Staff Report from the July 23, 2024 Planning Commission Meeting	**APPROVED BY:** AK
RECOMMENDED ACTION: Motion to continue the Planning Commission agenda item until the Planning Commission Meeting on September 24, 2024.		

BACKGROUND

UPDATE

The Planning Commission is being asked to continue its review of a multi-component application from KJ Walk, Inc. to the next regular Planning Commission meeting on September 24, 2024. The applicant had requested a PUD Final Site and Building Plan and Major Amendment to the Rosewood Commons Planned Unit Development Agreement to allow for the construction of two commercial buildings with outdoor dining and a drive-through facility. These requests were presented to the Planning Commission at their regular meeting on July 23, 2024, where ultimately the Planning Commission voted to continue the item until the August 27, 2024, meeting due to the need for additional information and updating of submitted materials.

The Planning Commission requested the applicant update the submitted materials to reflect the updated zoning code and additional detailed information that the Commission felt the submittal was missing. They requested that the updated site plan show a decrease in parking stalls on site to reflect the recently updated off-street parking requirements in the zoning code. The applicant was asked to increase the parking lot landscaping due to the need for fewer parking stalls, eliminate or reconfigure parking stalls on the northern end of the site to offset the 0-foot parking surface setback requirement amendment that is being requested to the Rosewood Commons PUD agreement and removal of the ash trees from the landscape plan. The Planning Commission also wanted to see an update in the uses in the commercial buildings as off-street parking requirements are different for every use, location of

the drive-through order board and an example of what the proposed order board would look like as well as 3D renderings or more completed architectural elevations/visuals.

The applicant resubmitted an updated site plan, grading plan and landscape plan to city staff. The site plan showed a decrease in parking stalls by 10 stalls but did not include an update on the primary uses in the eastern commercial building on site. The drive-through area was shown to be reconfigured on the north side of the building where the cars are shown to exist from the drive-through. The parking surface on the northern end of the site was shifted south to offset the setback issue from the northern property line. Staff will need to verify with the applicant that the parking is setback 10-feet from the northern property line. It appears on the updated site plan that there is a rectangular looking object near the southern end of the eastern commercial site that looks to be a potential order board for the proposed drive-through. On the site plan, it does not outright call that object a menu board, which would need to be updated. Also, an example/visual of what the proposed drive-through order board would look like was not provided as part of the re-submittal. An additional patio area is now shown on the site plan as well directly west of the northern restaurant use in the eastern commercial building.

The landscape plan was updated to replace the ash trees with maple and birch trees. Additional trees were shown to be added to the site along the northern boundary line, two additional trees adjacent to the newly added patio space near the eastern commercial building and three trees south from the patio area of the western commercial building. 11 total additional trees were added to the site, which brought the total of trees up from 25 trees with the original landscape plan to 36 trees.

RECOMMENDATION

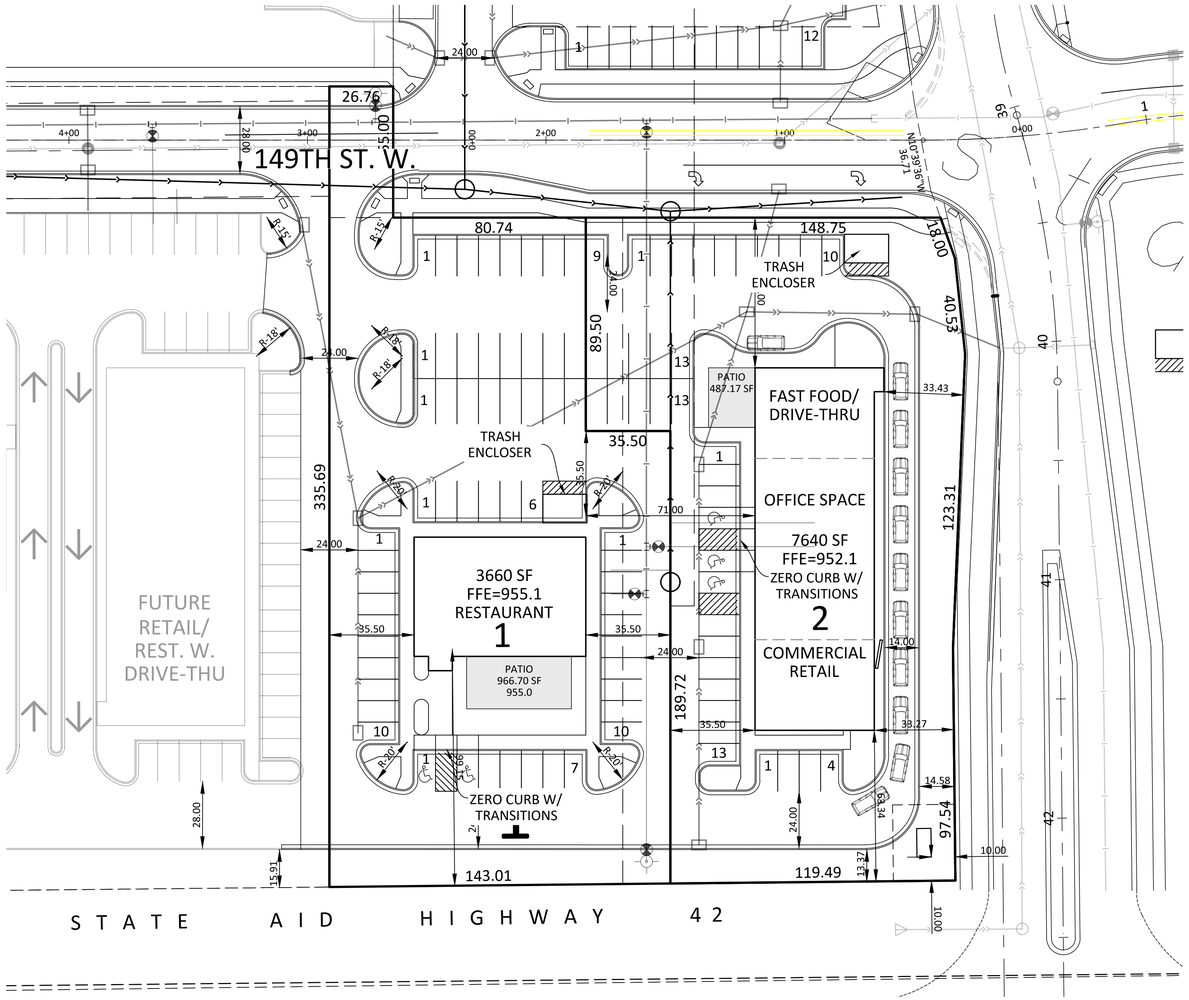
Though some of the plans were updated to reflect the requests that the Planning Commission were asking for, there are still additional materials that are missing from the re-submittal. Staff is recommending this item be continued until the September 24, 2024, Planning Commission meeting in order for the applicant to have time to submit additional materials/documentation related to their requests.

ROBERT TRL S
148TH ST W
BUSINESS PKWY
149TH ST W
150TH ST W
150TH ST W
ST W
ST W

ROSEWOOD COMMONS SECOND ADDITION

Rosewood Commons				
Use and Parking Requirements				
Lot/Block	USE	UNITS / AREA	# of Seats 1/30 Total Floor Area	REQUIRED PARKING
Lot 1 Blk 1	Restaurant	3,660 Sq Ft	122	
Lot 1 Blk 1	Patio	1454 Sq Ft	49	
Lot 2 Blk 1	Restaurant	1,940 Sq Ft	64	
Lot 2 Blk 1	Retail	1,900 Sq Ft	6 per 1000 Sq Ft	
Lot 2 Blk 1	Office	3,800 Sq Ft	5 per 1000 Sq Ft	
Total Required				##
Total Provided				95

Surface materials for the streets/parking, sidewalks and driveways will be a combination of blacktop, concrete and stamped concrete.



SHEET INDEX

1 Cover and Site Plan
2 Grading and Erosion Control
3 SWPPP
4 Landscape Plan

DEVELOPER/ENGINEER/BUILDER

KJ Walk, Inc.
6001 Egan Drive, Ste 100
Savage, MN 55378

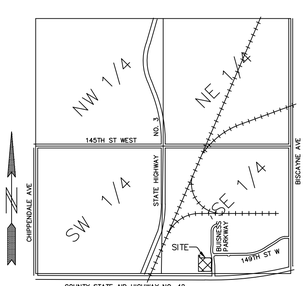
Luke Israelson
952.826.9068

Legal Description:
Lot 1 and 2, Block 1, Rosewood Commons Second Addition, Dakota County, Minnesota.

BENCHMARK

T.N.H AT 149TH ST W AND BUSINESS PARKWAY - ELEV. 949.75

DATUM: NAD83



SECTION 29, TWP. 115, RGE. 19
LOCATION MAP
NO SCALE

Impervious vs Pervious		
Area	Sq Ft	Percent
Total Area	74,963	
Building Foot Print	11,200	14.94%
Green Space	13,355	17.82%
Parking	43,108	57.50%
Sidewalks	7,300	9.74%

Legend

- Existing watermain
- Proposed watermain
- Existing sanitary
- Proposed sanitary
- Existing storm
- Proposed storm
- Existing hydrant
- Proposed hydrant
- Existing gate valve
- Proposed gate valve
- Existing manhole
- Proposed manhole
- Proposed catchbasin
- Silt fence
- Inlet protectors
- Parking lot lights
- Building Lights
- Rip Rap
- Drainage Arrow
- Spot Elevation
- Back of Curb Spot Elevation

KJwalk INC.
6001 Egan Drive, Ste 100, Savage, MN 55378
Phone: 952.226.3200 Web: www.kjwalk.com

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

Luke Warren Israelson
Registration #: 51362
Date: 8/16/2024

Date:	Revision:
05/15/2023	Original
05/31/2023	Revised
06/09/2023	Revised
06/29/2023	Revised
08/16/2024	Revised

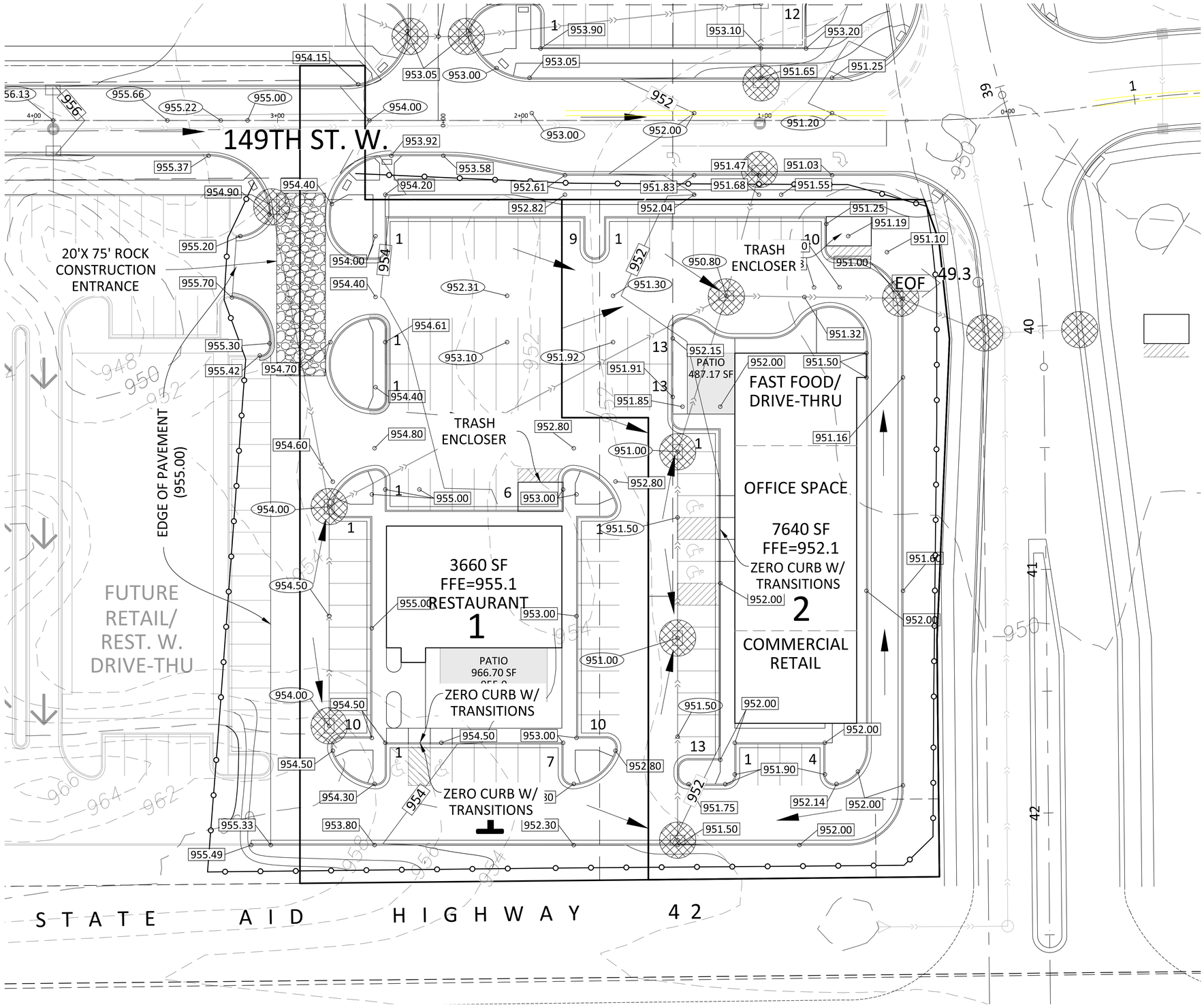
ROSEWOOD COMMONS SECOND ADDITION
ROSEMOUNT, MN

For Review
August 16, 2023

Cover-Site Plan

SHEET 1 of 4

FILE PATH: G:_shortcut-targets-by-id\0B7rATRBOKEB5GQ2TG9ZOxUTg\Work Files\Rosemount Projects\Rosewood Commons\Engineering\CAD\DWGs\RWCOMMONS2 - Site Plan.dwg



LEGEND

- SILT FENCE
- INLET PROTECTORS
- DRAINAGE ARROW
- 963.90 SPOT ELEVATION
- 952.80 BACK OF CURB SPOT ELEVATION

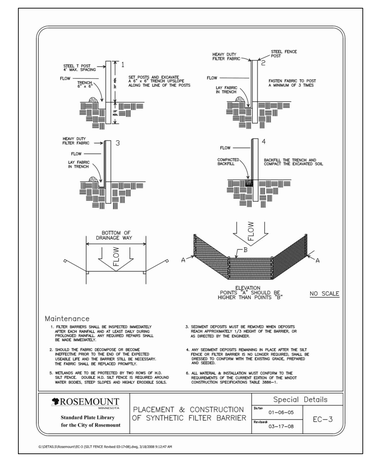
NOTES:

DISTURBED AREAS TO BE TEMPORARY SEEDED AND MULCHED WITHIN 14 DAYS OF STOPPAGE OF WORK.

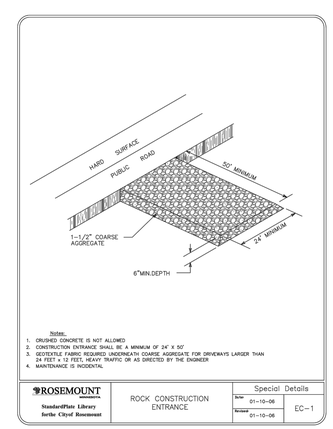
PERMANENT COVER TO BE INSTALLED WITHIN 14 DAYS OF FINAL GRADE BEING ESTABLISHED.

TEMPORARY SEEDING AND PERMANENT SEEDING IN UNDEVELOPED AREAS TO BE EROSION CONTROL MIX

FINISH SEED/SOD TO BE BLUEGRASS AND/OR FESCUES.



Silt Fence to be installed along perimeter of construction area prior to the start of work.



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6001 Egan Drive, Ste 100, Savage, MN 55378
Phone: 952.226.3200 Web: www.kjwalk.com

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06/29/2023	Revised
08/16/2024	Revised

ROSEWOOD COMMONS SECOND ADDITION

ROSEMOUNT, MN

For Review
August 16, 2023

Site Plan- Grading and Erosion Control Plan

SHEET 2 of 4

SWPPP (STORM WATER POLLUTION PREVENTION PLAN)

GENERAL PROJECT INFORMATION:

RESPONSIBLE PARTIES:
The Contractor and Owner must apply for coverage under the MPCA's General Storm Water Permit for Construction Activity as required by the National Pollutant Discharge Elimination System (NPDES) Phase II program. Coverage under the permit will begin automatically 7 calendar days after the postmarked date on the permit application. [Longer time frames apply to sites that: (1) disturb areas greater than 50 acres AND discharge within 1 mile of a Special or Impaired Water; or (2) Use alternative storm water treatment techniques].

Owner:	KJ Walk, Inc.	Luke Israelson	<952.226.3200>
		Contact Person	Phone
SWPPP Preparer:	KJ Walk, Inc.	Luke Israelson	<952.226.3200>
		Contact Person	Phone
Contractor:	KJ Walk, Inc.	Luke Israelson	<952.226.3200>
		Contact Person	Phone
Person Responsible For Inspections:	KJ Walk, Inc.	Luke Israelson	<952.226.3200>
		Contact Person	Phone
Party Responsible for Long Term O&M of Permanent Storm Water Management Facility:	City of Rosemount		
		Contact Person	Phone

PROJECT LOCATION:

County, State	Township	Range	Section(s)	Latitude	Longitude
Dakota, MN	115	19	29		

PROJECT DESCRIPTION:
This project includes disturbance of approximately 8.6 acres. Construction activities include Stripping of topsoil and stock piling of material.

Soils on the site are primarily of Hydrologic Soil Group Type A, with high infiltration capacity.

Planned Construction Start Date: 08/01/2023
Estimated Construction Completion Date: 12/01/2024

PROJECT AREAS:
Total Project Size (disturbed area) = 1.72 AC

Existing area of impervious surface = 0.03 AC
Post construction area of impervious surface = 1.45 AC
Total new impervious surface area created = 1.42 AC

STORM WATER MANAGEMENT:
Type of storm water management used if more than 1 acre of new impervious surface is created:

- Wet sedimentation basin [X]
- Infiltration [ ]
- Filtration [ ]
- Regional pond [ ]
- Permanent storm water management not required [ ]
- Alternative methods [ ]

Required Water Quality Volume:	0.12 ACRE FT
Design Water Quality Volume:	6.598 AF
Elevation of Water Quality Volume Storage:	937.90
Surface Area at Water Quality Volume Storage:	N/A
Allowable Discharge of Water Quality Volume:	N/A
Designed Discharge for Water Quality Volume:	N/A
Required Infiltration Volume:	0.12 ACRE FT
Designed Infiltration Volume:	7.59 ACRE FT

RECEIVING WATERS:
Surface waters which will receive storm water from the site within 1 mile of project boundary. Include waters shown on USGS 7.5 minute quad and all waters identified in Appendix A of the permit.

Name of Water Body	Type (ditch, pond, wetland, lake, etc.)	Appendix A Special Water?	Flows to Impaired Water within 1 mile?	USEPA Approved TMDL?

Impairment: _____

CONSTRUCTION ACTIVITY NOTES:

EROSION PREVENTION PRACTICES:
Phased construction will be used to extent practical or as indicated in the plans to minimize exposed soils.

Areas not to be disturbed shall be delineated with flags, stakes, signs, silt fence, etc. prior to work beginning. The normal wetted perimeter of all ditches or swales, including storm water management pond slopes, that drain waters from the site must be stabilized within 200' of any property edge or discharge point, including storm sewer inlets, within 24 hours of connection.

Energy dissipation or other outlet treatment must be installed within 24 hours of connection.

All exposed soils must be stabilized as soon as possible but in no case later than 7 days after the construction activity has temporarily or permanently ceased.

Seed and/or sod, fertilizer, and mulch shall be placed as indicated in the plans and project specifications.

Rapid stabilization shall be of type and quantity indicated in the project specifications. Additional rapid stabilization may be necessary to minimize erosion throughout the duration of the project. Type and quantity shall be determined by the engineer or inspector prior to installation.

If the Contractor stockpiles material on site, he shall install the appropriate erosion control devices around the stockpile and perform the best management practices possible to avoid erosion from the stockpile.

Temporary (or permanent) sedimentation ponds are required for areas > 10 acres of disturbed soils draining to one point.

SEDIMENT CONTROL PRACTICES:
Installation of silt fence and all other down gradient sediment protection measures shall be completed prior to commencement of upstream land disturbing activities.

Silt fence shall be installed along constant contours with continuous lengths not to exceed 600 feet. As indicated on plans, silt fence will be periodically broken and hooked upslope in "J-hook" or "smile" patterns to provide ponding and slow runoff.

No unbroken slope lengths greater than 75 feet are permitted when slope is 3:1 or greater. Slope shall be broken with silt fence or biorolls as indicated on plans.

BMP	QUANTITY
Silt Fence	1100 LF
Rock Constrution Entrance	1 Each
Temporary Seed And Mulch	0.58 ACRES
Inlet Protectors	14

Vehicle tracking to be minimized to all practical extents. All eroded material that leaves the construction zone shall be collected by the contractor and returned to the site at the contractor's expense.

All stock piles shall be surrounded by silt fence and seeded with temporary seed and mulch. See erosion and sediment control plans.

All site storm sewer inlets, as well as off site downstream inlets with potential to receive sediment, shall be protected with approved inlet protection measures at all times. Inlets shall remain protected until site is 100% stabilized and vegetation is at least 70% established. Inlet protection may be removed in winter, if the project has an approval letter from jurisdictional authority or can produce it within 72 hours.

TEMPORARY SEDIMENTATION BASINS & DEWATERING:
Temporary sedimentation basins are required prior to runoff leaving the construction site or entering surface waters when 10 or more acres of disturbed soils drain to a common location. The basin must provide 3,600 cubic feet of storage below the outlet per acre drained. If hydraulic calculations are available, the temporary sedimentation basin must provide a storage volume equivalent to the 2-year, 24-hour storm, but in no case less than 1800 cubic feet per acre drained. The temporary sedimentation basin must be constructed and made operational concurrent with the start of soil distrubance upgradient of the pond.

All dewatering on site during construction must be routed to temporary sedimentation basins.

Temporary sedimentation basins must be drained within 48 hours of any rainfall event. If the rock filtered outlets plug or cause the pond not to drain within 48 hours, ponds are to be drained with pumps. Pump inlets should be protected with a geotextile membrane and rock filter setup as shown in the details, or an approved alternative. Excessive sediment-laden water that is not properly filtered will not be permitted to discharge from site.

Dewatering practices cannot cause downstream nuisance conditions, erosion, or non-permitted wetland inundation causing adverse impacts.

POLLUTION PREVENTION:
All solid waste collected from the construction site must be disposed of in accordance with MPCA disposal requirements.

Concrete washout must be contained in a dedicated area surrounded by silt fence with proper signage

All hazardous materials (e.g., oil, gasoline, fuel, antifreeze, paint, cleaning solvents, curing compounds, fertilizers, etc.) must be properly stored (including secondary containment when necessary) to prevent spills, leaks, or other discharge. Storage and disposal of hazardous waste must be in compliance with MPCA regulations.

External washing areas must be limited to a defined area of the site. All runoff containing any hazardous material must be properly collected and disposed of. Defined area must be contained with heavy- or super-duty silt fence. NO ENGINE DEGREASING ALLOWED ON SITE.

The contractor is responsible for monitoring air pollution and ensuring it does not exceed levels set by local, state, or federal regulations. This includes dust created by work being performed on the site. Air pollution and dust control correction is considered incidental to the unit bid prices for which work is being performed. Additional dust control measures may be required by the Engineer.

INSPECTION & MAINTENANCE:
The permittees must routinely inspect the construction site once every seven (7) days during active construction and within 24 hours of a rainfall event greater than 0.5 inches in a 24 hour period.

All inspections performed during construction must be recorded and records retained on site with the SWPPP in accordance with the storm water permit. Records must include a site map showing areas of land disturbing activities and areas where activities have temporarily or permanently ceased.

Silt fence, biorolls and inlet protection devices must be maintained when non-functional or when accumulated sediment reaches 1/3 of device height.

Off site vehicle tracking to be removed within 24 hours of occurrence and the streets must be cleared of debris at the end of each day.

All non-functional BMPs must be repaired, replaced, or supplemented with functional BMPs within 24 hours of discovery, or as soon as field conditions allow access.

FINAL STABILIZATION:
The permittees must submit a Notice of Termination (N.O.T.) within 30 days of final stabilization or transferring permit responsibility to another owner or operator.

The Contractor must ensure final stabilization of the site. Final stabilization shall include a minimum of 70% vegetation establishment (100% stabilized) on all pervious areas.

All temporary erosion control measures and BMPs must be removed as part of the final site stabilization, unless directed otherwise by owner or engineer.

IMPLEMENTATION SCHEDULE & PHASING:
1) Install silt fence
2) Install rock construction entrances
3) Mass grading
4) Install utilities
5) Streets/Parking
6) Small utilities
7) Final stabilization(Finish seed/sod to be Bluegrass and/or Fescues)
8) Remove BMPs

RECORD RETENTION:
The SWPPP, all changes to it, and inspections and maintenance records must be kept at the site during construction. All owner(s) must retain the following for 3 years after submittal of NOT:
1) SWPPP;
2) Any other permits required for the project;
3) Inspection and maintenance logs;
4) All permanent operation and maintenance agreements for surface water facilities;
5) All design calculations for temporary and permanent storm water management.

PLAN SHEETS:
Sheet number 2 and 3 of this plan set is also considered a part of the SWPPP for this project.

KJwalk INC.
6001 Egan Drive, Ste 100, Savage, MN 55378
Phone: 952.226.3200 Web: www.kjwalk.com

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

Luke Warren Israelson
Registration #: 51362 Date: 8/16/2024

Date:	Revision:
05/15/2023	Original
05/31/2023	Revised
06/09/2023	Revised
06/29/2023	Revised
08/16/2024	Revised

ROSEWOOD COMMONS
ROSEMOUNT, MN

ROSEWOOD COMMONS

For Review
August 16, 2023

SWPPP PLAN

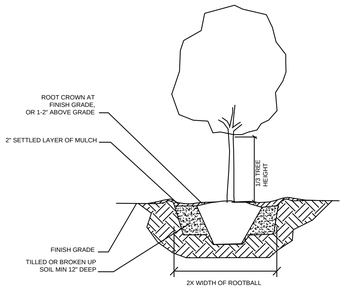
SHEET 3 of 4

FILE PATH: G:_shortcut-targets-by-id\2B7rIATRBOKE85GQ2T0Ik2OxUTg\Work Files\Rosemount Projects\Rosewood Commons\Engineering\CAD\DWGs\RWCOMMONS2 - Site Plan.dwg

Landscape Planting			
Common Name	Botanical Name	Size	
Autumn Blaze Maple	Acre Freemanii 'Jeffsred'	2.5"	12
Birch	Betula	2.5"	12
Linden	Tilia	2.5"	12
Total Trees			36
Shrubs			193
St. John's Wort, Low Grow Sumac, Tor Spirea, Hyperion Daylily, Dwarf Lilac, Or similar			
Total			229

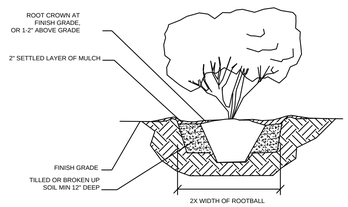
NOTES:

* CONIFEROUS TREES STAGGERED WITH 15' SPACING
* DECIDUOUS TREES-20' SPACING
* THERE ARE NO SIGNIFICANT TREES ON SITE



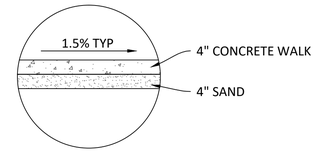
TREE PLANTING

SCALE: NOT TO SCALE



TYP. SHRUB PLANTING

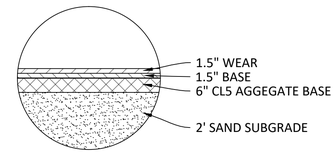
SCALE: NOT TO SCALE



TYPICAL SIDEWALK SECTION

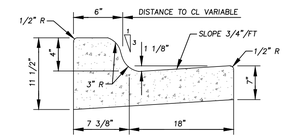
NOT TO SCALE

Paving	41,903 SQ FT
Curb and Gutter	2,100 LF
Sidewalk	5,750 SQ FT
Trash Enclosure Concrete	222 SQ FT



TYPICAL PARKING LOT SECTION

NOT TO SCALE



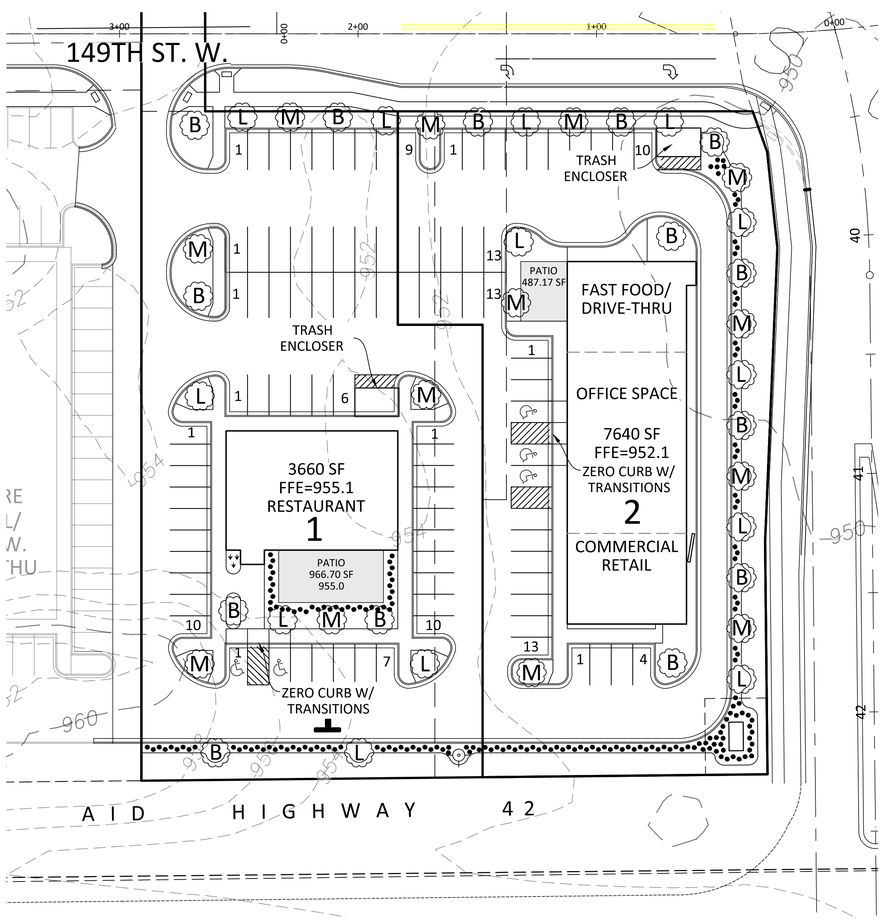
B 418 CURB AND GUTTER

NOT TO SCALE

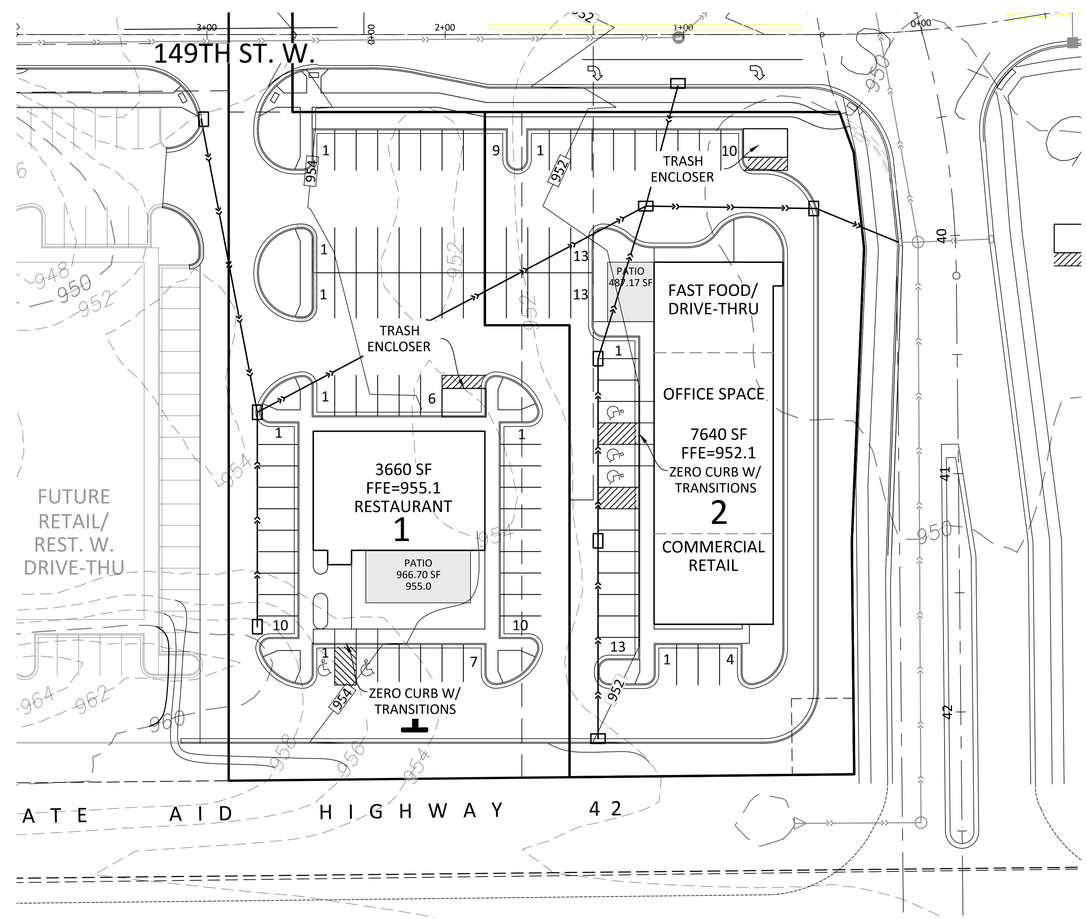
LEGEND

- MAPLE
- BIRCH
- LINDEN
- SHRUB
- FEATHER REED GRASS OR SIMILAR
- TIP-IN CURB AND GUTTER
- TIP-OUT CURB AND GUTTER

NOTE:
ALL NEWLY INSTALLED STREETS ARE PRIVATE AND WILL BE MAINTAINED PRIVATELY.



LANDSCAPE PLAN



PAVING PLAN

KJwalk INC.
6001 Egan Drive, Ste 100, Savage, MN 55378
Phone: 952.226.3200 Web: www.kjwalk.com

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

Luke Warren Israelson
Registration #: 51362 Date: 8/16/2024

Date:	Revision:
05/15/2023	Original
05/31/2023	Revised
06/09/2023	Revised
06/29/2023	Revised
08/16/2024	Revised

ROSEWOOD COMMONS SECOND ADDITION
ROSEMOUNT, MN

ROSEWOOD COMMONS

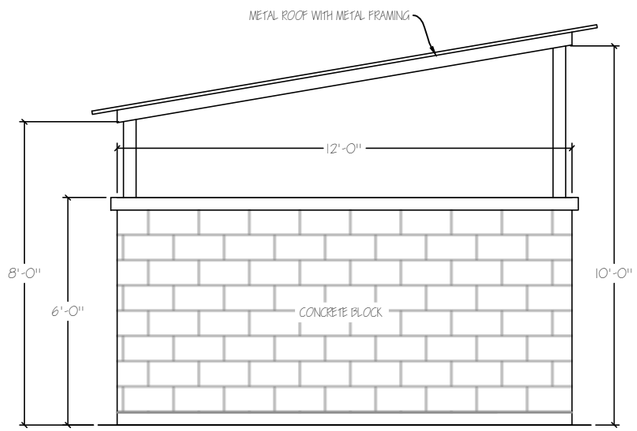
For Review
August 16, 2023

Site Plan- Paving and Landscape Plan

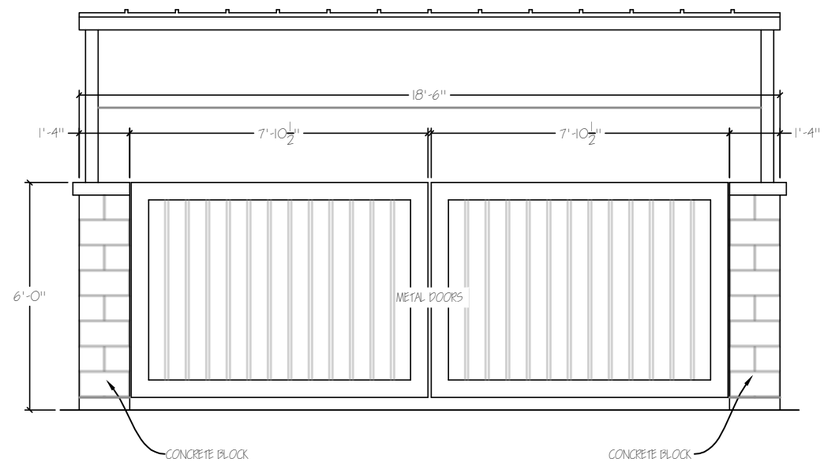
SHEET 4 of 4

FILE PATH: G:_shortcut-targets-by-id\0B7rIATRBOKEBSGQ2T0tKZOxJTg\Work Files\Rosemount Projects\Rosewood Commons\Engineering\CAD\DWG\RWCOMMONS2 - Site Plan.dwg

ROSEWOOD COMMONS SECOND ADDITION – TRASH ENCLOSURE



LEFT ELEVATION



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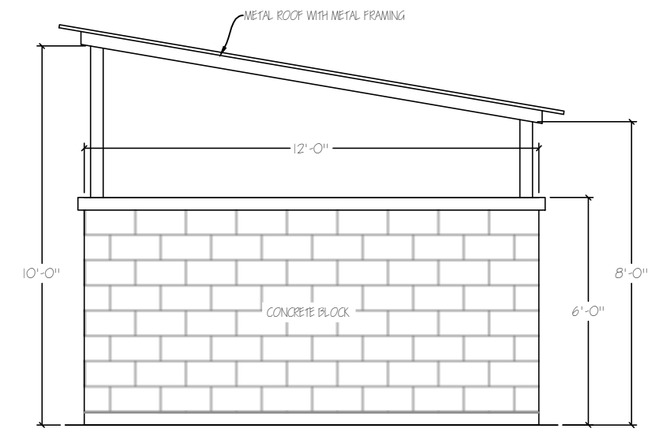
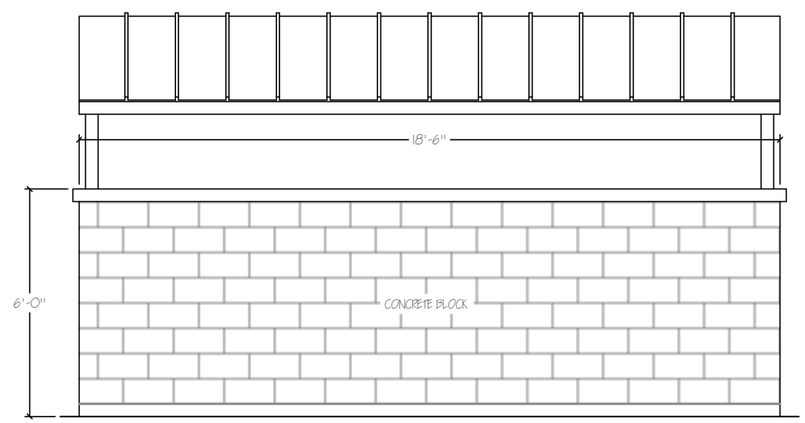


RIGHT ELEVATION

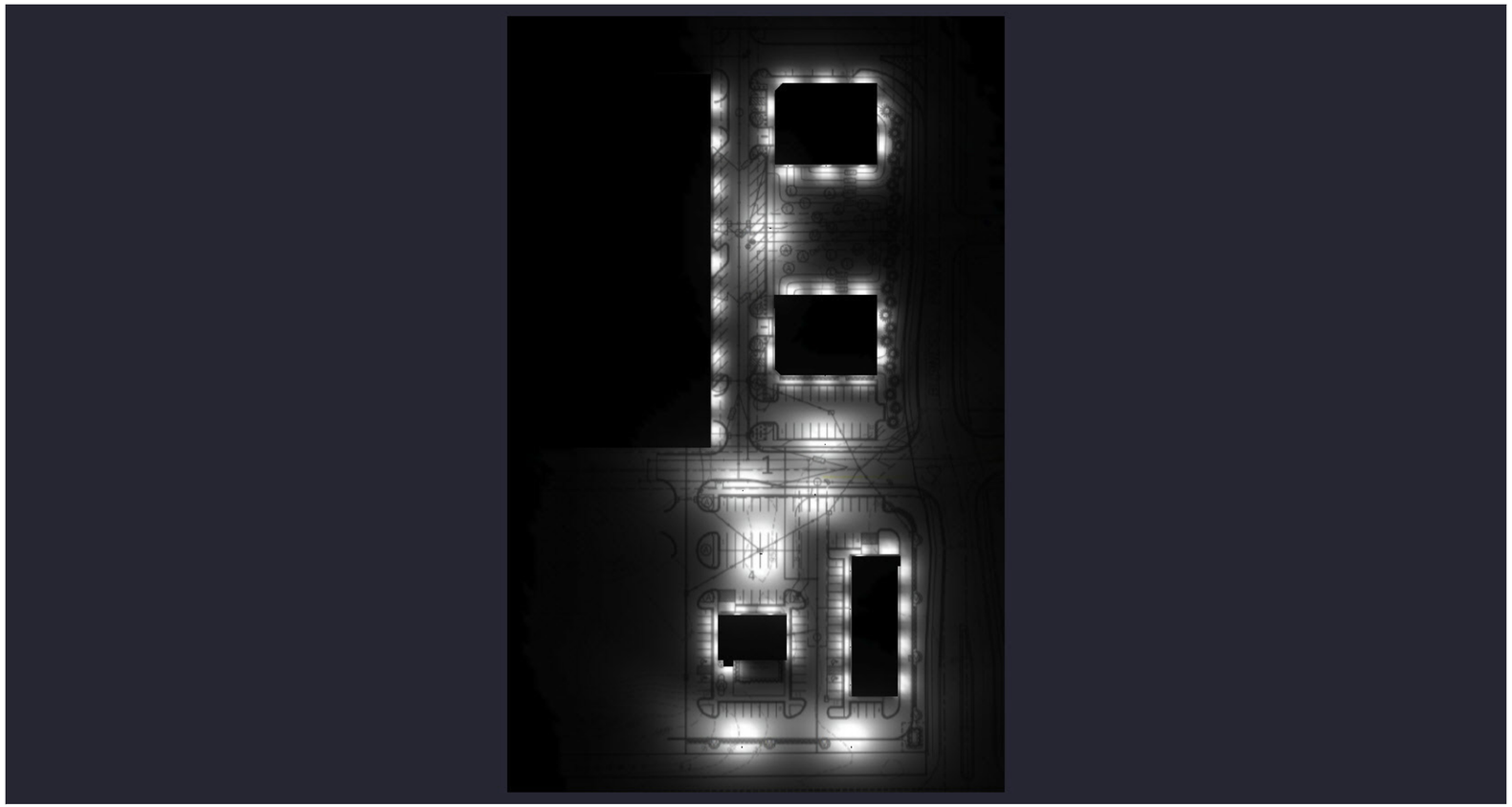


REAR ELEVATION

Calculation Summary											
Label	**CalcType**	**Units**	**Avg**	**Max**	**Min**	**Avg/Min**	**Max/Min**	**Description**	**PtSpcLr**	**PtSpcTb**	**Meter Type**
CalcPts_1	Illuminance	Fc	1.31	25.5	0.0	N.A.	N.A.	Readings Taken 0'-0" AFG	10	10	Horizontal

******LAYOUT AND BOM ARE SUBJECT TO APPROVAL******

Luminaire Schedule												
Symbol	**Qty**	**Tag**	**Label**	**Arrangement**	**Lum. Lumens**	**Arr. Lum. Lumens**	**LLF**	**Description**	**Lum. Watts**	**Arr. Watts**	**Total Watts**	**Filename**
	6	A	a17-3t150	SINGLE	21180	21180	1.000	A17-3T150	149.08	149.08	894.48	a17-3t150.ies
	1	A2	A17-3T150 2@180	BACK-BACK	21180	42360	1.000	A17-3T150	149.08	298.16	298.16	a17-3t150.ies
	46	S	slim17fa30adj_5k	SINGLE	3540	3540	1.000	SLIM17FA15ADJ_5K	29.67	29.67	1364.82	slim17fa30adj_5k.ies



NOTES:
* The light loss factor (LLF) is a product of many variables, only lamp lumen depreciation (LLD) has been applied to the calculated results unless otherwise noted. The LLD is the result (quotient) of mean lumens / initial lumens per lamp manufacturers' specifications.

* Illumination values shown (in footcandles) are the predicted results for planes of calculation either to the plane of calculation.

* The calculated results of this lighting simulation represent an anticipated prediction of system performance. Actual measured results may vary from the anticipated performance and are subject to means and methods which are beyond the control of the designer.

* Mounting height determination is job site specific, our lighting simulations assume a mounting height (insertion point of the luminaire symbol) to be taken at the top of the symbol for ceiling mounted luminaires and at the bottom of the symbol for all other luminaire mounting configurations.

* RAB Lighting Inc. luminaire and product designs are protected under U.S. and International intellectual property laws. Patents issued or pending apply.

The Lighting Analysis, Estimate, Energy Analysis and/or Visual Simulation ("Lighting Design") provided by ROUZER ("ROUZER") represents an anticipated prediction of lighting system performance based on information provided by others and assumptions made by ROUZER. The Lighting Design is based on information provided by others have not been field verified by ROUZER and therefore actual measured results may vary from the anticipated performance and are subject to means and methods which are beyond the control of the designer. Field verified to confirm variation. ROUZER neither warrants, either implied or stated with information be provided by others, nor represents the appropriateness of the lighting design for any particular purpose. ROUZER neither warrants, either implied or stated, nor represents the appropriateness of the lighting design. Where ROUZER has agreed to provide a Lighting Design, ROUZER's only obligation is to perform those specifically stated on drawings created and submitted by ROUZER. ROUZER's Lighting Design is not a lighting design or electrical design for any purpose and is not intended for construction not as being part of a project's construction documentation package.

Scale: as noted

Date:2/1/2022

Filename: Rosewood Commons.AGI

Drawn By: Bailey Ganske

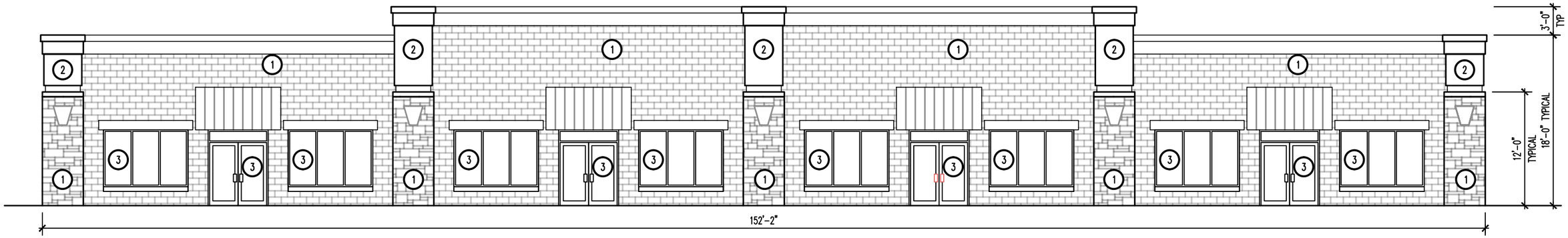
Job Name: Rosewood Commons

Lighting Layout
Version A

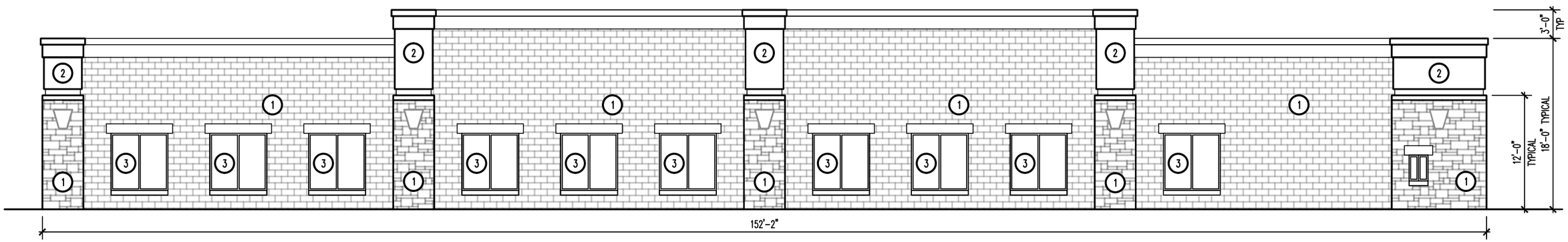
Prepared For: J.H. Larson

ROUZER GROUP

Filename: C:\Users\bailey\Desktop\AGI Layouts\Rosewood Commons.AGI



FRONT ELEVATION



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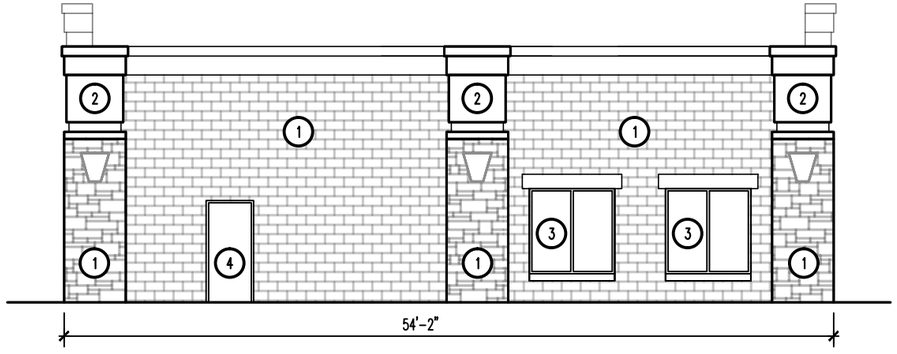
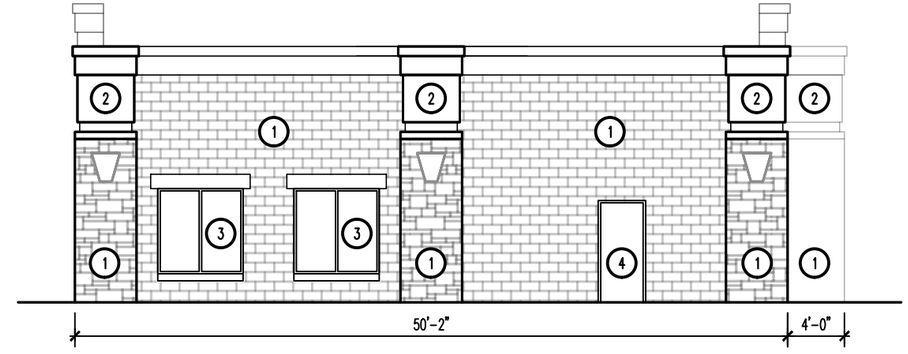
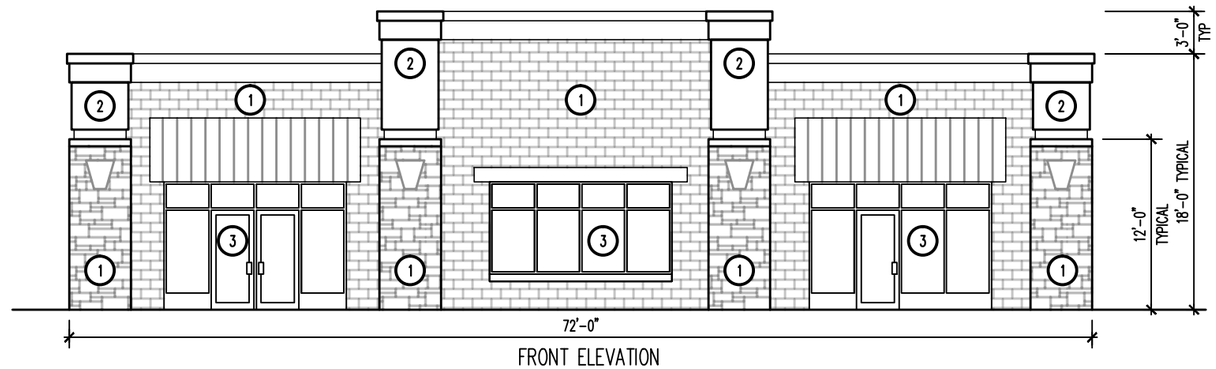


LEFT ELEVATION

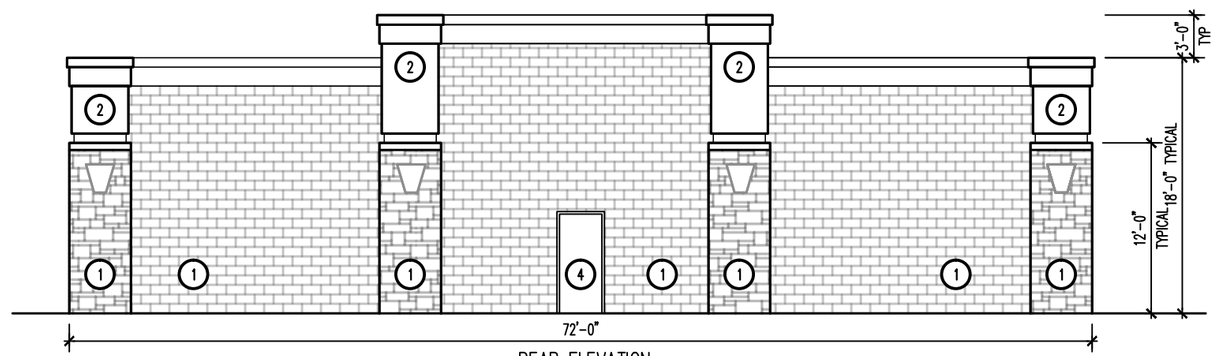


RIGHT ELEVATION

152' LONG BUILDING MATERIAL SQUARE FOOTAGES & PERCENTAGES							
MARK	MATERIAL DESCRIPTION	FRONT SF	RIGHT SF	REAR SF	LEFT SF	TOTALS	% OR TOTAL SF
1	STONE & CAP/ BRICK	1,886	700	2,155	716	5,457	69.2%
2	EIFS/ TRIM/ CORNERS	418	172	420	156	1,166	14.8%
3	ALUMINUM & GLASS STORE FRONT (DOORS & WINDOWS)	667	78	396	78	1,219	15.4%
4	HOLLOW METAL DOORS & FRAMES	0	24	0	24	48	0.6%
	TOTALS	2,971	974	2,971	974	7,890	100.0%



FRONT ELEVATION



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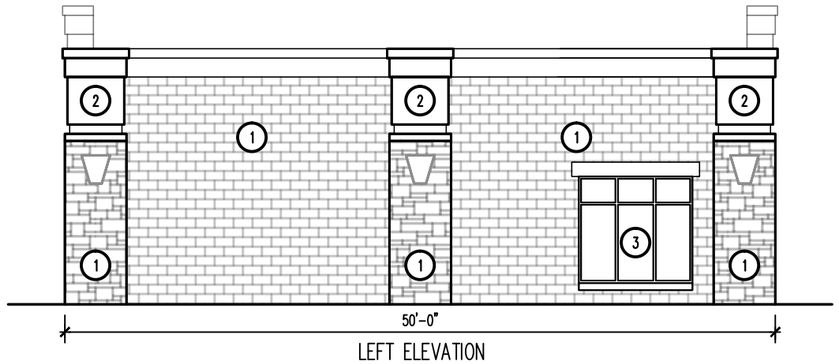
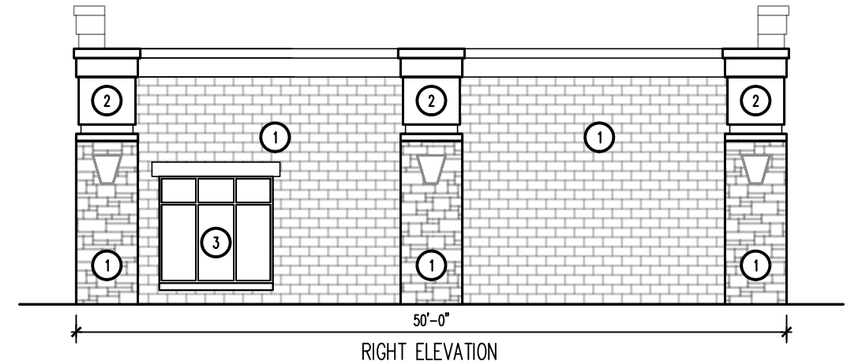
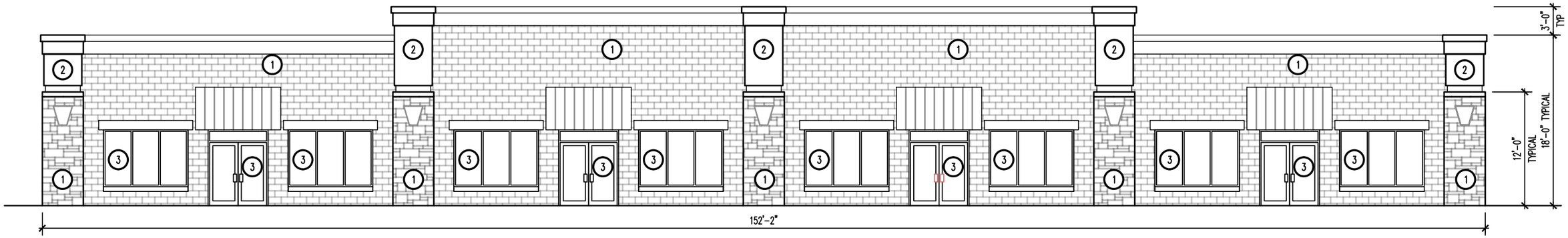


LEFT ELEVATION

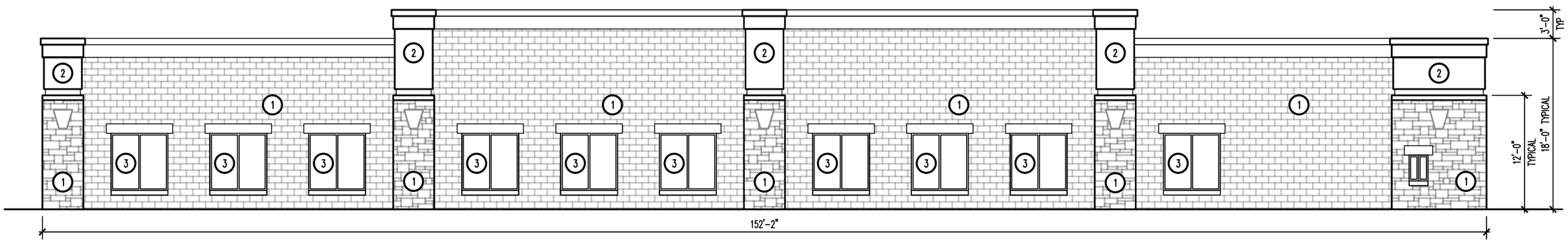


RIGHT ELEVATION

72' LONG BUILDING MATERIAL SQUARE FOOTAGES & PERCENTAGES							
MARK	MATERIAL DESCRIPTION	FRONT SF	RIGHT SF	REAR SF	LEFT SF	TOTALS	% OR TOTAL SF
1	STONE & CAP/ BRICK	825	687	1,123	687	3,322	72.9%
2	EIFS/ TRIM/ CORNERS	232	148	232	148	760	16.7%
3	ALUMINUM & GLASS STORE FRONT (DOORS & WINDOWS)	322	64	0	64	450	9.9%
4	HOLLOW METAL DOORS & FRAMES	0	0	24	0	24	0.5%
	TOTALS	1,379	899	1,379	899	4,556	100.0%



FRONT ELEVATION



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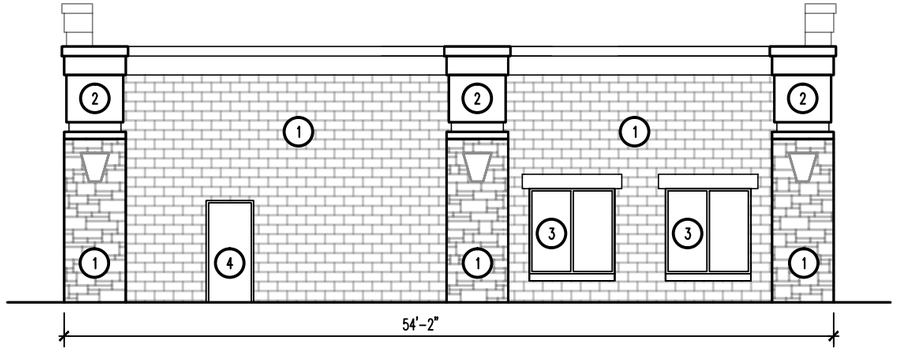

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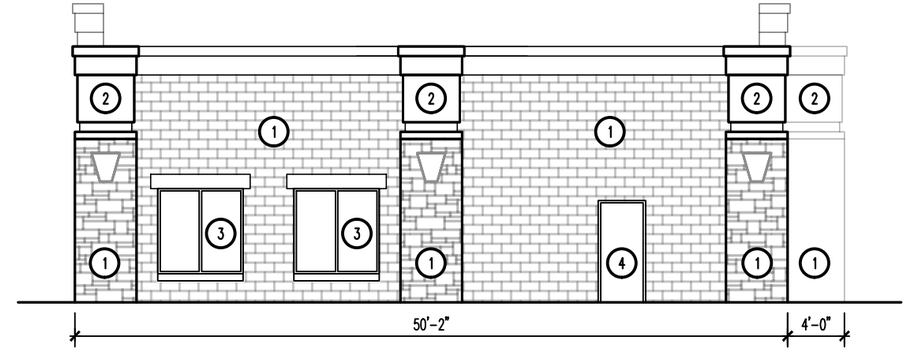

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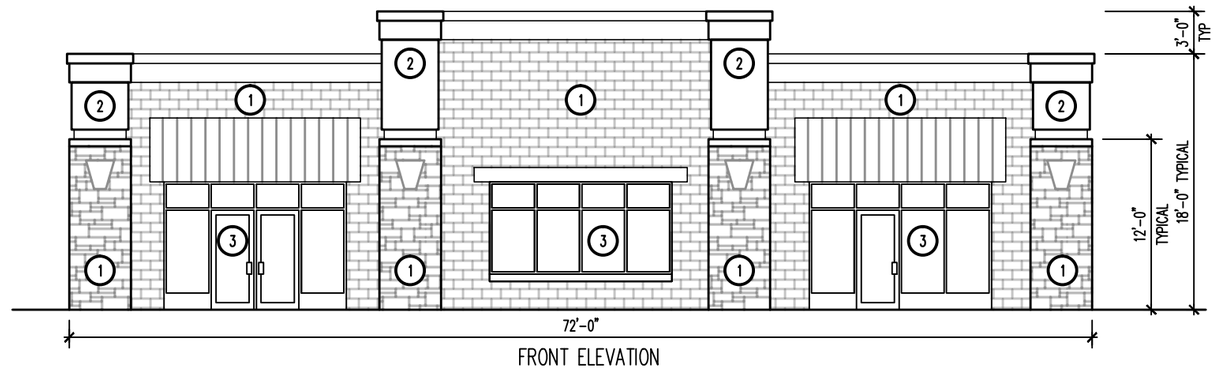

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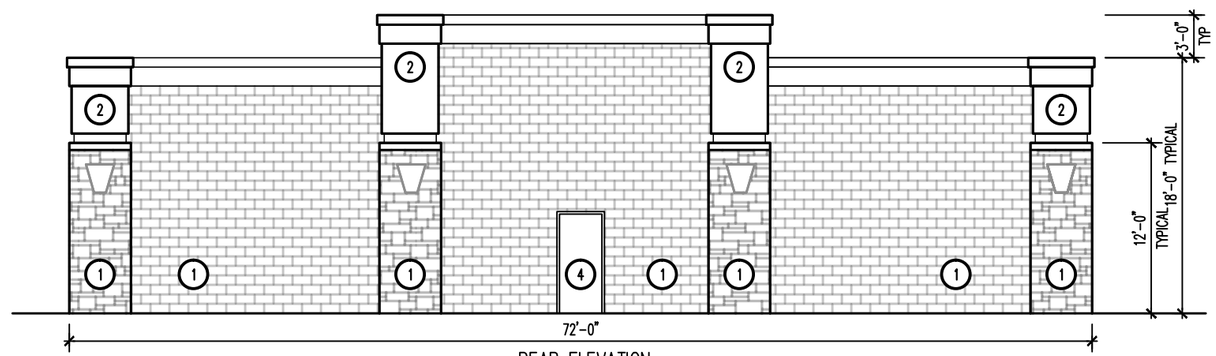

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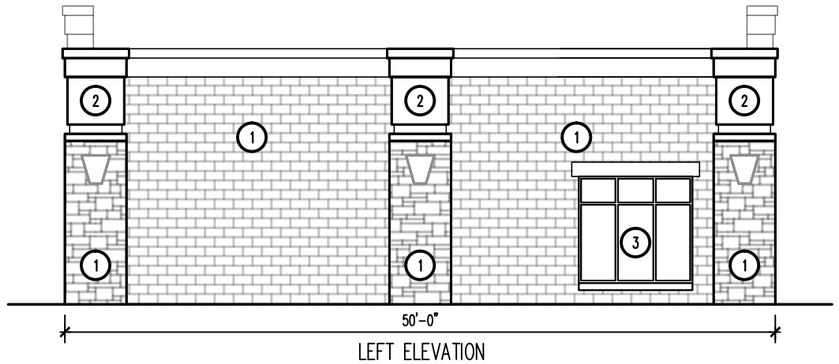
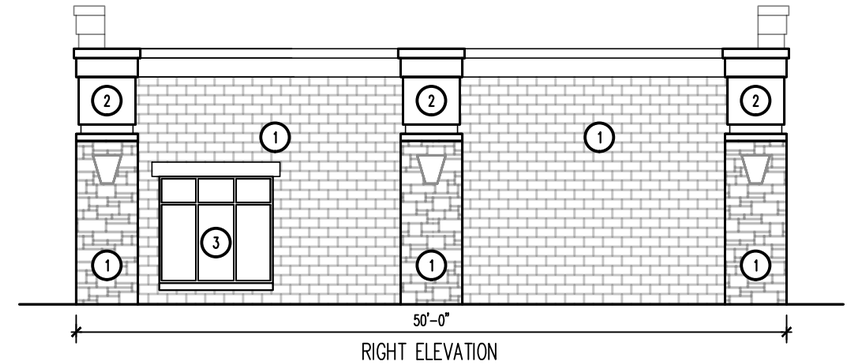


LEFT ELEVATION



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4	HOLLOW METAL DOORS & FRAMES	0	0	24	0	24	0.5%
	TOTALS	1,379	899	1,379	899	4,556	100.0%

ROSEMOUNT MINNESOTA

EXECUTIVE SUMMARY

Planning Commission Regular Meeting: July 23, 2024
Tenative City Council Meeting: August 20, 2024

AGENDA ITEM:	Request by KJ Walk for approval of a PUD Final Site and Building Plan and a Major Amendment to the Rosewood Commons Planned Unit Development Agreement to allow for the construction of two commercial buildings with outdoor dining and a drive-through facility.	**AGENDA SECTION:** PUBLIC HEARINGS
PREPARED BY:	Julia Hogan, Planner	**AGENDA NO.** 6.a.
ATTACHMENTS:	Site Location , Site Plan, Grading Plan, Landscape Plan, Trash Encloser, Lighting Plan, Architectural Elevations	**APPROVED BY:** AK, AN

RECOMMENDED ACTION:

Motion to approve the Planned Unit Development Final Site and Building Plan to allow for the construction of two commercial buildings with outdoor dining and a drive-through facility at 14904 Business Parkway and 2730 149th Street West, subject to the following conditions.

a. Approval of an amendment to the Rosewood Commons Planned Unit Development Agreement.
b. The trash enclosure plans shall be updated to feature exterior materials that match the principal structures.
c. The landscape plan shall be updated to replace ash trees with another species.
d. The applicant shall apply for a sign permit for any site signage.
e. Payment of $15,480 in lieu of park land dedication.
f. Payment of any area charges that were not collected as part of the subdivision agreement.
g. Conformance with all the required standards associated with outdoor dining and drive-through facilities.
h. No public address system shall be audible from adjacent non-commercial property boundaries.

Motion to recommend the City Council approve a Major Amendment to the Rosewood Commons Planned Unit Development Agreement, subject to:

a. A deviation from Section 11-7-6: Landscaping, Screening, and Buffering Standards to remove the requirement that the number of trees required as part of parking lot landscaping be in addition to the number of trees required based on site area.

b. A deviation from Section 11-7-3: Off-Street Parking and Loading Standards to allow for the reduction in the minimum setback requirement for parking from a private road from 10-feet to 0-feet.
c. A deviation from Section 11-7-2: Architectural Standards to allow up to 18.5% EIFS so long as the remaining non-glass areas contain at least 80% brick or stone.

BACKGROUND

SUMMARY

Applicant:	KJ Walk, Inc.
Property Owner:	KJ Walk, Inc.
Site Location:	14904 Business Parkway and 2730 149th Street West (NW of Business Parkway and CSAH 42)
Site Area in Acres:	Approximately 1.72 Acres
Current Zoning:	MX-2 PUD - Highway Mixed Use Planned Unit Development
Comp Plan Designation:	CC - Community Commercial

The applicant, KJ Walk is seeking approval of requests to construct two commercial buildings in the northwest quadrant of the intersection of Business Parkway and CSAH 42. The parcels on which the buildings would be constructed are part of the Rosewood Commons Planned Unit Development. One of the buildings will be a standalone restaurant, while the other will be a multi-tenant retail building with a drive-through facility serving a fast-food or fast-casual restaurant. The applicant is seeking deviations from the code related to exterior materials, to allow parking lot landscaping to count toward the total landscaping requirement, and a reduction in the setback requirement for parking from a private drive. Staff is recommending approval of the requests, subject to the conditions listed in the recommended action.

BACKGROUND

The City Council approved the Rosewood Commons Planned Unit Development in 2020. That approval covered the construction of six apartment buildings (two of which would have commercial space on the ground floor) and a hotel. The apartment buildings required a comprehensive plan amendment and rezoning from commercial uses to residential. The applicant also requested approval to construct a memory care facility east of Business Parkway, but that portion of their request was denied to maintain that parcel's commercial land use designation and zoning. That parcel is now the site of the New Horizon Academy, and the applicant received approval to replace the hotel component of the PUD with a memory care facility, which is now complete. The subject property the applicant is requesting approvals for was once contained in an outlot with the understanding that any development of the site would require approval of a major amendment to the Rosewood Commons PUD as well as any necessary platting.

In January 2023, the subject property was platted into two parcels along with an approval by the City Council of a PUD amendment to allow for parcels that do not meet the minimum width required by the zoning ordinance. This deviation was permitted based on the fact that the two parcels would be

part of a larger overall commercial development containing shared drive aisles and parking areas. The applicant came forward with this same request back in July 2023, but ultimately withdrew the request prior to the July 25, 2023, Planning Commission meeting. They are now seeking approval of the same requests that were applied for in 2023.

ISSUE ANALYSIS

Legal Authority

Final site and building plan reviews are *quasi-judicial* actions. In such cases, the City is acting as a judge to determine if the regulations within the Comprehensive Plan, Zoning Ordinance, Subdivision Ordinance, and Planned Unit Development Agreements are being followed. Generally, if the application meets these requirements, it must be approved.

Major Planned Unit Development Amendments are *legislative* decisions because the City is formulating public policy, which in this case is related to the proposed deviations from the zoning ordinance.

Site Plan Review

The proposed site development plans incorporate the sharing of parking and access between the two commercial buildings; therefore, the staff review comments associated with these two parcels are incorporated into one section.

Land Use and Zoning

The site is guided for CC-Community Commercial uses in the City's comprehensive land use plan, and it is within the MX-2 Highway Mixed Use zoning district. The site also is covered by the Rosewood Commons PUD overlay district. Any deviations that were approved with the initial phase of development within the PUD are only permitted within that initial development area. Likewise, the proposed deviations currently being reviewed only apply to the subject parcels being reviewed with these requests.

The proposed buildings and their anticipated uses are allowed by the zoning ordinance and are consistent with the comprehensive plan. The outdoor dining area and drive-through facility are permitted with standards within the MX-2 zoning district. A thorough review of those standards is provided later in this report.

Building Setbacks

Frontage	**Required Setback**		**Provided Setback**	
	Building	**Parking**	**Building**	**Parking**
North (149th Street West)	30 feet	10 feet	63	0
East (Business Parkway)	10 feet	10 feet	33.27	14.58
South (CSAH 42)	10+20 feet	10 feet	63.34 feet	13.37 feet
West (Lot 5, Block 1, Rosewood Commons 3rd Addition)	10 feet	10 feet	35.50	n/a

The applicant is requesting, as part of their submittal, elimination of the setback requirement related to parking on properties adjacent to a private driveway easement. Staff is supportive of this request as the site development plans include a 6' pedestrian facility between the private drive along the north side of the property and the parking area. The area to the north is part of the Rosewood Commons development. Staff would be less supportive if the area to the north of the site was a separate project or an incompatible use. The site plans show the development meeting all other setback requirements, including the additional setback requirement along the south side of the property due to its location along an arterial road.

Exterior Materials

The applicant has provided exterior elevations that include a breakdown in the percentage of each material. The zoning ordinance requires at least 50% of the building be finished with brick or stone and no more than 10% EIFS. The applicant is requesting the ability to include up to 18.5% EIFS in exchange for including stone and brick beyond that required by the zoning ordinance. The applicant's plans show that 81.8% of the non-glass areas are brick or stone on the eastern building. The non-glass areas of the western building contain 80.9% brick or stone. Staff is supportive of this request since the EIFS is limited to accent areas and the overall result is building elevations primarily consisting of brick or stone when the applicant could have identified other materials for use that would result in less brick or stone on the elevations.

Parking and Access

The site plan provided by the applicant shows a total of 102 parking spaces on the site. The applicant estimated parking requirements based on the anticipated number of seats in the restaurant areas and the square footage of the retail/office portion of the multi-tenant building. The code requires 1 stall per 300 square feet of gross floor area for both standalone retail or service business use and for business or professional office use. The code also requires 1 stall per 4 persons of the maximum occupancy for restaurant use. The applicant's original site plan provided 105 parking stalls for the area, but following the direction of staff to relocate a trash enclosure and add an additional enclosure, as well as to provide an additional parking lot island to accommodate more landscaping, the total number of parking stalls was reduced by three.

Use	Parking required
Restaurant (218 total seats @ 1 stall per 4 persons)	55 stalls
Retail (1,900 sf @ 1 stall per 300 sf)	7 stalls
Office (3,800 sf @ 1 stall per 300 sf)	13 stalls
Total Required	75 stalls
Total Provided	102 stalls

Vehicular access into the site will be made from the private roadway located immediately north of the site. The site is also bound by sidewalks on the north and east sides. The City's fire marshal requested and received an exhibit showing the turning radius of emergency apparatus within the site and has found that the site layout is able to accommodate emergency vehicles.

Landscaping
The applicant has provided a landscape plan with their submittal that generally meets the requirements of the City's zoning ordinance based on the size of the subject property. The City Code requires one tree per 3,000 square feet of site area, which in this case results in a requirement of 25 trees. There is an additional requirement related to the landscaping of the parking areas. The code requires landscaping around the parking lot equal to 10% of the total parking area, which in turn must contain one tree per 250 square feet of parking lot landscaping. This tree requirement is in addition to that required, based on the size of the site. Therefore, the total number of trees required on site is 43. Staff has worked with the applicant to update their plan to provide more parking lot landscaping, which now meets the code requirement, and to identify where more trees might be placed to get closer to the total tree requirement of 42 trees. A shortfall still exists, and staff is recommending a deviation that does not require the parking lot landscaping to be calculated in addition to that required based on site area.

The City Code also requires foundation plantings or shrubbery in an amount based on the total linear feet of building perimeter. Based on the size of the buildings, a total of 65 shrubs is required. The applicant has provided a total of 193 foundation plantings. These plantings are placed along the sides of the property that abut public rights of way and around the outdoor dining area associated with the restaurant in the western building.

The following table lays out the landscaping requirements for the site.

	Calculation Formula	Number Required	Number Provided
Site Trees	1 per 3,000 sf	74,923/3,000=25 trees	25 trees
Parking Lot Trees	1 per 250 sf	4311/250=18 trees	7 trees
Foundation Plantings	1 per 10 linear feet	644/10=65 foundation plants	193 foundation plants

Staff is also including a recommended condition that the applicant updates the final landscape plan to replace the trees identified as ash trees with another species due to the impact of the emerald ash borer on existing tree populations in the region.

Utilities
The site's sewer and water will connect to the system at stubs to mains located within the private street immediately north of the site. Stormwater will enter the City's system at a point to the east. The overall system within the Rosewood Commons PUD area was reviewed as part of the initial approval, and the development proposed for the subject parcels is consistent with what was anticipated for the site at that time. Therefore, no changes to the stormwater management infrastructure within the PUD area are needed.

Parks and Open Space
In review of the City's Parks Master Plan, no parks are identified in the subject property, therefore staff is recommending the City collect cash-in-lieu of park dedication. The City Code requires 10% of the development area be dedicated for parks and open space, which equals .172 acres. Based on the City's 2024 fee list, at $90,000 per acre the dedication fee-in-lieu is $15,480. Because the parcels are already platted, and the developer has asked to pay the fee with the building permit, the exact amount per building will be calculated and collected based on the individual parcel area.

Site Lighting
The site lighting will consist of 8' high wall-mounted lights and 20' high pole-mounted lights. These are both within the maximum height for site lighting. The applicant also provided a photometric plan that shows the lighting at the boundaries of adjacent parcels falls below the maximum lumen allowed.

Trash Enclosure
The applicant's plans show two trash enclosures constructed of materials that complement the principal structures. Staff worked with the applicant to adjust the site plan to ensure there are no conflicts with traffic movements in the site, particularly related to the drive-through facility.

Standards – Outdoor Dining Area Containing Seating for Eleven or More
Outdoor dining is an accessory use that is permitted with standards in the MX-2 Highway Mixed Use zoning district. The proposed use must comply with the specific performance standards for outdoor dining which is outlined in Section 11-6-8.A. of the City Code. These standards evaluate the city's land use and zoning performance standards and the potential impact of the proposed use on the surrounding neighborhood. These standards and staff findings for each are provided below.

1. The site and enclosure(s) shall be designed to limit the effects of outdoor seating or dining areas on contiguous properties and/or public rights of way.
Findings: The area will be located approximately 450' from the nearest residence. The applicant's plan calls for the outdoor dining areas to include foundation plantings along its perimeter. The distance and landscape design will limit the effects of the areas on contiguous properties and the public right-of-way.

2. The seating area shall be located on private property along the front, side or rear of the principal building but shall not be located within a required setback or on the side abutting any residential use or district.
Findings: The proposed outdoor seating area will be located along the south side of the building and beyond the required 30' minimum setback standard.

3. The seating area shall not interfere with circulation in any required parking, loading, maneuvering or pedestrian area. A minimum four foot (4') passageway shall be maintained along the private sidewalk for pedestrians.
Findings: The plan provided by the applicant shows a continuous sidewalk along all sides of the building and outside the outdoor dining area.

4. No public address system shall be audible from a noncommercial or nonindustrial use or district.
Finding: A condition of this approval will note that no public address system shall be audible from any residential use or district.

5. The seating area shall be located in a controlled or cordoned area acceptable to the city with at least one opening to an acceptable pedestrian walk.
Findings: The applicant's plan shows a contiguous area delineated by landscaping. If a fence is desired, staff will review the plans during the standards permit review process to ensure an opening to the sidewalk is provided.

6. When a liquor license is granted, an uninterrupted enclosure is required and the enclosure shall only have access through the principal building.
Findings: If a liquor license is requested by the future user of the site, compliance requires the presence of a continuous enclosure. Staff is recommending a condition of approval that reiterates that a fence is required in order for the site to receive a liquor license.

7. The seating area shall not be permitted within two hundred feet (200') of any residential use or district as measured at the property line and shall be separated from residential use or district by the principal structure or other method of screening acceptable to the city. The minimum distance from a residential use or district may be reduced should the city determine the applicant has added sufficient elements to reduce the impact of this use.
Findings: The outdoor dining area will be located greater than 200' from both the R1 district northeast of the site and the mixed-use area immediately north of the site. It is screened from those areas by the building itself.

Standards – Drive-Through Facility
Drive-through facilities are an accessory use that is permitted with standards in the MX-2 Highway Mixed Use zoning district. The proposed use must comply with the specific performance standards for drive-through facilities which are outlined in Section 11-6-7.H. of the City Code. These standards evaluate the city's land use and zoning performance standards and the potential impact of the proposed use on the surrounding neighborhood. These standards and staff findings for each are provided below.

1. The site and building(s) shall be designed to limit the effects of the drive-through, including noises, emissions, and headlight glare, on adjacent properties and public rights of way.
Finding: The stacking lanes, order boards and drive-through windows are configured to limit their impact on adjacent properties and public rights-of-way.

2. No use with a drive-through window shall be located abutting any residential use or district.
Finding: The drive-through window will face Business Parkway and is immediately across from another commercial district and use.

3. Stacking lanes shall not interfere with circulation through any required parking, loading, maneuvering or pedestrian area.
Finding: The stacking lanes of the drive through are located along the eastern side of the building. Parking for the site is located south, west, and north of the building, and therefore there is no interference between drive-through stacking and the parking area.

4. Stacking and exiting areas shall be screeded from adjacent properties and/or rights-of-way. Stacking areas shall have a minimum 90% opacity screen to a height of six feet while exiting areas shall have a minimum 50% opacity screen to a height of at least four feet

1. ***The principal structure shall be the primary source for screening the drive-through facility and stacking and exiting areas from adjacent properties and/or rights of way.***

2. ***Landscaping and berming shall be a secondary source for screening drive-through, stacking or exiting areas. Should landscaping and berming be found ineffective by the city, the city may approve screening walls and/or decorative fencing as an alternative.***
3. ***Screening walls shall be constructed of the same materials as the principal structure and shall not extend more than 25 feet without change in architecture to reduce their mass and appearance.***

Finding: Screening is provided by landscaping along the eastern and southern property lines and by the principal structure from the west.

5. Drive-through facilities shall have a minimum six (6) stacking spaces per drive-through window. Fast food uses operating more than one window per individual drive aisle shall meet the stacking requirements for a single drive-through facility. Each space shall be a minimum of nine feet (9') wide by eighteen feet (18') long.
Finding: The plans provided by the applicant indicate at least ten stacking spaces that are 20' long and 14' wide, which exceeds the dimensional requirements of the City Code.

6. No public address system shall be audible from a noncommercial or nonindustrial use or district.
Finding: Staff has prepared a condition stating that public address or ordering speakers shall not be audible from the boundaries of adjacent residential parcels.

7. Fast food uses may display menu boards as follows:

1. ***The menu board(s) not encroach into any parking setback and shall be located directly adjacent to the drive-through aisle and oriented in such a manner that the sign provides information to the drive-through patrons only and does not provide supplemental advertising to pass-by traffic and does not impair visibility or obstruct circulation.***
2. ***Individual menu board(s) shall be single sided with an area not to exceed 32 square feet including both sign copy and sign cabinet.***
3. ***The height of the menu board(s) shall not exceed eight feet including its base or pole measured from grade to the top of the structure.***

Finding: The actual design of the menu boards has not been provided. Staff has prepared a condition that requires conformance with the above menu board standards.

RECOMMENDATION

Staff has reviewed the plans submitted by the applicant and worked with the applicant to make improvements where possible, such as to the landscaping plan and to update the location of the trash enclosures. Staff finds that the proposed deviations result in a quality development that is in line with the City's goals contained in the comprehensive plan and the intent of the zoning ordinance. Staff is recommending approval of the requests subject to conditions.

ROSEMOUNT MINNESOTA

EXECUTIVE SUMMARY

Planning Commission Regular Meeting: August 27, 2024
Tenative City Council Meeting: Unless denied and appealed by the applicant, the Planning Commission's approval is the only action needed.

AGENDA ITEM:	Request by Today's Life Childcare for a Site Plan Review	**AGENDA SECTION:** PUBLIC HEARINGS
PREPARED BY:	Anthony Nemcek , Senior Planner	**AGENDA NO.** 6.a.
ATTACHMENTS:	Site Location, Site Plan, Paving and Drainage Plan, Grading, Erosion Control, and Utility Plan, Interior Layout, Architectural Renderings, Building Elevations, Sign, Trash Enclosure, and Storage Shed Plans, Lighting Plan and Photometric Study, Parks and Recreation Memo dated August 13, 2024	**APPROVED BY:** AK

RECOMMENDED ACTION: Motion to approve a site plan review allowing Today's Life Childcare to construct a child care center at 2634 149th Street West, subject to the following conditions:

1. Payment of $11,160.00 in lieu of park land dedication prior to the issuance of a building permit.
2. The applicant shall apply for and receive a sign permit prior to the installation of any site signage.
3. Payment of any remaining development fees not collected during the plat process.
4. The applicant shall work with the City Engineer to address the proposed retaining wall within the western perimeter easement.
5. Conformance with any requirements of the City Engineer related to the site's civil plans.

BACKGROUND

The Planning Commission is being asked to review the site plan submitted by Today's Life Childcare to construct a child care center at 2634 149th Street West. The subject parcel is located within the Rosewood Center 2nd Addition plat area on the north side of CSAH 42, approximately .4 miles east of Highway 3 and immediately east of the existing Anytime Fitness. The plans provided by the applicant meet all requirements of the zoning ordinance within the City Code, and staff is recommending approval of the site plan review to allow for the construction of the child care center, subject to the conditions listed in the recommended action section above.

Applicant	Today's Life Childcare
Property Owner	KJ Walk, Inc.
Site Location	2634 149th Street West
Site Area In Acres	1.24 Acres

Current Zoning	MX-2 Highway Mixed Use
Comp Plan Designation	CC-Community Commercial

GENERAL INFORMATION

The site of the proposed child care center is within the Rosewood Center 2nd Addition plat area. The subject parcel was originally an outlot of the Rosewood Estates single-family neighborhood immediately to the north of the commercial area along CSAH 42. This area was platted as Rosewood Center in 2014, and that year the adjacent Anytime Fitness was constructed. The City Council approved the Rosewood Center 2nd Addition Plat earlier this year to create four additional parcels, including the subject property, from an existing outlot.

The subject parcel is zoned MX-2 Highway Mixed Use, and childcare centers are listed as a use that is permitted with standards within that zoning district. In addition to the general site plan, the applicant has provided architectural drawings, a grading plan, a utility plan, and a landscape plan, all of which are included in the attachments. A formal review and analysis of this information and how it relates to the Zoning Ordinance is provided in the next section. No variances are being requested for the construction of the addition, and the proposed development meets the requirements of the zoning ordinance.

SITE PLAN REVIEW

The purpose of a site plan review is to evaluate each project as it relates to the performance and site design standards of the zoning ordinance. Site plan approval is required for all commercial, industrial, institutional and multifamily development projects.

Site plan applications are approved by the Planning Commission and considered a quasi-judicial action. As such, the City has a set of standards and requirements for review. Generally, if a site plan application meets the ordinance requirements, it must be approved. These standards are outlined in Section 11-6-3 (Use-Specific Standards) and 11-9-1 (Site Plan and Building Design Review). The two main standards specific to day care centers serving more than 12 children are that pick-up and drop off areas are located within the site and designed to avoid interfering with traffic and pedestrian movements and that outdoor recreational areas are located and designed in a manner which mitigates visual and noise impacts in any abutting residential parcels. The layout of the site meets these standards.

Site Standards

The proposed building is located towards the southern portion of the site, with the main entrance facing to the north. The northern portion of the site contains the parking lot, while to the south of the building will be fenced play areas. The table below shows the required setbacks in comparison with those provided in the site plan. The table includes an additional setback of 20’ from CSAH 42, an arterial road, for structures.

Frontage	Required Setback	Provided Setback

	Building	Parking	Building	Parking
North (149th Street West)	30 feet	20 feet	102.6 feet	30 feet
East (2592 149th St W)	10 feet	10 Feet	30 feet	15 feet
South (CSAH 42)	10+20 feet	10 feet	57 feet	219 feet
West (Business Parkway)	10 feet	10 feet	22 feet	18.4 feet

The site plan also shows a storage shed just outside the play area in the southwest portion of the site. The shed is located 10' from the west and parcel boundary and meets the setback requirement of the City Code. Additionally, the trash enclosure just west of the parking area is also 10' from the parcel boundary.

The MX-2 Mixed Use Highway district has a maximum lot coverage of 75%. The applicant's plans show a lot coverage for the site of 67%. Lot coverage is comprised of the building, paving and sidewalks, as well as fall areas and toddler turf in the outdoor play areas.

Parking and Access

Access into the site will come from a private drive that extends east over the adjacent parcel to an existing curb cut on 149th Street West. The parking area is landscaped, and traffic will circulate around a center island. The parking requirement for daycare centers is 1 stall per 5 children plus one per room with additional parking to accommodate vans or busses used by the facility. The proposed center will contain 9 rooms and accommodate 148 children. This results in a total parking requirement of 39 stalls plus room for a facility van or bus. 40 stalls are shown on the plan, in conformance with the zoning ordinance.

Required	Provided
40 Stalls (1 per 5 children plus 1 per room, with parking for a van) 30+9+1=40	40

Exterior Building Materials and Massing

The building elevations provided show a mix of materials being used on the exterior. The lower portions of the building will feature white and brown brick, while higher up a simulated-wood steel lap siding will be used. The main entrance area will feature white stone veneer, which will also be used below the windows. No EIFS or masonry stucco, of which 10% of the façade can be comprised, will be used. The MX-2 Highway Mixed Use zoning district has a requirement that at least 50% of the exterior must contain natural stone or brick. The elevations meet that minimum threshold.

The central portion of the building projects above the surrounding structure to a total height of just under 24 feet, which is below the maximum building height of 35' allowed in the C3 zoning district.

The majority of the structure is approximately 17' tall.

The outdoor storage structure will also feature brown and white brick that matches the principal structure.

Trash Enclosure

A 7'2" tall trash enclosure featuring materials like those used on the principal structure is shown on the applicant's plans. It will be located on the west side of the parking lot along the main entrance drive aisle.

Fencing

Fences are approved administratively by staff. They can be constructed up to, but not on, the property line. In non-residential zoning districts, the maximum fence height is 8'. While a complete description of the fence was not included in the submittal, and is not required, The applicant's renderings show fencing surrounding each outdoor play area and of a black steel picket design.

Signage

The applicant's elevations show wall signage that appears to meet the requirements of the zoning ordinance. The applicant will have to apply for and receive a sign permit for any site signage, including any freestanding signs. Sign permits are approved administratively by staff separately from the site plan review process. Staff is recommending a condition of approval that highlights this requirement.

Landscaping

A landscaping plan was provided by the applicant that includes a total of 25 trees, which is the minimum required by the City Code. The formula to determine the required number of trees is 1 tree per 3,000 square feet of site area, which in this case equals 18 trees. The zoning ordinance also requires landscaping in and around the parking lot in addition to the 18 trees. Based on the size of the parking lot, 7 additional trees are required for a total of 25 trees on site. The parking lot landscaping formula requires 10% of the parking lot area to be landscaped with islands and peninsulas. Within that landscaped area, one tree per 250 square feet is required. The parking lot area is 15,910 square feet in area, which means 1,591 square feet of the parking lot must be landscaped. The landscape plan includes 1,673 square feet of landscaping within the parking lot. This area is comprised of islands, peninsulas, and areas within the perimeter of the parking lot.

Also required by the landscaping ordinance is one foundation planting for every 10 linear feet of building exterior. The proposed building has 517 linear feet of perimeter, which requires a total of 52 foundation plants. The landscape plan includes 94 total foundation plantings located along the front of the building, between the parking lot and 149th Street West and within the parking lot islands and peninsulas.

	Calculation Formula	Number Required	Number Provided
Site Trees	1 per 3,000 sf	53,953/3,000=18 trees	18 trees
Parking Lot Trees	1 per 250 sf	1,591/250=7 trees	7 trees
Foundation Plantings	1 per 10 linear feet	517/10=52 foundation plants	94 foundation plants

Lighting

The applicant is proposing site lighting that consists of pole mounted lights and wall mounted lights. The wall mounted lights will be mounted at a height of 9', while the pole mounted lights will be 30' in height. The zoning ordinance allows pole mounted lights to be up to 30' tall except in areas within 100' of a residential use. In those areas, the maximum height for lighting is 20'. No lights will be located within 100' of residential uses. The maximum level of lighting allowed by the code is 0.5 lumen at adjacent residential property lines and 1.0 lumen at non-residential property lines. The applicant has submitted a photometric study that shows the levels to be within the limits established by the zoning ordinance.

Park Dedication

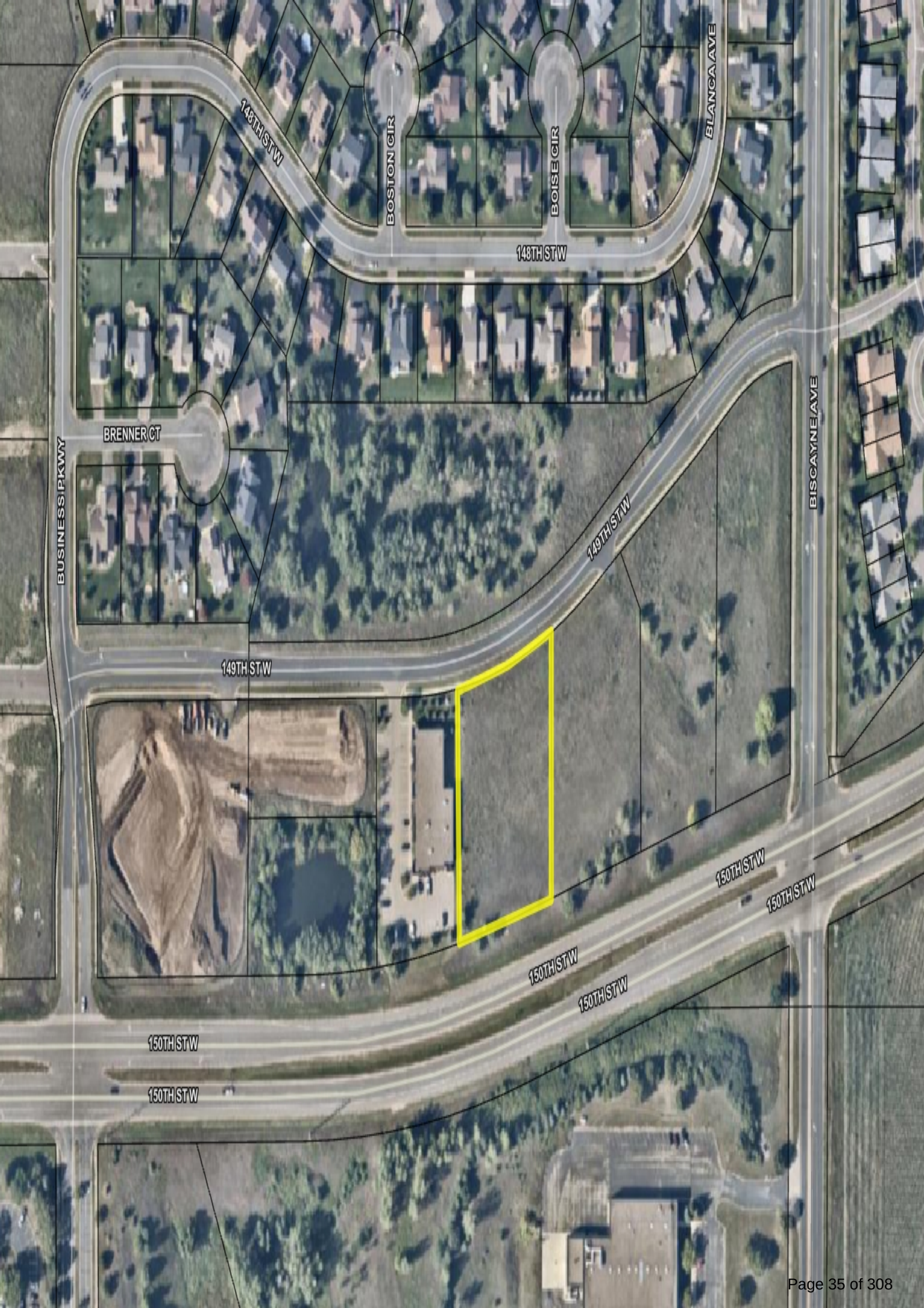
The developer of the Rosewood Center 2nd Addition plat has requested that park dedication fees be collected at the time a building permit is issued. The park dedication requirement for commercial developments is either 10% of the total property area as land dedication or cash-in-lieu of land dedication. The cash dedication for the 1.24-acre site is $11,160 (.124 acres x $90,000/acre). Staff has included the payment of the park dedication fee with the building permit fee as a recommended condition of approval.

Engineering

Sewer and water service will be provided by existing facilities located at 149th Street West, and stormwater will exit the site to storm sewer within 149th Street West. The Site stormwater will make use of the stormwater pond located west of the adjacent Anytime Fitness site. There is a proposed retaining wall within the easement along the western perimeter of the site, and the applicant will need to work with the City to execute an encroachment agreement for the wall or identify possible changes to the site's grading. This and conformance with all requirements of the City Engineer related to the civil site plans is a recommended condition of approval.

RECOMMENDATION

Staff finds the plans provided by the applicant meet the standards of the zoning ordinance except where noted, and is recommending approval of the site plan allowing Today's Life Childcare to construct a childcare center at 2634 149th Street West.


148TH ST W
BOSTON CIR
BOISE CIR
BLANCA AVE
148TH ST W
BRENNER CT
BUSINESS PKWY
149TH ST W
149TH ST W
BISCAYNE AVE
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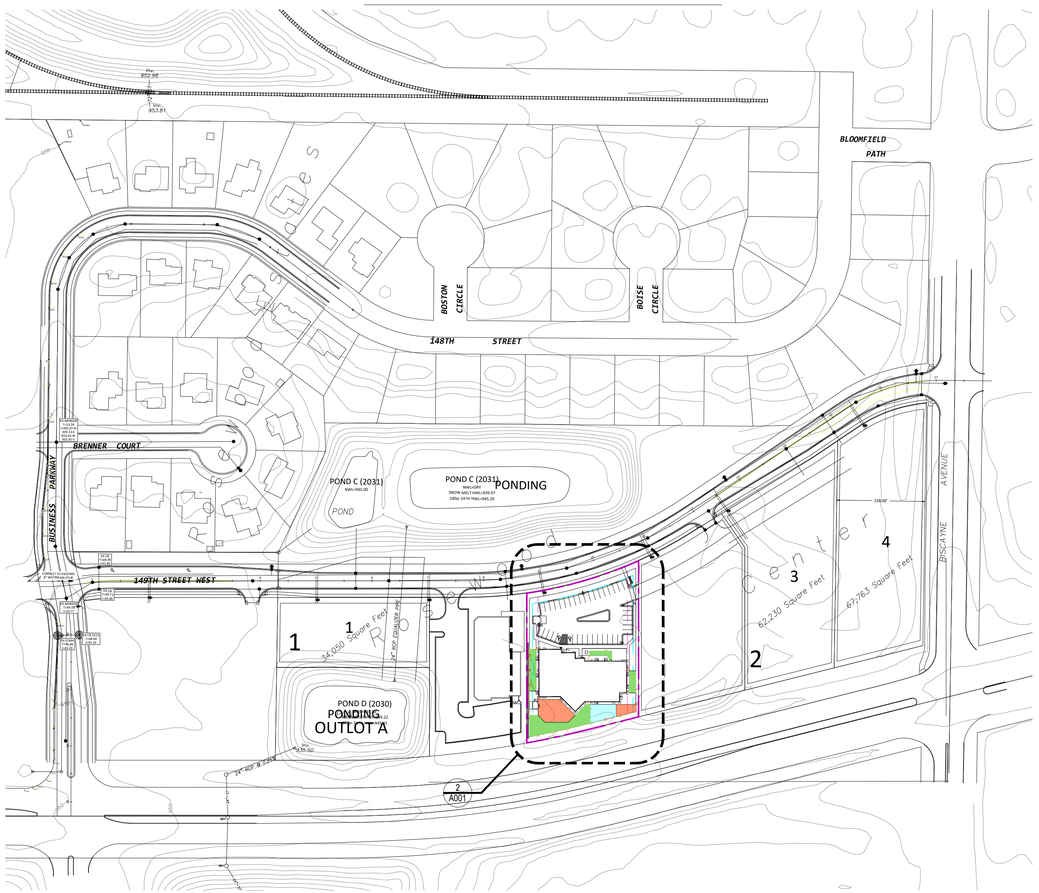
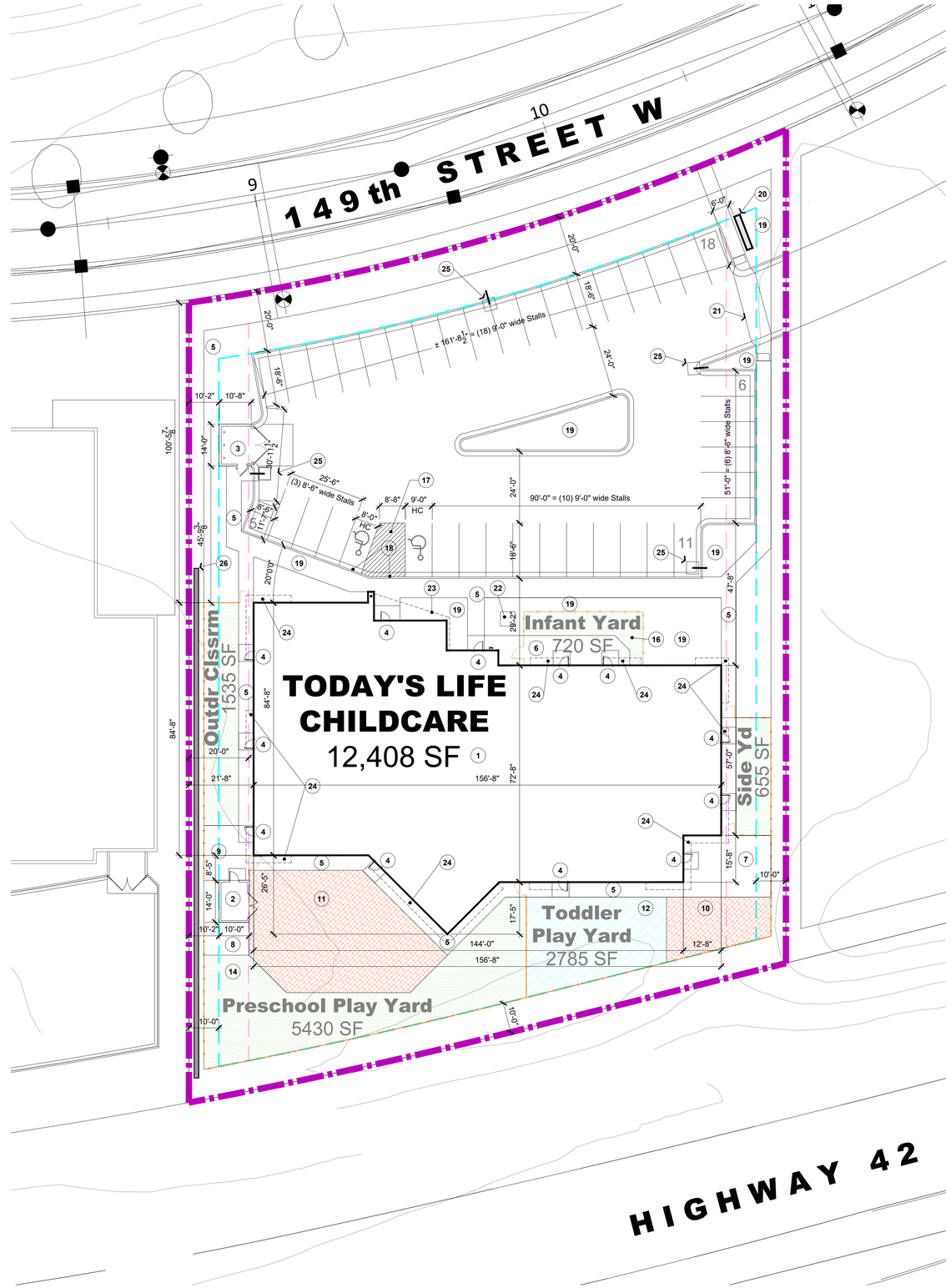
SITE PLAN KEYNOTES

1	CHILDCARE CENTER = 12,408 SF	14	PRESCHOOL YARD GRASS AREA = 2540 SF
2	PLAY YARD OUTDOOR STORAGE = 140 SF w/SERVICE DOOR & CONC. STOOP PLUS OVERHEAD DOOR	15	OUDOOR CLASSROOM FENCED SIDE YARD GRASS AREA = 870 SF
3	TRASH ENCLOSURE - 149 SF w/SERVICE GATE & DBL DR GATE	16	INFANT GRASS AREA = 375 SF
4	EXTERIOR BUILDING ENTRANCE w/CONC. STOOP	17	HANDICAP ACCESS AISLE
5	CONC. SIDEWALK	18	TAPPER CURB DOWN TO ACCESS AISLE PER CIVIL
6	INFANT PATIO	19	PLANTING AREA PER LANDSCAPE PLANS
7	TODDLER PATIO	20	MONUMENT SIGN
8	PRESCHOOL PATIO	21	PEDESTRIAN CROSSING
9	CONC. STORAGE BUILDING APRON	22	ELECTRICAL TRANSFORMER PAD
10	TODDLER FALLZONE AREA = 610 SF	23	FRONT ENTRANCE CANOPY w/RECESSED LIGHTING
11	PRESCHOOL FALLZONE AREA = 2160 SF	24	METAL LOUVERED SUNSHADE - SEE EXTERIOR ELEVS
12	TODDLER TURF AREA = 1300 SF	25	PARKING LOT LIGHT POLE - SEE PHOTOMETRIC PLANS
13	EAST FENCED SIDE YARD GRASS AREA = 460 SF	26	LOW RETAINING WALL PER CIVIL PLANS

PLAY YARDS SHOWN ARE GENERAL INTENT. FINAL PLAY YARD SHAPE, MATERIALS AND PLAYGROUND EQUIPMENT TO BE FULLY DESIGNED FOR PERMIT SET



1 DEVELOPMENT KEY MAP PLAN
SCALE: 1/128" = 1'-0"



2 SITE PLAN
SCALE: 1" = 20'-0"

40 PARKING STALLS

REQUIRED PARKING = 1 Stall per 5 Children & 1 Stall per Classroom & 1 Van Stall if applicable

Children = 148 Children / 5	= 30 Required Stalls
Classrooms = 1 / Room	= 9 Required Stalls
Daycare Van Stall	= 1 Stall
Provide # Stalls	**40 STALLS PROVIDED**

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PROJECT INFORMATION:
TODAY'S LIFE CHILDCARE CENTER

ROSEMOUNT, MN

CLIENT INFORMATION:
TODAY'S LIFE LEARNING CENTER

A. PETER HILGER #15862

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

A. PETER HILGER
LICENSED ARCHITECT
15862
STATE OF MINNESOTA

Drawing Date:
7.25.24

Drawing History/Revisions:

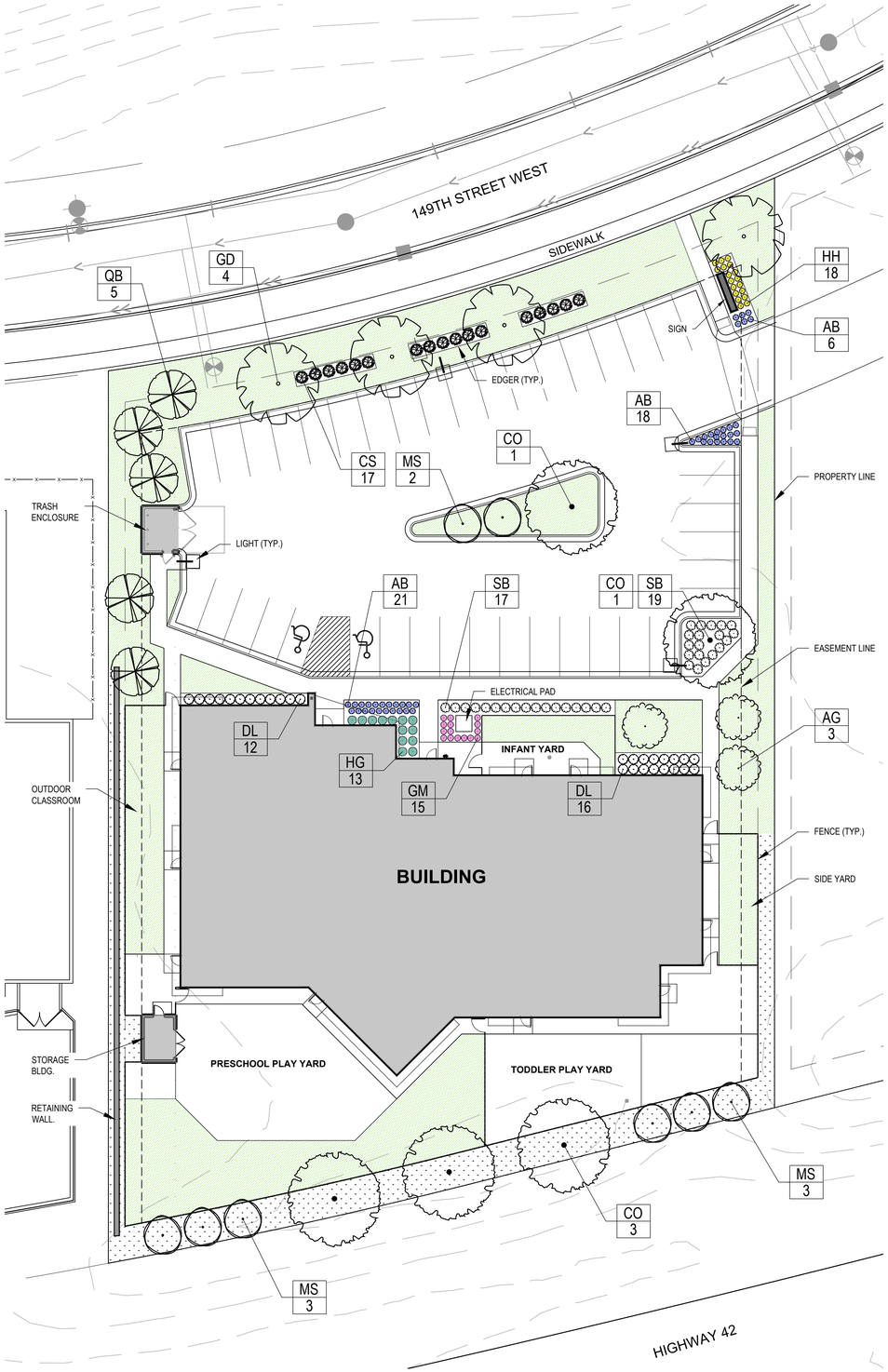
New Site Plan Base	**8.16.24**

Project Architect:
A. PETER HILGER, AIA

Drawn By: VJH
Checked By: APH

SHEET TITLE:
SITE PLAN & DEVELOPMENT KEY MAP PLAN

Sheet No.: **A001**



1 LANDSCAPE PLAN

LANDSCAPE REQUIREMENTS

ZONING: C4 - GENERAL COMMERCIAL

LAND AREA: 53,953 SF

BUILDING PERIMETER: 517 LF

PARKING LOT AREA: 15,910 SF

OVERSTORY TREES	UNIT	REQUIRED	ON THIS PLAN
1 OVERSTORY TREE PER 3,000 SF LAND AREA	EA	18	
DECIDUOUS SHADE TREE	EA		9
DECIDUOUS ORNAMENTAL TREE	EA		9
AT LEAST 75% OF TREES TO BE DECIDUOUS	EA	14	18
FOUNDATION			
1 FOUNDATION PLANT PER 10 LF OF BUILDING PERIMETER	EA	52	
SHRUBS			45
PERENNIALS			49
PARKING LOT			
MIN. 10% OF PARKING LOT AREA TO BE LANDSCAPE. AREA INCLUDES ISLAND AND PENINSULAS (930 SF), AND WEST SIDE OF PARKING AREA (743 SF)	SF	1,591	1673
MIN. 1 TREE PER 250 SF OF PARKING LOT AREA IN ADDITION TO THE REQUIRED LANDSCAPE TREES	EA	7	7

PLANT SCHEDULE

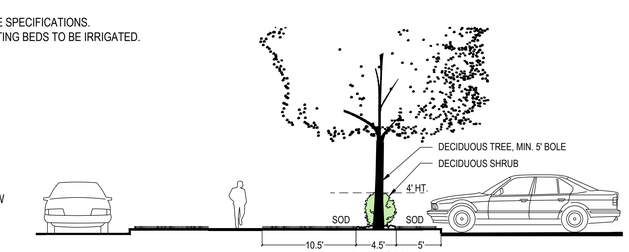
SYMBOL	QTY	CODE	SCIENTIFIC NAME/COMMON NAME	SIZE	ROOT	REMARKS
			SHADE TREES (ALL TREES TO HAVE STRAIGHT TRUNK & SINGLE LEADER)			
	5	CO	CELTIS OCCIDENTALIS	2"	BB	SPACE 35' O.C.
			HACKBERRY			
	4	GD	GYMNOCLADUS DIOICUS 'UMNSSYNERGY'	2"	BB	SPACE 35' O.C.
			KENTUCKY TRUE NORTH COFFEETREE			
	5	QB	QUERCUS X BIMUNDORUM 'JFS-KW1QX'	2"	BB	SEE PLAN FOR SPACING
			STREETSPIRE OAK			
			ORNAMENTAL TREES (ALL TREES TO HAVE STRAIGHT TRUNK & SINGLE LEADER)			
	3	AG	AMELANCHIER X GRAND. 'AUTUMN BRILLIANCE'	2"	BB	SEE PLAN FOR SPACING
			AUTUMN BRILLIANCE SERVICEBERRY			
	8	MS	MALUS SARGENTII 'SELECT A'	2"	BB	SPACE 12' O.C.
			FIREBIRD CRABAPPLE			
			SHRUBS (24" MIN. SHRUB SIZE AT TIME OF INSTALLATION)			
	17	CS	CORNUS SERICEA 'BAILADELINE'	#5	CONT.	SPACE 4' O.C.
			FIREDANCE REDTWIG DOGWOOD			
	28	DL	DIERVILLA LONICERA	#5	CONT.	SPACE 3' O.C.
			DWARF BUSH HONEYSUCKLE			
	36	SB	SPIREA BETULIFOLIA 'TOR'	#5	CONT.	SPACE 3' O.C.
			TOR SPIREA			
			PERENNIALS			
	45	AB	AMSONIA 'BLUE ICE'	#1	CONT.	SPACE 2' O.C.
			BLUE ICE AMSONIA			
	15	GM	GERANIUM MACRORRHIZUM 'BEVAN'S VARIETY'	#1	CONT.	SPACE 2' O.C.
			BEVAN'S VARIETY GERANIUM			
	18	HH	HEMEROCALLIS 'HAPPY RETURNS'	#1	CONT.	SPACE 2' O.C.
			HAPPY RETURNS DAYLILY			
	13	HG	HOSTA 'GAUCAMOLE'	#1	CONT.	SPACE 3' to 3.25' O.C.
			GAUCAMOLE HOSTA			

NOTES:
1. SEE SHEET L2 FOR PLANTING DETAILS & LANDSCAPE SPECIFICATIONS.
2. ALL TURF (SODDED AND SEEDED AREAS) AND PLANTING BEDS TO BE IRRIGATED.

KEY

SOD

SEED WITH MNDOT 25-131 LOW MAINTENANCE TURF



SECTION: PARKING LOT SCREENING
SCALE: 1/8" = 1'-0"

RYLAUR
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NORTH OAKS, MN 55127
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philger@rylaur.com
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PROJECT INFORMATION:
TODAY'S LIFE CHILDCARE CENTER

ROSEMOUNT, MN

CLIENT INFORMATION:
TODAY'S LIFE LEARNING CENTER

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

License # 24236

Signature: Carmen Simonet

Date July 25, 2024

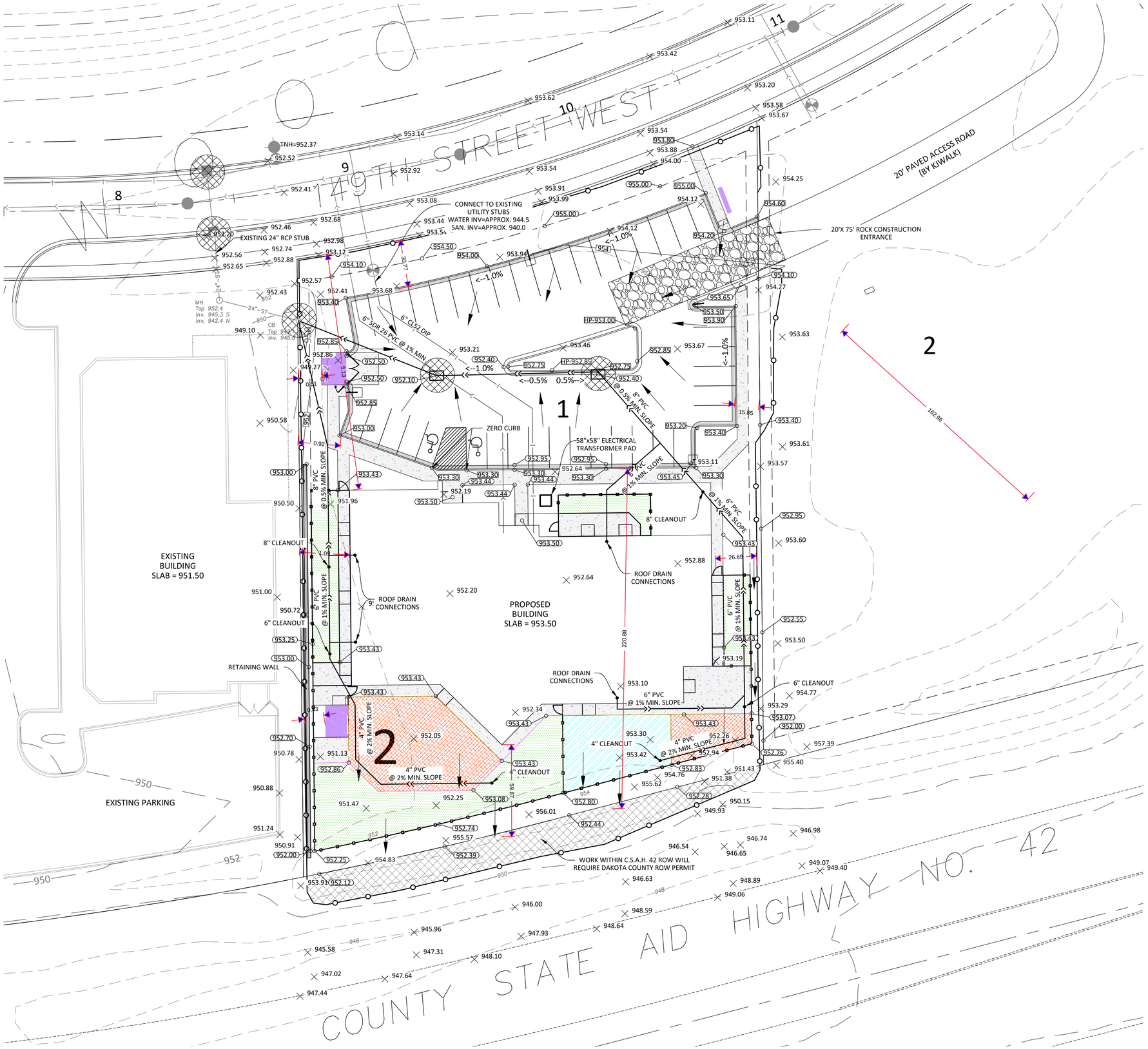
Drawing Date:
07.25.2024

Drawing History/Revisions:
08.08.24 REV. NEW BASE

Project Architect:
A. PETER HILGER, AIA

SHEET TITLE:
LANDSCAPE PLAN

L1



NOTES:

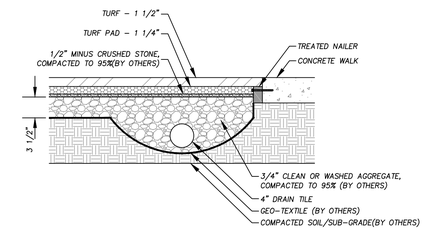
SILT FENCE TO BE INSTALLED ALONG PERIMETER OF CONSTRUCTION AREA PRIOR TO THE START OF WORK.

DISTURBED AREAS TO BE TEMPORARY SEEDED AND MULCHED WITHIN 14 DAYS OF STOPPAGE OF WORK.

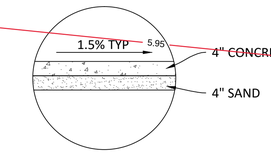
PERMANENT COVER TO BE INSTALLED WITHIN 14 DAYS OF FINAL GRADE BEING ESTABLISHED.

TEMPORARY SEEDING AND PERMANENT SEEDING IN UNDEVELOPED AREAS TO BE EROSION CONTROL MIX

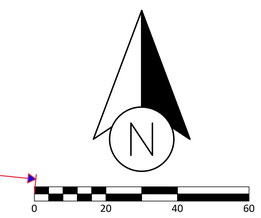
FINISH SEED/SOD TO BE BLUEGRASS AND/OR FESCUES.



PLAYGROUND DRAIN TILE DETAIL
NOT TO SCALE



TYPICAL SIDEWALK SECTION
NOT TO SCALE



KJwalk INC.
6001 Egan Drive, Ste 100, Savage, MN 55378
Phone: 952.226.3200 Web: www.kjwalk.com

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

Luke Warren Israelson
Registration #: 51362 Date: 8/16/2024

Date:	Revision:
07/25/2024	Original
08/16/2024	Revised Per City Comments

ROSEWOOD CENTER SECOND ADDITION

TODAY'S LIFE CHILDCARE CENTER

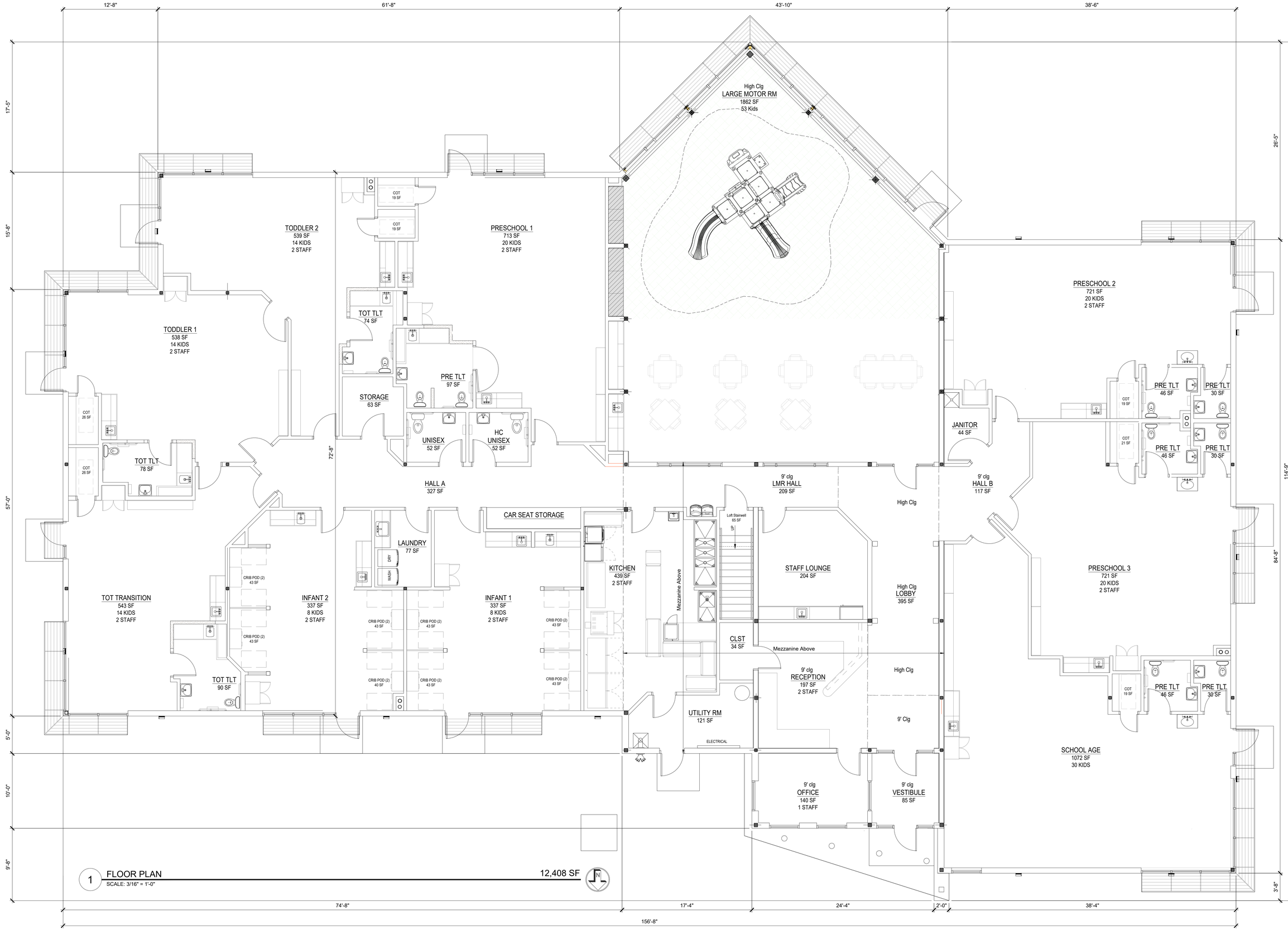
ROSEMOUNT, MN

For Review
August 16, 2024

Grading, Erosion Control and Utility Plan

SHEET 2 of 5

FILE PATH: G:\,shortcut-targets-by-id\0B7HATRBOKE8SGQZTDbZiOxU7Ig\Work Files\Rosemount Projects\Rosewood Commons\Engineering\CAD\DWGS\ROSEWOOD TLC DAYCARE-AUGUST.dwg



1 FLOOR PLAN

SCALE: 3/16" = 1'-0"

12,408 SF

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PROJECT INFORMATION:

TODAY'S LIFE CHILDCARE CENTER

ROSEMOUNT, MN

CLIENT INFORMATION:
TODAY'S LIFE LEARNING CENTER

Today's Life
Schools + Childcare
A Place For Today's Children

A. PETER HILGER #15862

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A. PETER HILGER
LICENSED ARCHITECT
15862
STATE OF MINNESOTA

Drawing Date:
7.25.24

Drawing History/Revisions:

Project Architect:
A. PETER HILGER, AIA

Drawn By: VJH

Checked By: APH

SHEET TITLE:
FLOOR PLAN

Sheet No.: **A101**

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STATE OF MINNESOTA

Drawing Date:
7.25.24

Drawing History/Revisions:

Project Architect:
A. PETER HILGER, AIA

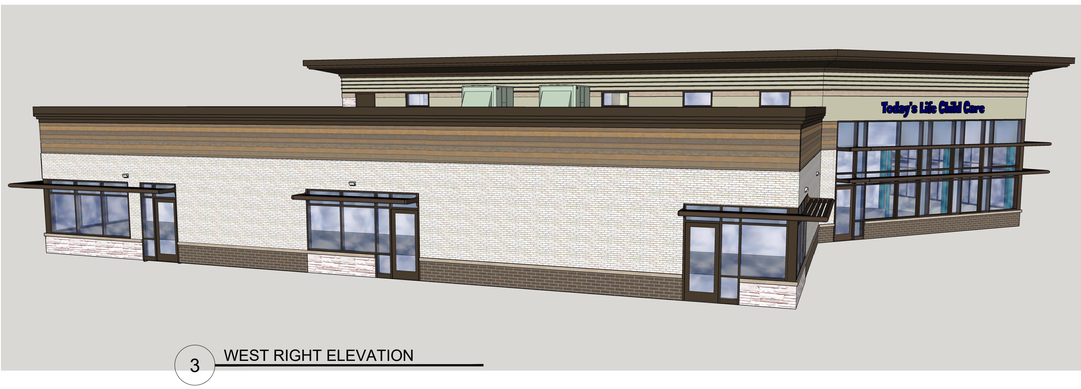
Drawn By: VJH
Checked By: APH

SHEET TITLE:
PROJECT RENDERINGS

Sheet No.: **A103**

1 NORTH FRONT ELEVATION

2 SOUTH REAR ELEVATION



3 WEST RIGHT ELEVATION

4 EAST LEFT ELEVATION

SEE SHEETS A201 & A202
FOR EXTERIOR MATERIALS
LEGEND AND PERCENTAGES

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PROJECT INFORMATION:
TODAY'S LIFE CHILDCARE CENTER

ROSEMOUNT, MN

CLIENT INFORMATION:
TODAY'S LIFE LEARNING
ROSEMOUNT

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A. PETER HILGER
LICENSED ARCHITECT
15862
STATE OF MINNESOTA

Drawing Date:
7.25.24

Drawing History/Revisions:

Project Architect:
A. PETER HILGER, AIA

Drawn By: VJH
Checked By: APH

SHEET TITLE:
COLORED EXTERIOR ELEVATIONS

Sheet No.: **A200**

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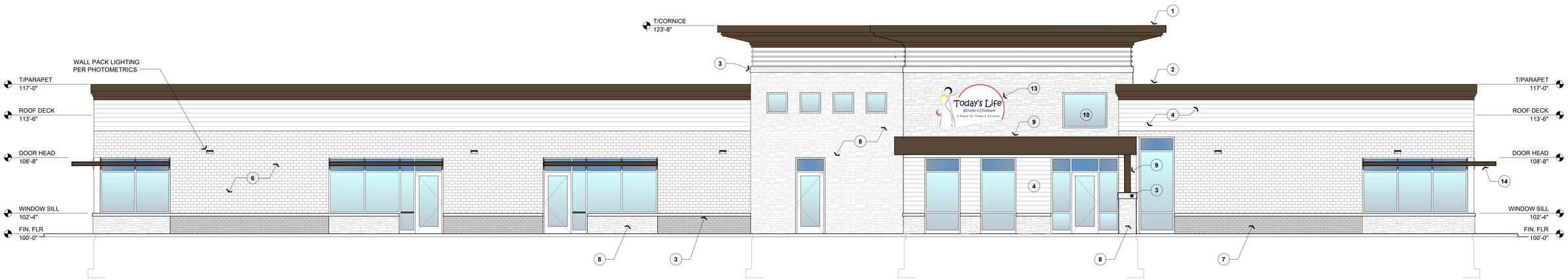
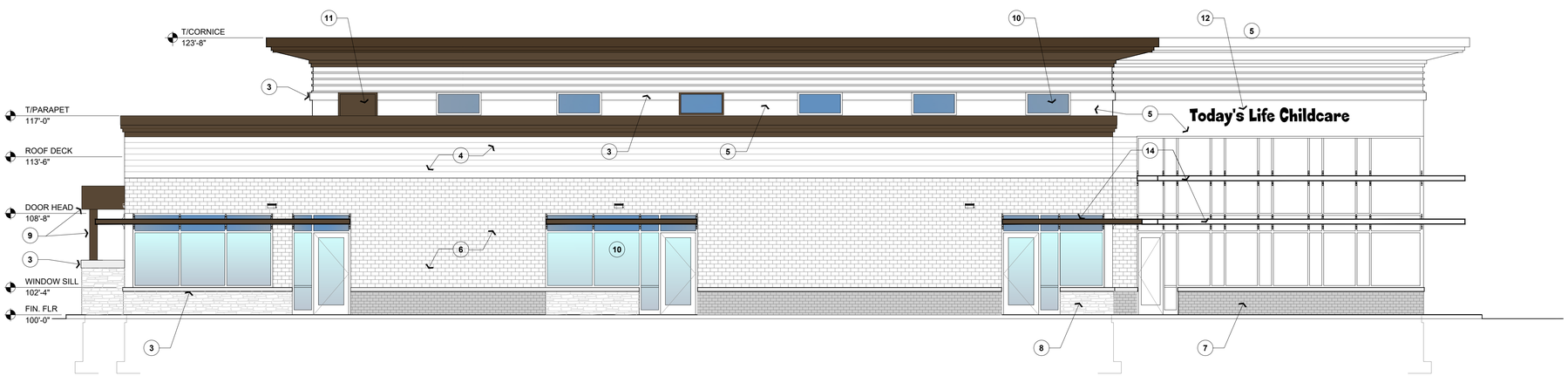
PROJECT INFORMATION:
TODAY'S LIFE CHILDCARE CENTER

ROSEMOUNT, MN

CLIENT INFORMATION:
TODAY'S LIFE LEARNING CENTER



1 NORTH FRONT ELEVATION
SCALE: 3/16" = 1'-0"



2 WEST RIGHT ELEVATION
SCALE: 3/16" = 1'-0"

EXTERIOR MATERIALS LEGEND

MATERIAL PERCENTAGES NOTED BELOW BASED OFF OF 11,050 SF BUILDING FACADE (includes all sides)

#			#		
1	**CORNICE:** DARK BRONZE CAP FLASHING OVER DARK BRONZE STEPPED FASCIA w/HORIZONTAL DARK BRONZE BATTENS OVER TAN HARDIE FLAT PANEL BACKER	1136 sf / 11,050 sf 10%	8	**STONE:** WHITE STONE VENEER AT FRONT FACADE AND UNDERNEATH WINDOWS WHERE SHOWN	868 sf / 11,050 sf 8%
2	**METAL CAP FLASHING:** DARK BRONZE CAP FLASHING PARAPET w/STEPPED PROFILE	726 sf / 11,050 sf 7%	9	**ENTRANCE CANOPY:** DARK BRONZE METAL FASCIA ON MAIN ENTRY ROOF CANOPY STRUCTURE w/DARK BRONZE METAL COLUMN ON TOP OF LEDGE WALL	119 sf / 11,050 sf 1%
3	**PRECAST SILL:** CONTINUOUS HORIZONTAL SILL UNDER WINDOWS AND AT WINDOW HEAD OF HIGH CEILING LMR WINDOWS AND AT FRONT ENTRANCE COLUMN LEDGE	298 sf / 11,050 sf 3%	10	**STOREFRONT:** DARK BRONZE ALUMINUM STOREFRONT w/TINTED GLAZING AS SHOWN	2655 sf / 11,050 sf 24%
4	**LAP SIDING:** SIMULATED WOOD STEEL HORIZONTAL SIDING BELOW LOW PARAPET AND AT FRONT ENTRANCE	1572 sf / 11,050 sf 14%	11	**ROOF ACCESS DOOR:** DARK BRONZE HOLLOW METAL ACCESS DOOR & FRAME FROM LOFT LEVEL ONTOP ROOF LEVEL	14 sf / 11,050 sf < 1%
5	**FLAT PANEL:** HARIDE FLAT PANEL FACADE w/SEAM TRIM UNDER HIGH ROOF CORNICE, TAN TONE	397 sf / 11,050 sf 4%	12	**CHANNEL LETTERS:** 24" high ILLUMINATED CHANNEL LETTERS ACROSS EACH ANGLED REAR FACADE (+/- 38 sf Each, Approx 19' long)	76 sf / 11,050 sf < 1%
6	**WHITE BRICK:** MAIN BODY BRICK FACADE	2492 sf / 11,050 sf 23%	13	**LOGO SIGN:** ILLUMINATED LOGO WALL SIGN ON FRONT BUILDING FACADE	30 sf / 11,050 sf < 1%
7	**BROWN BRICK:** WAINSCOT BRICK VENEER WHERE SHOWN	574 sf / 11,050 sf 5%	14	**SUN SHADE:** DARK BRONZE ALUMINUM LOUVERED SUN SHADE ATTACHED TO STOREFRONT SYSTEM	

A. PETER HILGER #15862

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A. PETER HILGER
LICENSED ARCHITECT
15862
STATE OF MINNESOTA

Drawing Date:
7.25.24

Drawing History/Revisions:

Project Architect:
A. PETER HILGER, AIA

Drawn By: VJH
Checked By: APH

SHEET TITLE:
EXTERIOR ELEVATIONS

Sheet No.: **A201**

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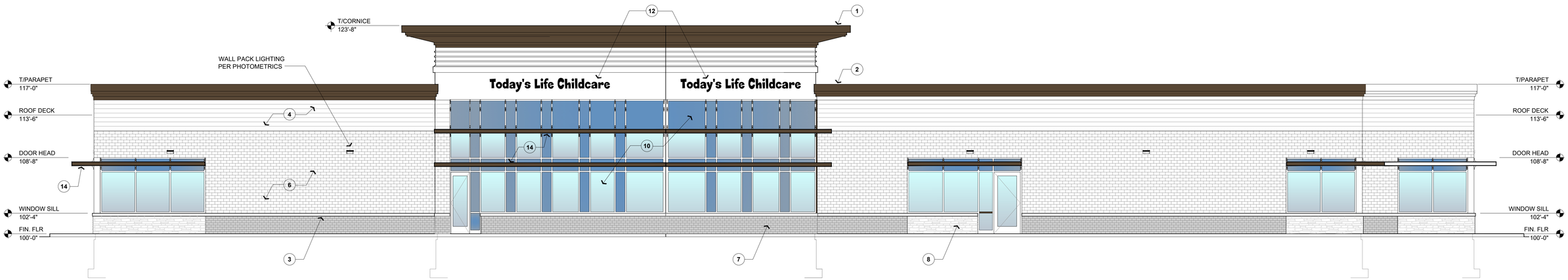
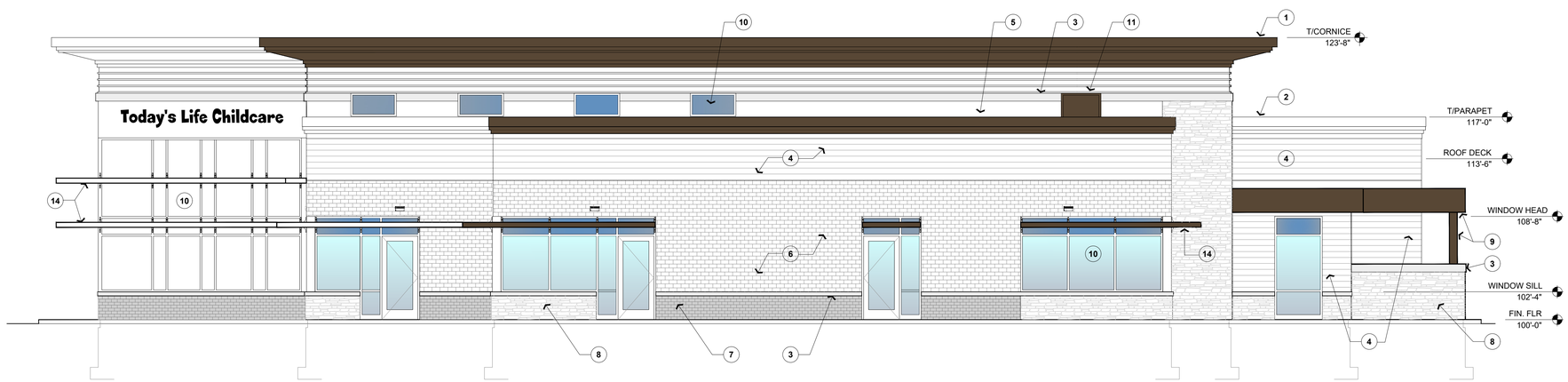
PROJECT INFORMATION:
TODAY'S LIFE CHILDCARE CENTER

ROSEMOUNT, MN

CLIENT INFORMATION:
TODAY'S LIFE LEARNING CENTER



1 SOUTH REAR ELEVATION
SCALE: 3/16" = 1'-0"



2 EAST LEFT ELEVATION
SCALE: 3/16" = 1'-0"

EXTERIOR MATERIALS LEGEND

MATERIAL PERCENTAGES NOTED BELOW BASED OFF OF 11,050 SF BUILDING FACADE (includes all sides)

#			#		
1	**CORNICE:** DARK BRONZE CAP FLASHING OVER DARK BRONZE STEPPED FASCIA w/HORIZONTAL DARK BRONZE BATTENS OVER TAN HARDIE FLAT PANEL BACKER	1136 sf / 11,050 sf 10%	8	**STONE:** WHITE STONE VENEER AT FRONT FACADE AND UNDERNEATH WINDOWS WHERE SHOWN	868 sf / 11,050 sf 8%
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3	**PRECAST SILL:** CONTINUOUS HORIZONTAL SILL UNDER WINDOWS AND AT WINDOW HEAD OF HIGH CEILING LMR WINDOWS AND AT FRONT ENTRANCE COLUMN LEDGE	298 sf / 11,050 sf 3%	10	**STOREFRONT:** DARK BRONZE ALUMINUM STOREFRONT w/TINTED GLAZING AS SHOWN	2655 sf / 11,050 sf 24%
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6	**WHITE BRICK:** MAIN BODY BRICK FACADE	2492 sf / 11,050 sf 23%	13	**LOGO SIGN:** ILLUMINATED LOGO WALL SIGN ON FRONT BUILDING FACADE	30 sf / 11,050 sf < 1%
7	**BROWN BRICK:** WAINSCOT BRICK VENEER WHERE SHOWN	574 sf / 11,050 sf 5%	14	**SUN SHADE:** DARK BRONZE ALUMINUM LOUVERED SUN SHADE ATTACHED TO STOREFRONT SYSTEM	

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A. PETER HILGER
LICENSED ARCHITECT
15862
STATE OF MINNESOTA

Drawing Date:
7.25.24

Drawing History/Revisions:

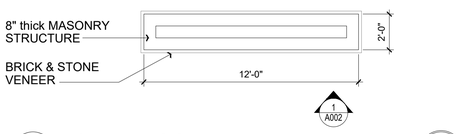
Project Architect:
A. PETER HILGER, AIA

Drawn By: VJH
Checked By: APH

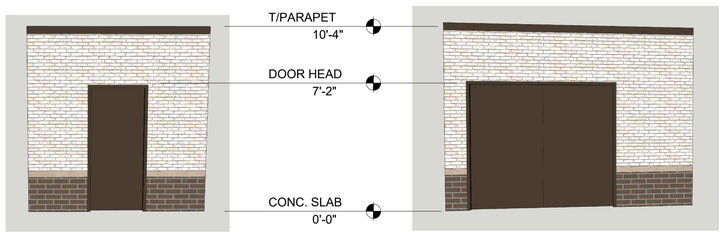
SHEET TITLE:
EXTERIOR ELEVATIONS

Sheet No.: **A202**

1 MONUMENT SIGN ELEVATION
SCALE: 1/4" = 1'-0"

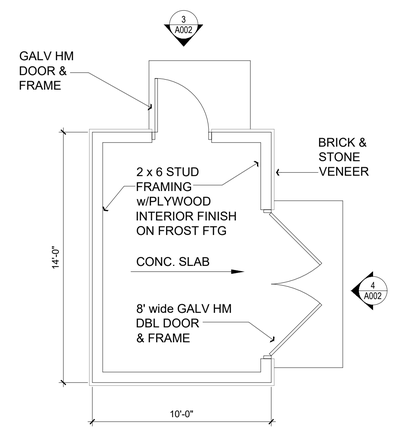


2 MONUMENT SIGN PLAN VIEW
SCALE: 1/4" = 1'-0"

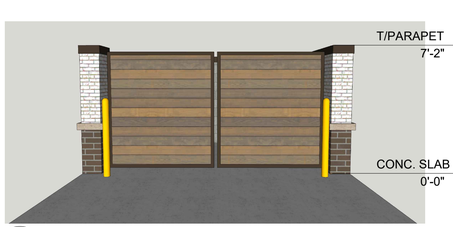


3 OUTDOOR STORAGE SIDE ELEVATION
SCALE: 1/4" = 1'-0"

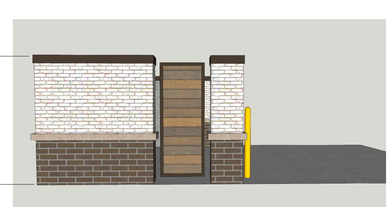
4 OUTDOOR STORAGE FRONT ELEVATION
SCALE: 1/4" = 1'-0"



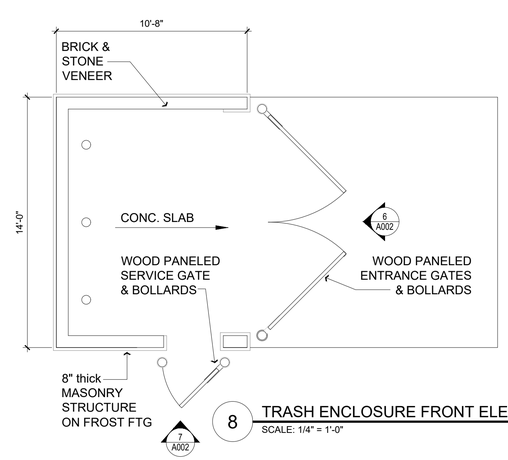
5 OUTDOOR STORAGE PLAN
SCALE: 1/4" = 1'-0"



6 TRASH ENCLOSURE FRONT ELEVATION
SCALE: 1/4" = 1'-0"



7 TRASH ENCLOSURE FRONT ELEVATION
SCALE: 1/4" = 1'-0"



8 TRASH ENCLOSURE FRONT ELEVATION
SCALE: 1/4" = 1'-0"

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PROJECT INFORMATION:
TODAY'S LIFE CHILDCARE CENTER

ROSEMOUNT, MN

CLIENT INFORMATION:
TODAY'S LIFE LEARNING CENTER

A. PETER HILGER #15862

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A. PETER HILGER
LICENSED ARCHITECT
15862
STATE OF MINNESOTA

Drawing Date:
7.25.24

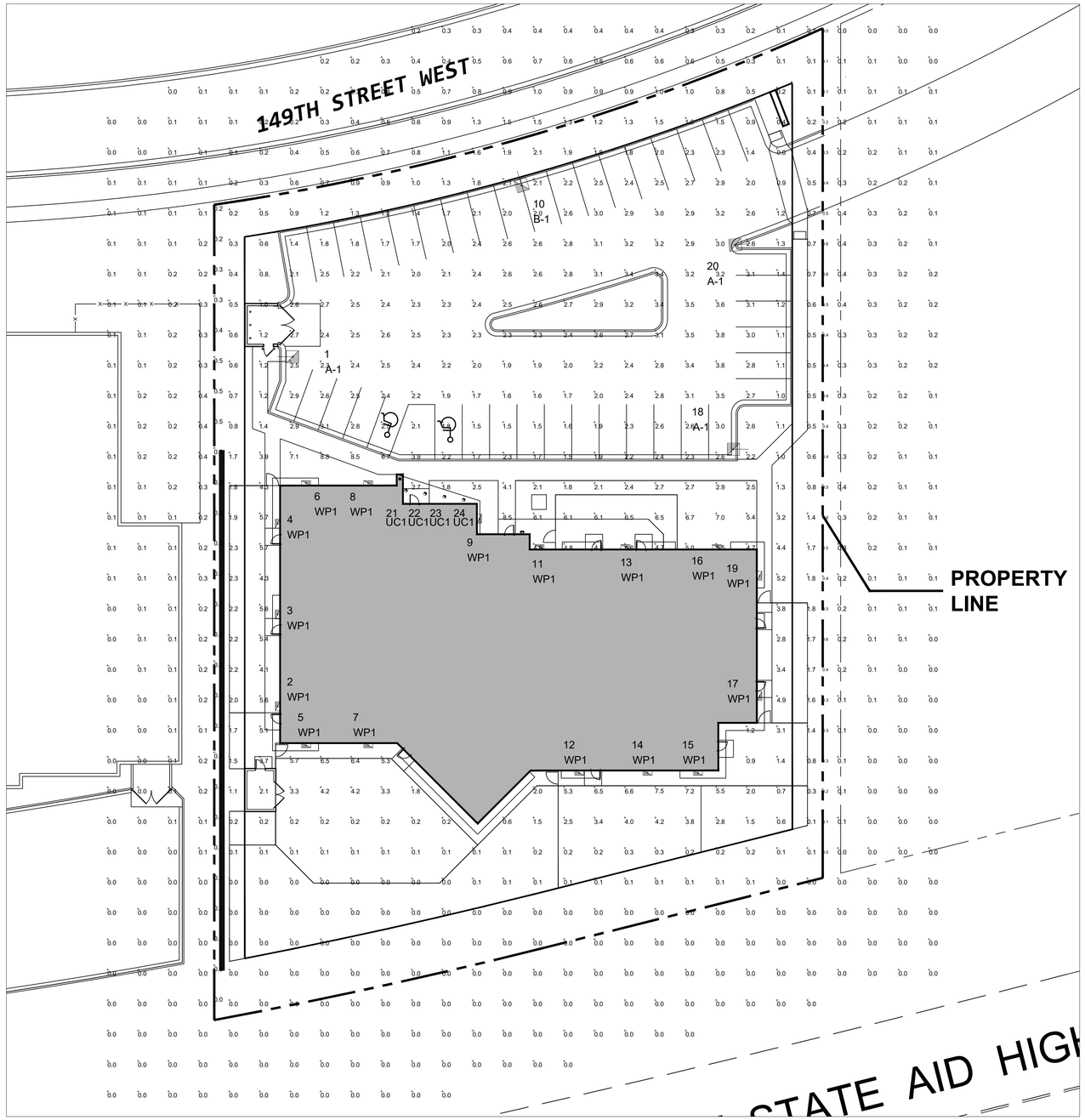
Drawing History/Revisions:

Project Architect:
A. PETER HILGER, AIA

Drawn By: VJH
Checked By: APH

SHEET TITLE:
SITE DETAILS

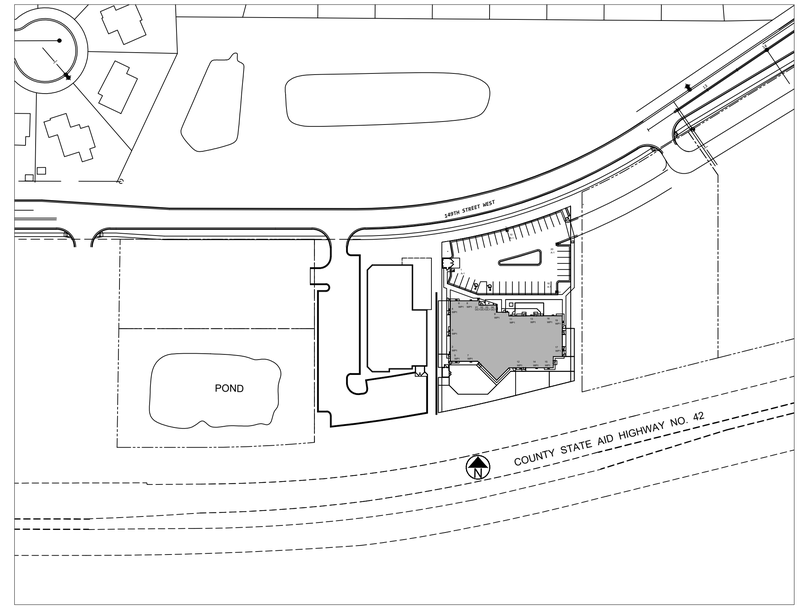
Sheet No.: **A002**



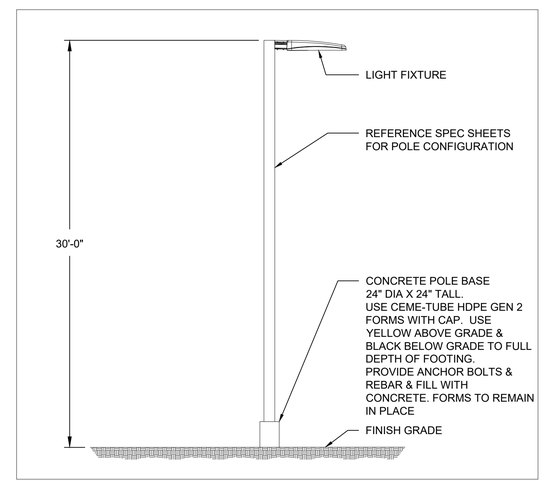
1 PROPOSED PHOTOMETRIC PLAN
SCALE: 1"= 20'-0"

N

0' 20' 40'



SITE PLAN
SCALE: 1" = 100'-0"



2 POLE DETAIL A-1, B-1 PARKING LOT
SCALE: NTS

LUMINAIRE SCHEDULE

Symbol	Qty	Label	Arrangement	LLF	Description	BUG Rating
	3	A-1	SINGLE	0.90	NEW BASE, POLE & AREA FIXT 135W LED T4 30'-0 MTG HT (4000K/19063 LUMENS) LSI INDUSTRIES MRM-LED-18L-SIL-4-40-70CR	B3-U0-G5
	1	B-1	SINGLE	0.90	NEW BASE, POLE & AREA FIXT 85W LED T3 30'-0 MTG HT (4000K/13232 LUMENS) LSI INDUSTRIES MRM-LED-12L-SIL-3-40-70CRI	B2-U0-G2
	4	UC1	SINGLE	0.90	NEW ROUND RECESSED UNDER CANOPY FIXTURES, APPROX 15W, FINAL SPEC TBD.	NA
	16	WP1	SINGLE	0.90	NEW WALLPACK FIXT 23W LED T3 9'-0 MTG HT (4000K/3416 LUMENS) LSI INDUSTRIES XWM-3-LED-03L-40	B1-U0-G1

CALCULATION SUMMARY

Label	Avg	Max	Min	Avg/Min	Max/Min	# Pts
ALL CALC POINTS AT GRADE	1.04	8.6	0.0	N.A.	N.A.	872
PROPERTY LINE EAST	0.37	0.6	0.0	N.A.	N.A.	28
PROPERTY LINE WEST	0.34	0.7	0.0	N.A.	N.A.	27
PARKING AND DRIVES	2.45	4.3	0.6	4.08	7.17	159

BASED ON THE INFORMATION PROVIDED. ALL DIMENSIONS AND LUMINAIRE LOCATIONS SHOWN REPRESENT RECOMMENDED POSITIONS. THE ENGINEER AND/OR ARCHITECT **MUST** DETERMINE APPLICABILITY OF THE LAYOUT TO EXISTING OR FUTURE FIELD CONDITIONS.

THE LIGHTING PATTERN REPRESENTS ILLUMINATION LEVELS CALCULATED FROM LABORATORY DATA TAKEN UNDER THE CONTROLLED CONDITIONS UTILIZING CURRENT INDUSTRY STANDARD LAMP RATINGS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY APPROVED METHODS. ACTUAL PERFORMANCE OF ANY MANUFACTURER'S LUMINAIRE MAY VARY DUE TO VARIATION IN ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS, AND OTHER VARIABLE FIELD CONDITIONS.

FOR ADDITIONAL LIGHTING INFORMATION CONTACT:
On-Site Lighting & Survey, LLC
PH: 763.684.1548

On-Site Lighting & Survey, LLC
1111 HIGHWAY 25 NORTH
SUITE 201
BUFFALO MN 55313
PH:763.684.1548
FAX:763.682.9048

RYLAUR create + solve + advise
14 PHEASANT LANE
NORTH OAKS. MN 55127
PH:612-868-3636

PROJECT INFO: Today's Life Schools + Childcare — A Place For Today's Children

TODAY'S LIFE CHILDCARE CENTER
ROSEMOUNT, MN

ENGINEER INFO

ENGINEER SEAL

REVISONS

#	DATE	INIT	DESCRIPTION
1	08.08.2024	CDH	NEW SITE PLAN RCVD 8-8-24

SHEET DESCRIPTION: **PROPOSED PHOTOMETRIC PLAN**

PROJECT #

ISSUE DATE: 07.25.2024

DESIGN LEVEL: NA

AGI: C.D.HEANER

CAD: C.D.HEANER

SHEET#: SL2.0 REV #: 1

ROSEMOUNT
PARKS AND RECREATION

M E M O R A N D U M

To: Adam Kienberger, Community Development Director
Anthony Nemcek, Senior Planner
Julia Hogan, Planner

From: Dan Schultz, Parks and Recreation Director

Date: August 13, 2024

Subject: Today's Life Childcare Center Project

The Parks and Recreation Department recently reviewed the plans for the Today's Life Childcare Center project. After reviewing the plans, the Parks and Recreation Department staff has the following comments:

Parks Dedication
The parks dedication requirement for a commercial development is either a 10% of the total property area as land dedication, a cash dedication in-lieu of land or combination of the two.

Staff is recommending that the City collect cash in-lieu of land for the development that is currently being processed. The cash dedication for the 1.24 acre development is $11,160.00 (.124 acres x $90,000 per acre). This amount is to be paid when the building permit is issued.

Please let me know if you have any questions about this memo.

ROSEMOUNT MINNESOTA

EXECUTIVE SUMMARY

Planning Commission Regular Meeting: August 27, 2024
Tenative City Council Meeting: September 17, 2024

AGENDA ITEM:	Request by Kwik Trip for approval of a PUD Final Site and Building Plan and a Conditional Use Permit	**AGENDA SECTION:** PUBLIC HEARINGS
PREPARED BY:	Eric Van Oss, Economic Development Coordinator	**AGENDA NO.** 6.b.
ATTACHMENTS:	_Kwik Trip Store 1757-site improvement plans_240716, Detached Dumpster Enclosure, KS LH Vestibule. Rear Gable No Dumpster, 1 Bay LH CW, 026374-000 Kwik Trip Store 1757 - Engineering Review Memo 20240820, kwik trip review memo 8 13 24	**APPROVED BY:**

RECOMMENDED ACTION: Motion to approve the Planned Unit Development Final Site and Building Plan for Kwik Trip to construct a convenience store, detached car wash, and an automobile fuel station, subject to the following conditions.

1. Approval of a Conditional Use Permit for automobile fuel station facilities.
2. Provide a landscaping surety bond of $35,925.
3. Applicant shall work with staff to verify lumens identified on the photometric plan do not exceed 1.0 lumens at non-residential property lines.
4. Non-essential lighting shall be turned off after business hours.
5. No public address system shall be audible from a noncommercial or nonindustrial use or district.
6. The facility will comply with the restrictions on outside storage, display, and services as outlined in City Code section 11-6-3.
7. Provide updated plans showing car wash and gas pump stacking in addition to updating the minimum distance (24’) between pump rows.
8. Payment of $43,110.00 in lieu of park land dedication, to be collected with the building permit fee.
9. Compliance with all comments and requirements of the City's engineer detailed in the Engineer's Memo dated June 12, 2024.
10. A sign permit is required for any on-site signage.

Motion to recommend the City Council approve a Conditional Use Permit allowing automobile fuel station.

BACKGROUND

Applicant Kwik Trip

Property Owner	Akron 42, LLC
Site Area in Acres	4.79 Acres
Comp Plan Land Use Designation	CC Community Commercial
Current Zoning	MX-2 PUD - Highway Mixed Use District Planned Unit Development
Neighboring Uses	West – MX-2 Highway Mixed Use; North – MX-2 Highway Mixed Use; East – MX-2 Highway Mixed Use; South – MX-2 Highway Mixed Use

The Planning Commission is being asked to consider requests by Kwik Trip for a PUD Final Site and Building Plan and a Conditional Use Permit to construct an 11,000 square foot convenience store, a one-bay detached car wash, and automobile fuel stations with a 40x20 fueling canopy. The site plan generally meets the requirements of the zoning ordinance except for the amount of vehicle stacking provided for the pump islands and car wash. Additionally, the site plan will need to be updated to show 24' spacing between parking islands.

SITE HISTORY AND CONTEXT

The subject property is part of the Prestwick Place Planned Unit Development that was originally approved in 2007. It is designated in the City's comprehensive land use plan for commercial uses and has been zoned accordingly since the original PUD approval. The original PUD approval was very prescriptive about how the site would develop. For example, the PUD described the specific types of commercial uses, as well as the size of the buildings that would be permitted on the parcels. That was much more specific than seen in any of the planned unit developments that have been approved since, and it was very limiting as to the type of commercial development that could occur. A Major PUD Amendment was approved that removed the subject property, as well as other adjacent undeveloped outlots from the scope of the Commercial Area Guidelines within the 2007 PUD agreement. Additionally, land immediately north of the subject parcel was reguided from CC-Community Commercial to HDR-High Density Residential in order to help provide a critical mass of residents that would not otherwise support commercial development due to the large swaths of open land held by Flint Hills Resources and the University of Minnesota within the market area used to determine the feasibility of commercial projects by developers.

This area is currently undergoing significant commercial development. The LifeTime facility, First State Bank of Rosemount, Sweet Kneads, and O2B Childcare are currently under construction on nearby sites.

FINAL SITE AND BUILDING PLAN REVIEW

Legal Authority

Final site and building plan reviews are quasi-judicial actions. In such cases, the City is acting as a judge to determine if the regulations within the Comprehensive Plan, Zoning Ordinance, Subdivision Ordinance, and Planned Unit Development Agreements are being followed. Generally, if the application meets these requirements, it must be approved.

Land Use and Zoning

The site is designated in the City's Comprehensive Land Use Plan for CC-Community Commercial uses.

The purpose of this designation is to provide retail, professional offices, and personal services that serve the daily and weekly needs of the residents of Rosemount. The site is part of the MX-2 Highway Mixed Use zoning district, which is consistent with the site's land use designation. The proposed use is permitted within that district, and the associated automobile fuel station is a conditional use in the MX-2 zoning district. The site is also regulated by the Prestwick Place PUD, although no specific provisions related to the zoning standards currently apply to the proposed project. The use, automobile fuel station, has 12 use-specific standards, which will be addressed in each relevant section.

Setbacks

Frontage	**Minimum Setback**		**Provided Setback**	
	Building	**Parking**	**Building**	**Parking**
North	10 feet	10 feet	317 feet (fuel canopy)	13 feet
South (CSAH 42)	30 feet	20 feet	50 feet (main building)	50 feet
East (Akron)	10 feet	10 feet	135 feet (main building)	50 feet
West	10 feet	10 Feet	58 feet (car wash)	153 feet

All building setbacks meet ordinance requirements. The setback for parking from the west property line is ten (10) feet. The car wash drive aisle is not included in the setback for parking as the parking and drive aisles will flow into the parking on the site to the east. The pump island canopy setbacks are the same as setbacks for the principal building. The canopy will need to be extended by 10 feet to comply with the required spacing of the pump islands but will still greatly exceed the minimum requirement.

Traffic Circulation

There will be two vehicular accesses into the site, one from either Abbeyfield or Akron Avenue onto an internal drive and a connection to that drive that runs south from the east/west road separating the northern Roers site from the commercial development in the south. The access is shown to come from the northwest side of the site. The site plans also shows a shared access with the future O2B childcare facility to the east. The car wash's drive-through is shown to be entered to the east in the center of the site near the front entrance of the building. This drive-through is shown to be a one-way with the option to exit either east toward childcare or north towards the main access on Upper 144th West. Parking is shown to be located on the northern, eastern and southern areas of the site. There are also sidewalks shown around 3 sides of the convenience store. As required the code's use standards for automobile fuel stations, the underground fuel storage tanks are positioned to allow access by motor fuel transports and unloading operations that do not interfere with site access and circulation.

The zoning code requires stacking for 6 vehicles per wash stall. The code requires stacking for gas

pump islands in each direction in which access can be gained to the pump. Each space needs to be a minimum of 9 feet wide and 18 feet long. The placement of these stacking rows will minimize noises, emissions, and headlight glare on adjacent properties nor interfere with circulation throughout the parking and pedestrian area. Additionally, pump islands are required to have a minimum of 24 feet between pump rows, measured from curb to curb. The current site plans do not show the car wash or gas pump stacking and shows 21.5" between pump rows. Staff is recommending the Commission include, as a condition of approval, the applicant submit updated plans showing the car wash and gas pump stacking in addition to updating the minimum distance between pump rows.

Parking

The applicant's site plan provides parking that exceeds what is required by the City Code. Fuel stations require one parking stall per 2 gas pumps. The standalone retail building requires 1 stall per every 300 square feet of general floor area. The building is 11,000 square feet in area, which would require 37 parking stalls for the site. The applicant's original site plan showed 63 parking stalls on site.

Use	Required	Provided
Automobile fuel station	10 stalls (1 per 2 gas pumps)	20 stalls
Standalone Retail	37 stalls (1 per 300 square feet GFA)	43 stalls

Exterior Building Materials and Massing

The elevations included in the applicant's submittal show a mix of materials that meets the requirement of the MX-2 zoning district for at least 50% brick or stone. The building façade will be made up of brick with stucco accents and will be topped with a green metal roof. Being a single-story, the building does not come close to the maximum building height for the MX-2 zoning district. As required by the code's use standards for automobile fuel stations, the principal building is the primary source for screening the gasoline pumps from the adjacent rights of way and properties. Additionally, the plans comply with the code requirement that the canopy character and design are consistent with the principal building on site.

Landscaping

The applicant's landscape plan contains a mix of deciduous and coniferous trees planted to screen the site from adjacent public rights of way. Additional trees are provided on the landscape islands and in the open space in front of the main entrance and the car wash and stacking lanes. Based on the site area of 177,366 square feet, a total of 60 trees are required based on a calculation of one tree per 3,000 square feet. The Zoning Code also requires foundation plantings in an amount equal to 1 per 10 linear feet of building perimeter. The building features 62 linear feet, therefore 62 foundation plantings must be planted. The landscape plan shows 60 trees and 128 foundation plantings to be planted on site.

In addition to the landing required by the City's landscaping ordinance, the MX-2 zoning district requires a certain level of landscaping in parking lot areas. A minimum of 10% of the site's parking areas must be landscaped, and within that landscaping one tree per 250 square feet must be provided.

This is in addition to plantings required by the landscaping section of the zoning code.

Type of Planting	Required	Provided
Tree	60	60
Foundation Planting/Shrubs	62	128

Park Dedication
The park dedication requirement for commercial developments is either 10% of the total property area as land dedication or cash-in-lieu of land dedication. The cash dedication for the 4.79-acre site is $43,110.00 (.479 acres x $90,000/acre). Staff has included the payment of the park dedication fee with the building permit fee as a recommended condition of approval.

Lighting
The applicant's submittal includes a site lighting plan with photometric study to ensure compliance with the zoning ordinance. A combination of wall and pole mounted lighting will be used. The pole mounted lights will be 16 feet in height, which is under the maximum height requirement of 30-feet. The maximum levels of lighting allowed by the code is 1.0 lumen at non-residential property lines. The plan overall adheres to the lumen requirements.

CONDITIONAL USE PERMIT

Legal Authority
Conditional use permits (CUP) are considered quasi-judicial actions. In such cases, the City is acting as a judge to determine if the regulations within the Comprehensive Plan, Zoning Ordinance and Subdivision Ordinance are being followed. Generally, if the application meets these requirements, it must be approved.

REVIEW AND ANALYSIS
Will not be detrimental to or endanger the public health, safety, or general welfare of the neighborhood or the city.
Finding: The store, gas pumps and car wash will not change any traffic patterns exterior to the site. Screening will be provided to minimize impacts to traffic on adjacent public rights of way.

Will be harmonious with the objectives of the comprehensive plan and city code provisions.
Finding: The use and location are consistent with the Comprehensive Plan policies. The proposed automobile fuel station will conform with all requirements of the zoning code, when updated plans show vehicle stacking for the car wash and fuel pumps and 24’ spacing between pump islands.

Will be designed, constructed, operated and maintained so as to be compatible or similar in an architectural and landscape appearance with the existing or intended character of the general vicinity and will not change the essential character of that area, nor substantially diminish or impair property values within the neighborhood.
Finding: The area is guided for Community Commercial uses. The site itself is surrounded by land that

is designated for commercial uses. The proposed development is consistent with planned uses.

Will be served adequately by existing (or those proposed in the project) essential public facilities and services, including streets, police and fire protection, drainage, structures, refuse disposal, water and sewer systems and schools.
Finding: The site will continue to be served by the existing services, including storm water management. The project will not require any public services or utilities beyond those being installed as part of the over development in this area of Rosemount.

Will not involve uses, activities, processes, material equipment, and conditions of operation that will be hazardous or detrimental to any persons, property, or the general welfare because of excessive production of traffic, noise, smoke, fumes, glare, or odors. Finding: The proposed development will not involve uses, activities, processes, material equipment, and conditions of operation that will be hazardous or detrimental to any persons, property, or the general welfare because of excessive production of traffic, noise, smoke, fumes, glare, or odors.

Will have vehicular ingress and egress to the property which does not create traffic congestion or interfere with traffic on surrounding public streets.
Finding: The City's engineering staff has reviewed the site plan and indicates that the site will not create traffic congestion or interfere with traffic on surrounding public streets. The streets in this part of the city were and are being designed with a mix of commercial and residential development in mind.

Will not result in the destruction, loss or damage of a natural, scenic, or historic feature of major importance and will comply with all local, state, and federal environmental quality standards.
Finding: The site features no natural, scenic, or historic features of major importance that will be impacted by the proposed development.

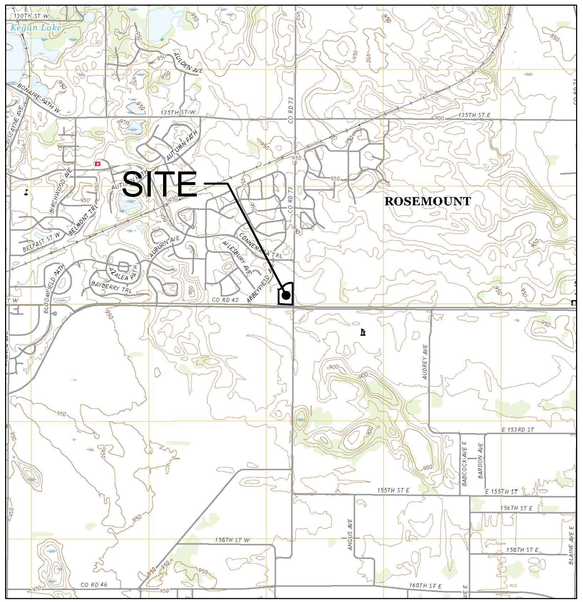
RECOMMENDATION

Staff is recommending approval of the Final Site and Building Plan and the Conditional Use Permit for an automobile fuel station, subject to conditions. This recommendation is based on information provided by the applicant and reviewed in this report.

KWIK TRIP STORE #1757

PERMIT SET

CITY OF ROSEMOUNT
DAKOTA COUNTY, MINNESOTA



SITE LOCATION MAP

AERIAL LOCATION MAP

DRAWING INDEX

C001	TITLE SHEET
C010	ALTA SURVEY
C020	DEMO PLAN
C100	SITE KEYNOTE PLAN
C180	SITE CIRCULATION PLAN
C181	SITE DIMENSION PLAN
C200	GRADE PLAN
C300	STORM SEWER PLAN
C301	STORM SEWER NOTES & DETAILS
C400	UTILITY PLAN
C401	UTILITY NOTES
C500	SITE PLAN DETAILS
C501	SITE PLAN DETAILS
C600	EROSION CONTROL PLAN
C601	EROSION CONTROL NOTES
C602	EROSION CONTROL DETAILS
C603	EROSION CONTROL DETAILS
C700	LANDSCAPE PLAN
C701	LANDSCAPE PLAN
C800	PHOTOMETRIC LIGHTING PLAN
C801	PHOTOMETRIC RENDERING PLANS

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

Name: Daniel J. Wilke, P.E.
Signature: Dan Wilke
Date: 07/16/24 License #: 53182

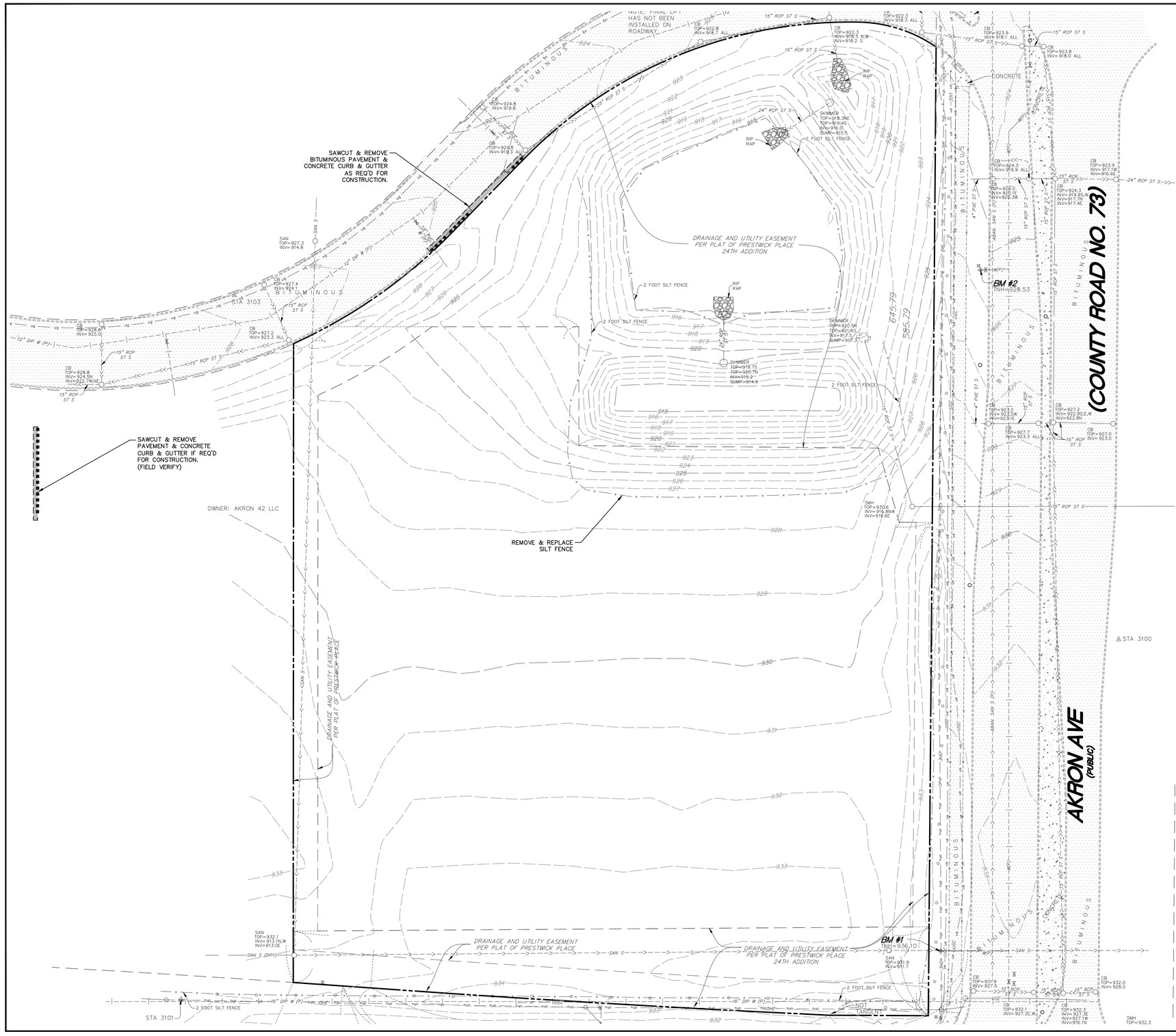
COVER SHEET

CONVENIENCE STORE #1757
WITH 1-BAY DETACHED CARWASH

145TH ST W & AKRON AVENUE
ROSEMOUNT, MINNESOTA

#	DATE	DESCRIPTION

DRAWN BY	DJW
SCALE	GRAPHIC
PROJ. NO.	11004-00
DATE	2024-07-16
SHEET	1757 C001



PLAN LEGEND

	EXISTING	REMOVAL
CURB		
BITUMINOUS		
CONCRETE PAVEMENT		
CONCRETE WALK		
PROPERTY LINE		
EASEMENT LINE		
STORM SEWER		AS NOTED
SANITARY SEWER		
WATER MAIN		
UNDERGROUND GAS		
UNDERGROUND FIBER OPTIC		
UNDERGROUND ELECTRIC		
FLARED END SECTION		
COMMUNICATIONS BOX		
MANHOLE		
LIGHT POLE		
SIGN		
WATER VALVE		
HYDRANT		
UTILITY POLE		
HANDHOLE		

REMOVAL PLAN NOTES

1. ALL EXISTING UTILITY LOCATIONS SHOWN ARE APPROXIMATE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION, DEPTH AND TYPES OF EXISTING UTILITIES AND TO NOTIFY THE OWNER AND ENGINEER IMMEDIATELY OF ANY DISCREPANCIES OR VARIATIONS FROM THE PLANS.
2. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL EXISTING UTILITIES, APPURTENANCES AND STRUCTURES NOT INDICATED FOR REMOVAL. DAMAGE CAUSED BY DEMOLITION OPERATIONS SHALL BE REPAIRED AT NO ADDITIONAL COST TO THE OWNER.
3. CONTRACTOR TO REMOVE/RELOCATE EXISTING PRIVATE UTILITIES AS NECESSARY. THE CONTRACTOR SHALL COORDINATE THESE ACTIVITIES WITH THE UTILITY COMPANIES.
4. THE CONTRACTOR IS RESPONSIBLE FOR ALL THE REMOVALS SHOWN ON THE PLANS AND SHALL CONFORM/ADHERE TO ALL GOVERNING STATE AND LOCAL REGULATIONS. ALL PERMITS, APPLICATIONS AND FEES ARE THE RESPONSIBILITY OF THE CONTRACTOR.

0 15 30 60
(IN FEET)

BENCHMARKS

1. TOP OF NUT OF FIRE HYDRANT IN THE NORTHWEST QUADRANT OF AKRON AVE & 145TH STREET

   ELEVATION = 936.10 (NAVD 88)
2. TOP OF NUT OF SECOND FIRE HYDRANT NORTH OF 145TH STREET ON THE WEST SIDE OF AKRON AVE.

   ELEVATION = 928.53 (NAVD 88)

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Name: Daniel J. Wilke, P.E.

Signature: Dan Wilke

Date: 07/16/24 License #: 53182

DEMO PLAN

CONVENIENCE STORE #1757 WITH 1-BAY DETACHED CARWASH

145TH ST W & AKRON AVENUE
ROSEMOUNT, MINNESOTA

#	DATE	DESCRIPTION

DRAWN BY	DJW
SCALE	GRAPHIC
PROJ. NO.	11004-00
DATE	2024-07-16
SHEET	1757 C020

SIGNAGE & STRIPING NOTES

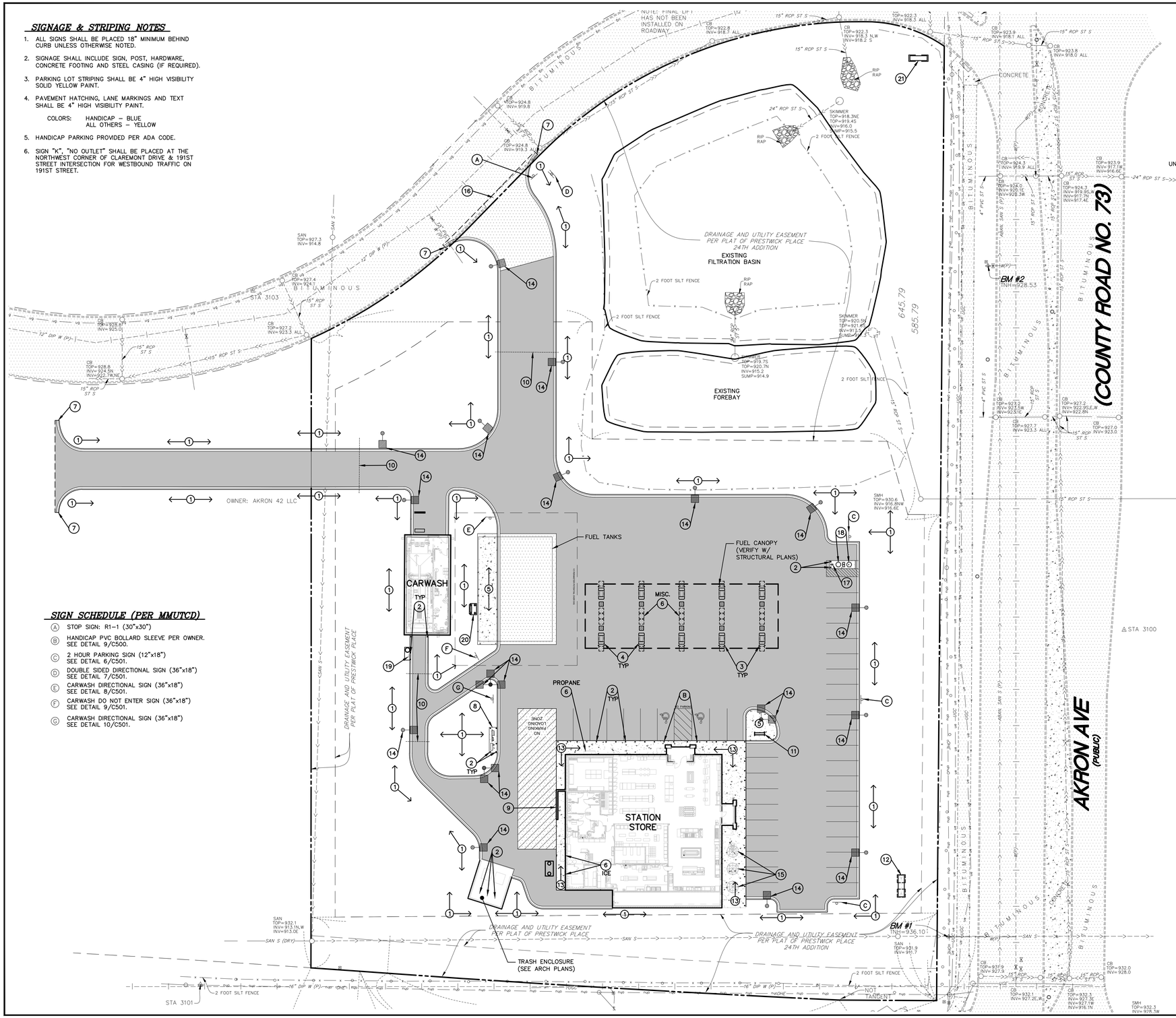
1. ALL SIGNS SHALL BE PLACED 18" MINIMUM BEHIND CURB UNLESS OTHERWISE NOTED.
2. SIGNAGE SHALL INCLUDE SIGN, POST, HARDWARE, CONCRETE FOOTING AND STEEL CASING (IF REQUIRED).
3. PARKING LOT STRIPING SHALL BE 4" HIGH VISIBILITY SOLID YELLOW PAINT.
4. PAVEMENT HATCHING, LANE MARKINGS AND TEXT SHALL BE 4" HIGH VISIBILITY PAINT.

   COLORS: HANDICAP – BLUE
   ALL OTHERS – YELLOW

5. HANDICAP PARKING PROVIDED PER ADA CODE.
6. SIGN "K", "NO OUTLET" SHALL BE PLACED AT THE NORTHWEST CORNER OF CLAREMONT DRIVE & 191ST STREET INTERSECTION FOR WESTBOUND TRAFFIC ON 191ST STREET.

SIGN SCHEDULE (PER MMUTCD)

- (A) STOP SIGN: R1-1 (30"x30")
- (B) HANDICAP PVC BOLLARD SLEEVE PER OWNER. SEE DETAIL 9/C500.
- (C) 2 HOUR PARKING SIGN (12"x18") SEE DETAIL 6/C501.
- (D) DOUBLE SIDED DIRECTIONAL SIGN (36"x18") SEE DETAIL 7/C501.
- (E) CARWASH DIRECTIONAL SIGN (36"x18") SEE DETAIL 8/C501.
- (F) CARWASH DO NOT ENTER SIGN (36"x18") SEE DETAIL 9/C501.
- (G) CARWASH DIRECTIONAL SIGN (36"x18") SEE DETAIL 10/C501.



PLAN LEGEND

	EXISTING	PROPOSED
CURB		
BITUMINOUS		
CONCRETE PAVEMENT		HEAVY DUTY 6,583 SF; LIGHT DUTY 53,253 SF
CONCRETE WALK		
PROPERTY LINE		
EASEMENT LINE		
STORM SEWER		
SANITARY SEWER		
WATER MAIN		
UNDERGROUND GAS		
UNDERGROUND FIBER OPTIC		
UNDERGROUND ELECTRIC		
FLARED END SECTION		
COMMUNICATIONS BOX		
MANHOLE		
LIGHT POLE		
SIGN		
WATER VALVE		
HYDRANT		
UTILITY POLE		
HANDHOLE		

PLAN KEYNOTES

1. LANDSCAPE AREA. SEE SHEET L1.
2. 30" HEIGHT, 6" DIAMETER CONCRETE FILLED PIPE BOLLARD. SEE DETAIL 6/C500.
3. 36" HEIGHT, 6" DIAMETER CONCRETE FILLED PIPE BOLLARD. SEE DETAIL 7/C500.
4. CONCRETE ISLAND WITH 6" EXPOSURE WITH FUEL DISPENSER. DISPENSER PER OWNER.
5. 4" CONCRETE WALK.
6. OUTDOOR MERCHANDISING.
7. MATCH EXISTING CURB & GUTTER/SIDEWALK/PAVEMENT.
8. TRANSFORMER LOCATION.
9. TOTE SCREENING WALL. SEE ARCHITECTURAL PLANS.
10. PVC IRRIGATION SLEEVE UNDER PAVEMENT. VERIFY WITH IRRIGATION PLAN FOR EXACT SIZE AND LOCATION BEFORE INSTALLATION.
11. BIKE RACK PER OWNER.
12. PYLON SIGN.
13. 6" INTEGRAL CONCRETE WALK/CURB.
14. SITE AREA LIGHT WITH CONCRETE BASE PER DETAIL 5/C500.
15. PICNIC TABLE PER OWNER.
16. CONCRETE VALLEY GUTTER PER DETAIL 13/C500.
17. "FREE AIR" COMPRESSOR PER OWNER. PROVIDE SIGNAGE PER OWNER.
18. AUTO VACUUM PER OWNER ON CONCRETE ISLAND WITH 6" EXPOSURE. PROVIDE TRASH CONTAINER PER OWNER.
19. CARWASH KEYPAD PER OWNER. PROVIDE TRASH CONTAINER PER OWNER.
20. FUEL TANKS VENT STAND PER OWNER.
21. MONUMENTS SIGN.

0 15 30 60
(IN FEET)

BENCHMARKS

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Name: Daniel J. Wilke, P.E.
Signature:
Date: 07/16/24 License #: 53182

SITE KEYNOTE PLAN

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145TH ST W & AKRON AVENUE
ROSEMOUNT, MINNESOTA

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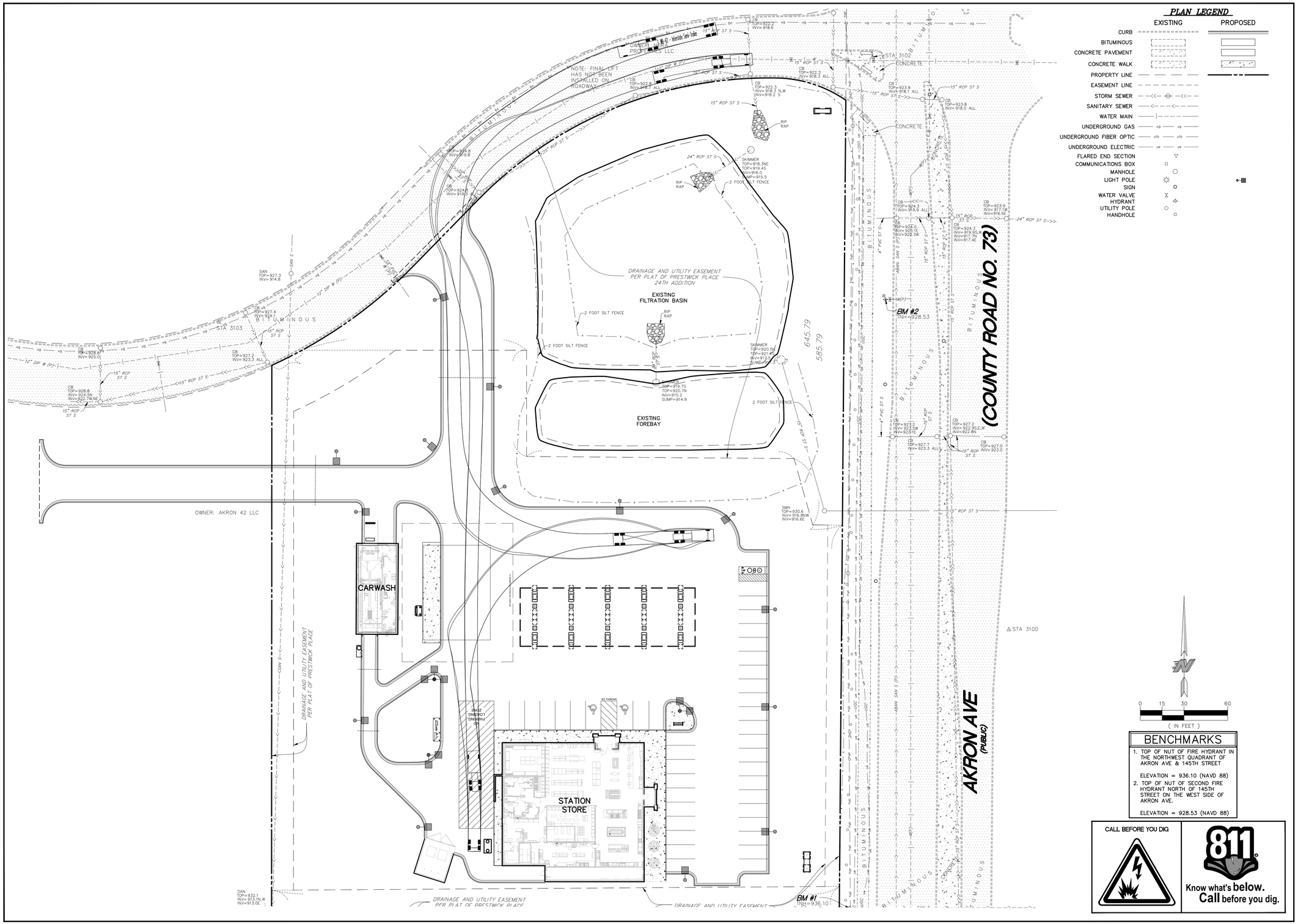
DRAWN BY	DJW
SCALE	GRAPHIC
PROJ. NO.	11004-00
DATE	2024-07-16
SHEET	1757 C100



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Name: Daniel J. Wilke, P.E.

Signature: Dan Wilke

Date: 07/16/24 License #: 53182

SITE CIRCULATION PLAN

CONVENIENCE STORE #1757 WITH 1-BAY DETACHED CARWASH

145TH ST W & AKRON AVENUE
ROSEMOUNT, MINNESOTA

#	DATE	DESCRIPTION

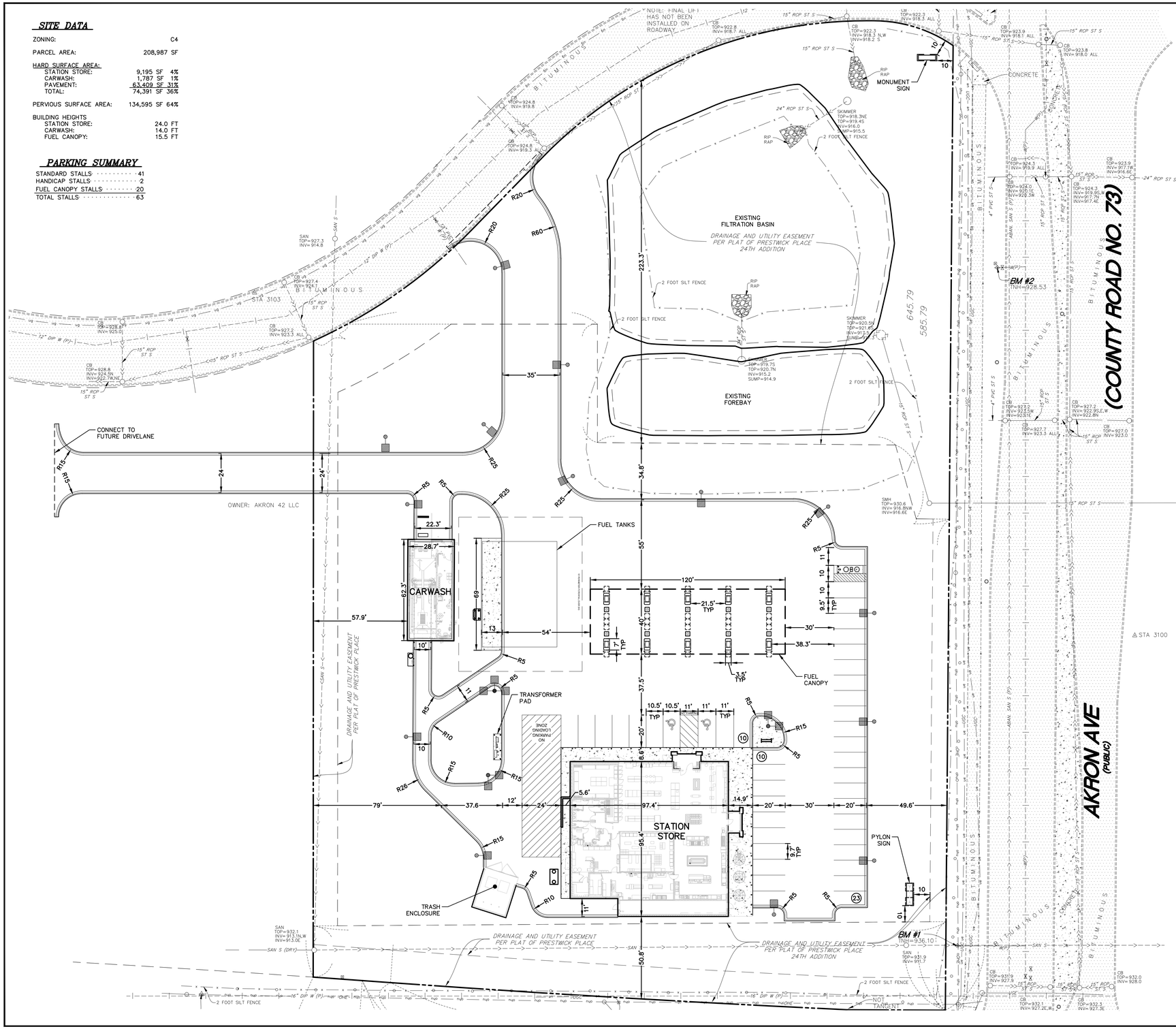
DRAWN BY	DJW
SCALE	GRAPHIC
PROJ. NO.	11004-00
DATE	2024-07-16
SHEET	1757 C180

SITE DATA

ZONING:	C4
PARCEL AREA:	208,987 SF
HARD SURFACE AREA:	
STATION STORE:	9,195 SF 4%
CARWASH:	1,787 SF 1%
PAVEMENT:	63,409 SF 31%
TOTAL:	74,391 SF 36%
PERVIOUS SURFACE AREA:	134,595 SF 64%
BUILDING HEIGHTS	
STATION STORE:	24.0 FT
CARWASH:	14.0 FT
FUEL CANOPY:	15.5 FT

PARKING SUMMARY

STANDARD STALLS	41
HANDICAP STALLS	2
FUEL CANOPY STALLS	20
TOTAL STALLS	63



PLAN LEGEND

	EXISTING	PROPOSED
CURB		
BITUMINOUS		
CONCRETE PAVEMENT		
CONCRETE WALK		
PROPERTY LINE		
EASEMENT LINE		
STORM SEWER		
SANITARY SEWER		
WATER MAIN		
UNDERGROUND GAS	ug	ug
UNDERGROUND FIBER OPTIC	ufo	ufo
UNDERGROUND ELECTRIC	ue	ue
FLARED END SECTION		
COMMUNICATIONS BOX		
MANHOLE		
LIGHT POLE		
SIGN		
WATER VALVE		
HYDRANT		
UTILITY POLE		
HANDHOLE		

SITE PLAN NOTES

1. ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
2. CONCRETE CURB AND GUTTER SHALL BE B612 UNLESS OTHERWISE NOTED.
3. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY THE LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES PRIOR TO THE START OF SITE WORK. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF DISCREPANCIES OR VARIATIONS FROM THE PLAN.
4. UNLESS OTHERWISE SHOWN ON THIS DRAWING, CONTRACTOR SHALL PROVIDE CONTROL JOINTS, CONSTRUCTION JOINT AND EXPANSION JOINTS IN SLAB ON GRADE, SIDEWALKS AND DRIVES PER THE FOLLOWING REQUIREMENTS:

CONTROL JOINT MAX. SPACING: WALKS–8' O.C.
ALL OTHERS–10' O.C.

SAW CUT CONTROL JOINTS MINIMUM ¼ CONCRETE THICKNESS.

EXPANSION JOINT MAX. SPACING: WALKS–24' O.C.
*ALL OTHERS–40' O.C.

*ALL POINTS WHERE A CHANGE IN PAVEMENT THICKNESS OCCURS SHALL HAVE AN EXPANSION JOINT.

DOWELL ALL EXPANSION JOINTS: 24" O.C. MAX.

CONCRETE SEALER SHALL BE TK–26UV.

0 15 30 60
(IN FEET)

BENCHMARKS

1. TOP OF NUT OF FIRE HYDRANT IN THE NORTHWEST QUADRANT OF AKRON AVE & 145TH STREET

   ELEVATION = 936.10 (NAVD 88)
2. TOP OF NUT OF SECOND FIRE HYDRANT NORTH OF 145TH STREET ON THE WEST SIDE OF AKRON AVE.

   ELEVATION = 928.53 (NAVD 88)

CALL BEFORE YOU DIG

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

KWIK TRIP

KWIK STAR

KWIK TRIP, Inc.
P.O. BOX 2107
1626 OAK STREET
LA CROSSE, WI 54602-2107
PH. (608) 781-8988
FAX (608) 781-8960

CARLSON McCAIN
3890 PHEASANT RIDGE DRIVE NE, SUITE 100, BLAINE, MN 55449
TEL 763.489-7900 \ FAX 763.489.7959 \ CARLSONMCCAIN.COM

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.

Name: Daniel J. Wilke, P.E.
Signature: Dan Wilke
Date: 07/16/24 License #: 53182

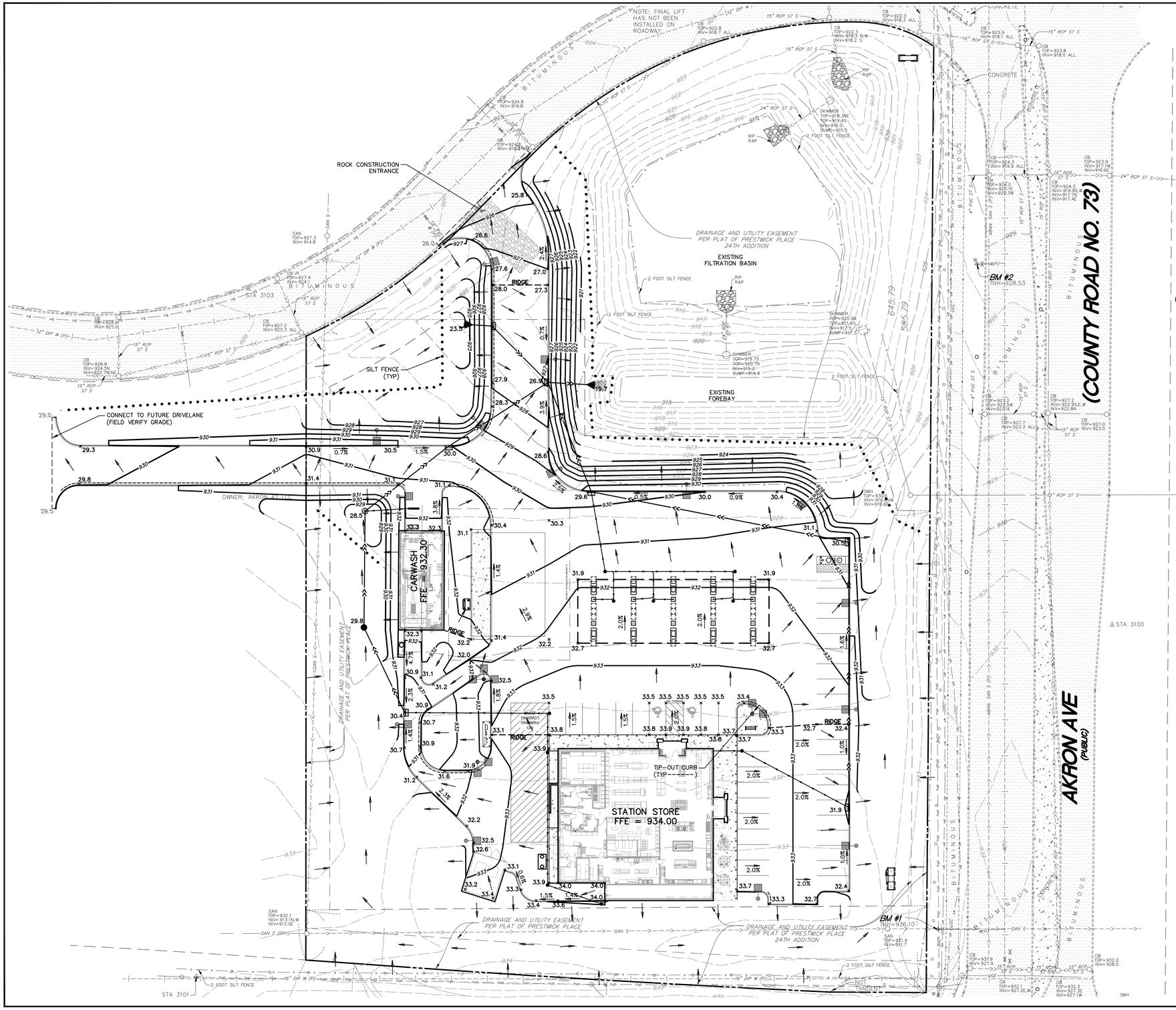
SITE DIMENSION PLAN

CONVENIENCE STORE #1757
WITH 1-BAY DETACHED CARWASH

145TH ST W & AKRON AVENUE
ROSEMOUNT, MINNESOTA

#	DATE	DESCRIPTION

DRAWN BY	DJW
SCALE	GRAPHIC
PROJ. NO.	11004-00
DATE	2024-07-16
SHEET	1757 C181



PLAN LEGEND

	EXISTING	PROPOSED
CURB		
BITUMINOUS		
CONCRETE PAVEMENT		
CONCRETE WALK		
PROPERTY LINE		
EASEMENT LINE		
STORM SEWER		
SANITARY SEWER		
WATER MAIN		
UNDERGROUND GAS		
UNDERGROUND FIBER OPTIC		
UNDERGROUND ELECTRIC		
FLARED END SECTION		
COMMUNICATIONS BOX		
MANHOLE		
LIGHT POLE		
SIGN		
WATER VALVE		
HYDRANT		
UTILITY POLE		
HANDHOLE		
5' CONTOUR	905	905
1' CONTOUR	904	904
SPOT ELEVATION (CURB ELEVATIONS ARE TO GUTTER LINE)	00.0	00.0
EROSION CONTROL BLANKET		
SILT FENCE		

GOVERNING SPECIFICATIONS

1. THE LATEST EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION".
2. THE LATEST EDITION OF THE CITY OF ROSEMOUNT STANDARD DETAILS AND SPECIFICATIONS.
3. THE LATEST EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MMUTCD).
4. THE LATEST EDITION OF THE CITY ENGINEERS ASSOCIATION OF MINNESOTA (CEAM) STANDARD SPECIFICATIONS.

GRADING NOTES

1. SILT FENCE AND EXISTING CATCH BASIN INLET PROTECTION SHALL BE INSTALLED PRIOR TO GRADING CONSTRUCTION, AND SHALL BE MAINTAINED UNTIL SITE HAS BEEN STABILIZED.
2. CONTRACTOR SHALL FIELD VERIFY THE LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES AND PAVEMENTS PRIOR TO THE START OF GRADING CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF DISCREPANCIES OR VARIATIONS FROM THE PLAN.
3. CONTRACTOR SHALL STRIP, STOCKPILE AND RESPREAD SUFFICIENT TOPSOIL TO PROVIDE A MINIMUM OF 4" OF TOPSOIL OVER ALL DISTURBED AREAS THAT WILL BE SODDED, SEEDED OR LANDSCAPED.

0 15 30 60
(IN FEET)

BENCHMARKS

1. TOP OF NUT OF FIRE HYDRANT IN THE NORTHWEST QUADRANT OF AKRON AVE & 145TH STREET

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Name: Daniel J. Wilke, P.E.

Signature: Dan Wilke

Date: 07/16/24 License #: 53182

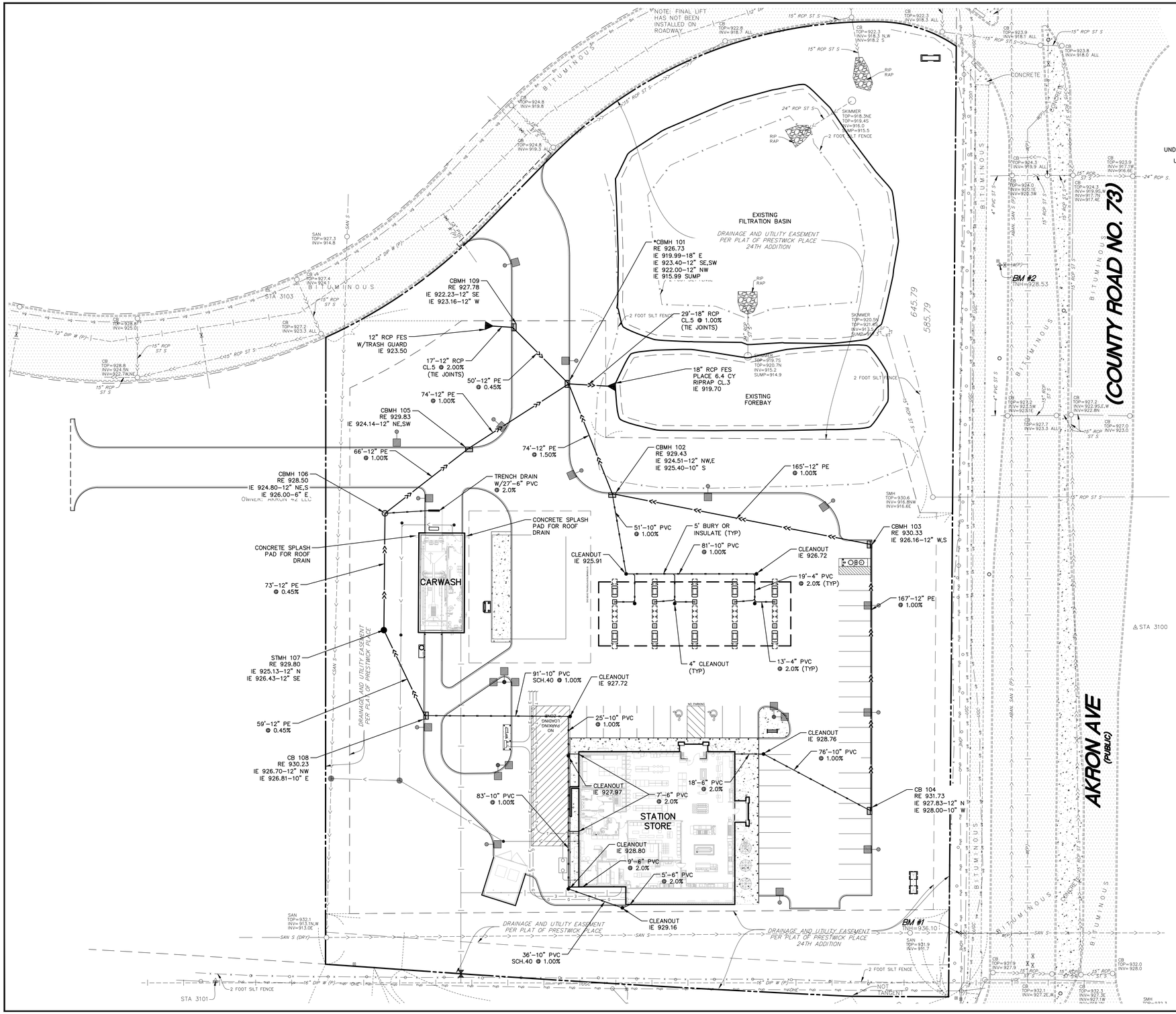
GRADE PLAN

CONVENIENCE STORE #1757 WITH 1-BAY DETACHED CARWASH

145TH ST W & AKRON AVENUE
ROSEMOUNT, MINNESOTA

#	DATE	DESCRIPTION

DRAWN BY	DJW
SCALE	GRAPHIC
PROJ. NO.	11004-00
DATE	2024-07-16
SHEET	1757 C200



PLAN LEGEND

	EXISTING	PROPOSED
CURB		
BITUMINOUS		
CONCRETE PAVEMENT		
CONCRETE WALK		
PROPERTY LINE		
EASEMENT LINE		
STORM SEWER		
SANITARY SEWER		
WATER MAIN		
UNDERGROUND GAS	ug ug	G G G
UNDERGROUND FIBER OPTIC	ufo ufo	T T T
UNDERGROUND ELECTRIC	ue ue	E E E
FLARED END SECTION		
COMMUNICATIONS BOX		
MANHOLE		
LIGHT POLE		
SIGN		
WATER VALVE		
HYDRANT		
UTILITY POLE		
HANDHOLE		

STORM SEWER SCHEDULE

STRUCTURE TYPE & No.	STRUCTURE SIZE	NEENAH CASTING or EQUAL
CBMH–109	48" DIA.	R–3067–V
CB–108	24"x 36"	R–3067–VB
STMH–107	48" DIA.	R–1733
CBMH–106	48" DIA.	R–4342
CBMH–105	48" DIA.	R–3067–V
CB–104	24"x 36"	R–3067–VB
CBMH–103	48" DIA.	R–3067–V
CBMH–102	48" DIA.	R–3067–V
*CBMH–101	48" DIA.	R–3067–VB

* INSTALL 18R SNOUT OIL & DEBRIS STOP AS MANUFACTURED BY BMP, INC. ON OUTLET PIPE.

0 15 30 60
(IN FEET)

BENCHMARKS

1. TOP OF NUT OF FIRE HYDRANT IN THE NORTHWEST QUADRANT OF AKRON AVE & 145TH STREET

   ELEVATION = 936.10 (NAVD 88)
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Name: Daniel J. Wilke, P.E.

Signature: Dan Wilke

Date: 07/16/24 License #: 53182

STORM SEWER PLAN

CONVENIENCE STORE #1757 WITH 1-BAY DETACHED CARWASH

145TH ST W & AKRON AVENUE
ROSEMOUNT, MINNESOTA

#	DATE	DESCRIPTION

DRAWN BY	DJW
SCALE	GRAPHIC
PROJ. NO.	11004-00
DATE	2024-07-16
SHEET	1757 C300

STORM DRAINAGE:

1. Unless otherwise indicated, use reinforced, precast, concrete maintenance holes and catchbasins conforming to ASTM C478, furnished with water stop rubber gaskets and precast bases. Joints for all precast maintenance hole sections shall have confined, rubber "O"-ring gaskets in accordance with ASTM C443. These joints are normally used in sewers to hold infiltration and exfiltration to a practical minimum and are adequate for hydrostatic heads up to 30'. The inside barrel diameter shall not be less than 48 inches.
2. Install catchbasin castings with specified rim elevation as shown.

3. All joints and connections in the storm sewer system shall be gastight or watertight. Use flexible compression joints to make watertight connections to manholes in accordance with Minnesota Rules part 4714.0719.6. Where permitted by the administrative authority, approved resilient rubber seals or waterstop gaskets may be used in order to make watertight connections to manholes, catchbasins, and other structures. Use Fernco "Concrete Manhole Adaptors" or "Large Diameter Waterstops", Press-Seal "Waterstop Grouting Rings", or approved equal. Cement mortar joints alone are not allowed unless making repairs or connections to existing lines having such joints.
4. The building sewer starts 2 feet outside of the building. See Uniform Plumbing Code (UPC) part 715.1. Material installed within 2 feet of the building must be of materials approved for use inside of or within the building.
5. The exterior storm water piping must comply with the following requirements: (A) Double wyes may not be used for drainage fittings in the horizontal position (see Minnesota Rules, Chapter 4714, Section 310.5), because proper pipe slope cannot be maintained on both of the lateral branches. (B) Changes in direction in drainage piping must be made by appropriate use of wyes and bends (see Minnesota Rules, Chapter 4714, Section 706.0). When connecting any vertical drop to a horizontal run, use a wye and a 1/8 bend (45 deg), or a sanitary combo. A sanitary combo is a combination wye and a 1/8 bend combined in a single fitting. The reason is to form a long radius bend in order to insure that the waste is directed in the downstream direction as it enters the horizontal run. Tees are not allowed where the direction of flow changes from either vertical to horizontal or horizontal to horizontal.
6. PVC Pipe (Outside of the Building): Use solid-core, Schedule 40 Polyvinyl Chloride (PVC) Plastic Pipe for all designated PVC storm sewer services outside of the building. The PVC pipe shall meet or exceed the industry standards and requirements as set forth by the American Society for Testing and Materials (ASTM) D1785 and D2665. Fittings must comply with ASTM D1866, D2665, or F794. Joints must be approved mechanical or push-on utilizing an elastomeric seal. Use of solvent cement joints is allowed for building services. Solvent cement joints in PVC pipe must include use of ASTM F656 purple primer and cement in accordance with Uniform Plumbing Code (UPC), part 605.13.2. Pipe with solvent cement joints shall be joined with PVC cement conforming to ASTM D2564. The installation must comply with ASTM D2321, which requires open-trench installation on a continuous granular bed.
7. Cleanouts: Install cleanouts on all roof drains. Cleanouts shall be installed at every wye, sweep, and bend. Install cleanouts on all storm sewer services in accordance with UPC part 719.0 and 1101.12. The distance between cleanouts in horizontal piping shall not exceed 100 feet for pipes 4-inch and over in size. Cleanouts shall be of the same nominal size as the pipes they serve. Include frost sleeves and concrete frame and pipe support. Install a meter box frame and solid lid (Neenah R-1914-A, or approved equal) over all cleanouts. Provide cleanouts at the base of the roof leader connections at the gas island pump stations.
8. Fittings: Provide directional fittings for the storm piping serving the gas island pump stations. All changes in direction of flow in drain piping shall be made by the appropriate use of 45 degree wyes, long or short sweep quarter bends, sixth, eighth, or sixteenth bends, or by a combination of these or other equivalent fittings.
9. RCP: Reinforced concrete pipe (RCP) and fittings shall conform to ASTM C76, Design C, with circular reinforcing for the class of pipe specified. Use Class IV RCP for pipes 21" and larger. Use Class V RCP for pipes 18" and smaller. Joints shall be made up of concrete surfaces with a groove on the spigot for an O-ring rubber gasket (also referred to as a confined O-ring type joint) in accordance with ASTM C361. These joints are normally used in gravity sewers where exceptional tightness is required. This type of joint provides excellent inherent water tightness in both the straight and deflected position and meets all the joint requirements of ASTM C443.
10. RC Aprons: Install a reinforced concrete apron on the free end of all daylighted RCP storm sewer pipes. Tie the last three sections (including apron) of all daylighted RCP storm sewer with a minimum of two tie bolt fasteners per joint. This requirement applies to both upstream and downstream pipe inlets and outlets. Tie all concrete culverts, in all joints. Ties to be used only to hold the pipe sections together, not for pulling the sections tight. Nuts and washers are not required on inside of 675 mm (27 inch) or less diameter pipes.
11. Grates on horizontal pipes: Install safety-trash grates on all horizontal inlets/outlets greater than 6 inches in diameter. The grates shall be placed so that the rods or bars are not more than 3 inches downstream of the inlet/outlet. Rods or bars shall be spaced so that the openings do not permit the passage of a 6-inch sphere.
12. Testing: Test all portions of storm sewer that are within 10 feet of buildings, within 10 feet of buried water, lines, within 50 feet of water wells, or that pass through soil or water identified as being contaminated in accordance with the Minnesota Rules part 4714.1109 and UPC part 1109.0. Test all flexible storm sewer lines for deflection after the sewer line has been installed and backfill has been in place for at least 30 days. No pipe shall exceed a deflection of 5%. If the test fails, make necessary repairs and retest.
13. Draintile: In accordance with Minnesota Rules part 4714.1102.5, use perforated polyvinyl chloride PVC (ASTM D2729) or corrugated polyethylene PE (ASTM F405) on all draintile 3-inches to 6-inches in diameter. **Install draintile with high permittivity circular knit polymeric filament filter sock per ASTM D6707-01. MnDot 3733 Type I sewn seam non-woven fabric shall not be used. Draintile pipe directly connected to the storm sewer is classified as storm sewer. Draintile inlet elevations to the catch basins must be above the storm sewer outlet elevations.**
14. Use Neenah R-3067-DR/DL casting with curb box, or approved equal, on CB #1, CB#2, CB#4 and CB #5. Casting shall include the "NO DUMPING. DRAINS TO RIVER." environmental notice.
15. Use Zurn Z886 trench drain model 8606N with black acid resistant epoxy coated ductile grate – Class C for proposed trench drain.
16. Use Neenah Foundry Co. R-1642 casting with self-sealing, solid, type B lid, or approved equal, on all storm sewer maintenance holes. Covers shall bear the "Storm Sewer" label.
17. Trace Wire: Install locating wires on all conductive and non-conductive storm sewer, sanitary sewer, and water lines in accordance with the Minnesota Rural Water Association (MRWA) Trace Wire Specification Guide and Details (www.mrwa.com/PDF/TracerWireSpecGuideFinalweb9.pdf). Use #12 HDPE-insulated copper-clad steel wire rated for underground service. The color of the insulating jacket shall be as follows: ground=red, storm sewer=green, sanitary sewer=green, and water lines=blue. Install the wire on the bottom side of the pipe below the spring line. Fasten the wire to the pipe with tape or plastic ties at 5' intervals. Do not wrap the trace wire around the corresponding utility. Do not connect the trace wire to existing conductive utilities. Use Copperhead Dryconn 3-Way or Locking Snake Bite connectors rated for underground direct bury applications or approved equal at all crossings or service connections. Twist on connectors are not allowed. Trace wire must be properly grounded at all dead ends and services. Install grade-level/in-ground trace wire access boxes and drive-in magnesium grounding anodes at all dead ends, services, and fire hydrants. Trace wire access boxes shall be color coded as follows: storm sewer=green, sanitary sewer=green, and water lines=blue.
18. Detectable Warning Tape: Install detectable underground warning tape directly above all underground utilities at a depth of 457 mm (18 inches) below finished grade, unless otherwise indicated. Underground warning tape shall be 3-inches wide with a minimum 5.0 mil overall thickness. Tape shall be manufactured using a 0.8 mil clear virgin polypropylene film, reverse printed and laminated to a 0.35 mil solid aluminum foil core, and then laminated to a 3.75 mil clear virgin polyethylene film. The aluminum backing makes underground assets easy to find using a non-ferrous locator. Tape shall be printed using a diagonally striped design for maximum visibility and meet the APWA Color-Code standard for identification of buried utilities. Use Pro-Line Safety Products (www.prolinesafety.com) detectable marking tape or approved equal.
19. Install anti-seepage diaphragms at the locations indicated on the plan in accordance with MNDOT Standard Specification 2501 and MNDOT Standard Plate No. 3146C.
20. The minimum depth of cover for building and canopy roof drain leaders without insulation is 5 feet. Insulate roof drain leaders at locations where the depth of cover is less than 5 feet. Provide a minimum insulation thickness of 2 inches. The insulation must be at least 4 feet wide and centered on the pipe. Install the insulation boards 6 inches above the tops of the pipes on mechanically compacted and leveled pipe bedding material. Use high density, closed cell, rigid board material equivalent to DOW Styrofoam HI-40 plastic foam insulation.
21. Install all pipe with the ASTM identification numbers on the top for inspection. Commence pipe laying at the lowest point in the proposed sewer line. Lay the pipe with the bell end or receiving groove end of the pipe pointing upgrade. When connecting to an existing pipe, uncover the existing pipe in order to allow any adjustments in the proposed line and grade before laying any pipe. Do not lay pipes in water or when the trench conditions are unsuitable for such work.
22. Line ponds with 2' thick impervious clay liner per detail.
23. Clean sediment and debris from sewers, sumps and stormwater basins prior to final owner acceptance.
24. Televise all existing lines prior to connection.
25. Provide a final storm water management report that will serve to verify that the intent of the approved storm water management design has been met. The report shall include record drawings, measurements, and photographic evidence of the as-built storm water management system. The report shall substantiate that all aspects of the original design have been adequately provided for by the construction of the project.
26. Install finger drains at each and every proposed catchbasin (see detail). Finger drains around catch basin inlets shall not be installed below the crown of the storm drain piping.

HDPE REQUIREMENTS:

1. Install dual-wall, smooth interior, corrugated high-density polyethylene (HDPE) pipe at locations indicated on the plan. High-density polyethylene (HDPE) storm sewers must meet ASTM F714 (see Minnesota Rules, Chapter 4714 and Installation Standard 1).
2. Dual-wall, smooth interior, corrugated high-density polyethylene (HDPE) pipe shall conform to the requirements of AASHTO M252 for pipe sizes 4-inch to 10-inch diameter. Dual-wall, smooth interior, corrugated high-density polyethylene (HDPE) pipe shall conform to the requirements of ASTM F2306 (virgin PE material) for pipe sizes 12-inch to 60-inch diameter.
3. All fittings must comply with ASTM Standard D3212.
4. Water-tight joints must be used at all connections (including structures) in conformance with ASTM F2510.
5. HDPE pipe connections into all concrete structures must be made with water tight materials utilizing Nyoplast "Manhole Adaptors" along with Press-Seal or Kor-N-Seal "Watertight Connector", Cast-A-Seal "Precast Watertight Connector", or approved equals. 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 Administrative Authority.
6. Lay all HDPE pipe on a continuous granular bed. Installation must comply with ASTM D2321. All sections of the corrugated HDPE pipe shall be coupled in order to provide water-tight joints.
7. Perform deflection tests on all HDPE pipe after the sewer lines have been installed and backfill has been in place for at least 30 days. No pipe shall exceed a deflection of 5%. If the test fails, make necessary repairs and perform the test again until acceptable. Supply the mandrel for deflection testing. If the deflection test is to be run using a rigid ball or mandrel, it shall have a diameter equal to 95% of the inside diameter of the pipe. The ball or mandrel shall be clearly stamped with the diameter. Perform the tests without mechanical pulling devices.

INFILTRATION AREA CONSTRUCTION:

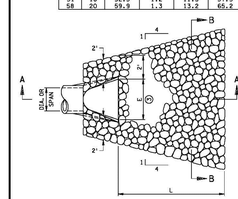
1. Protect the infiltration area from compaction and disturbance of existing soils.
2. Report any signs of high water table or compaction of the in place soils to the Engineer.
3. Schedule the construction so that excavation of the infiltration system to final grade occurs after the contributing drainage areas have been constructed and fully stabilized. Excavate the infiltration areas to within one foot of final grade initially. Delay final excavation of the basin floor until all disturbed areas tributary to the basin are stabilized. Utilize tracked excavation equipment that has relatively light bearing pressures. No heavy equipment is allowed on the infiltration areas before or after construction.
4. Delineate the location of infiltration areas (e.g. with flags, stakes, signs, silt fence, etc.) before work begins so that heavy construction equipment will not compact the soil in the proposed infiltration system.
5. Excavation of infiltration areas shall be completed using a backhoe with a toothed bucket.
6. The bottom excavations surface of infiltration areas shall be level without dips or swales.
7. Native soils in infiltration areas shall be de-compacted to a minimum depth of 18 inches prior to placing planting media or rock.
8. Planting media and rock shall remain uncontaminated (not mixed with other soil) before and during installation.
9. During construction, stormwater must be routed around infiltration areas until all construction activity has ceased and tributary surface are cleaned of sediment.
10. Installation of infiltration practices shall be done during periods of dry weather and completed before the rainfall event. Placement of planting media or rock shall be on dry native soil only.
11. Use rigorous erosion prevention and sediment controls (e.g. diversion berms) during the construction of the infiltration system in order to keep sediment and runoff completely away from the infiltration area.
12. Inspect all infiltration areas in order to ensure that no sediment from ongoing construction activity is reaching the infiltration areas and that these areas are protected from compaction due to construction equipment driving across the infiltration areas.
13. Prior to construction, provide dual-ring infiltrometer testing (ASTM D-3385) at the infiltration site in order to to verify infiltration rates used for the basin design. The tests shall be performed at the bottom elevation of the infiltration basin and shall be performed by a qualified geotechnical professional. Do not begin construction until soil type and infiltration rate verification has been made. Perform a minimum of 2 tests at each infiltration site (0.5-acre bottom area or less). Perform 2 additional tests for every additional 0.5-acre of bottom area. Verify the number of tests with the geotechnical professional and the governing authorities.
14. 2.5' of engineered soil is to be used as the surface layer of the infiltration basin. It shall consist of 40% by volume silica sand, topsoil (20% by volume if loam texture, 30% by volume if sandy loam or loamy sand texture), and 30%-40% by volume compost material.
15. Coarse filter aggregate shall be a free draining mineral product, excluding crushed carbonate quarry rock, limestone, crushed concrete, and salvaged bituminous mixture.
16. After final grading, till the floor of the infiltration area to a depth of at least 18 inches in order to provide a well aerated, porous surface texture. Till in 6 inches of compost material if the soils become compacted.
17. Place all excavated materials downstream and away from the infiltration area during and after excavation.
18. Stabilize the bottom and sideslopes of the infiltration area immediately following construction of the basin.
19. Use native MN state seed mixture 33-261. Apply seed mixture at a rate of 35 lbs per acre in accordance with MNDOT Standard Spec. 2575. Incorporate a Type 3 fertilizer (slow release type with 10 week residual) consisting of 22-5-10 (2N-P-K) into the soil at an application rate of 200 lbs per acre by disking prior to seeding. Prepare the soil in accordance with MNDOT Standard Spec. 2574.3
20. Establish native seed mix in accordance with MNDOT Standard Spec. 2575.3. Seed native mixes with a native seed drill, a drop type seeder, or a hydro seeder at the adjusted bulk application rate of each mixture. Use a drill capable of accurately metering the types of seed planted and capable of maintaining a uniform mixture of seeds during drilling. Use a drill with disk furrow openers and a packer assembly to compact the soil directly over the drill row. Seed native mixes in rows spaced no greater than 8 inches apart. Place seeds to a final planting depth from ¼ inch to ½ inch. Perform drill seeding at a right angle to surface drainage. A drop type seeder equipped with a separate seed box for the fluffy seed and a soil packer assembly may be used in lieu of a drill with disc openers. Use a cyclone or spinner type seeder on areas no greater than 1 acre or on areas inaccessible to other equipment, as approved by the Engineer. Lightly harrow or rake the site following the seeding operation. Pack the site following harrowing in order to ensure a firm seed-bed.
21. Comply with the requirements of MNDOT Standard Spec. Table 2575-1 for season of planting native seed mixtures. The appropriate dates for spring seeding are from April 15 through July 20. Fall seeding dates are from September 20 to October 20. Dormant seeding dates are from October 20 to November 15. Dormant seeding will only be allowed if the maximum soil temperature at a depth of 1 inch does not exceed 40 degrees F in order to prevent germination. When the dates in the season of planting prohibit seeding of the permanent seed mixture, apply temporary seeding and mulch in order to comply with the requirements of the GENERAL STORMWATER PERMIT FOR CONSTRUCTION ACTIVITY and then apply permanent seeding at a later date.
22. Water and maintain seeded areas on a timely day-to-day basis. In the event of a seeding failure, reseed and remulch the areas where the original seed has failed to grow and perform additional watering as necessary at no additional cost to the Owner.
23. Maintenance of Areas Planted With Native Seeds: To reduce weed establishment, mow 2 to 3 times (30 days apart) during the first year with the mower deck about 6" – 8" off the ground. Mow one time during the 2nd year before weeds set their seeds. Mow once every 3 to 5 years following the initial 2 years of maintenance in order to remove dead plant material and stimulate new seed.

TABLE OF QUANTITIES
RIPRAP AT RCP OUTLETS

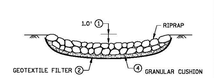
DIA. OF ROUND PIPE (IN.)	L (FT.)	CLASS II d_{50} = 6" GEO-TEXTILE FILTER (SQ.YD.)	CLASS II d_{50} = 6" GRANULAR FILTER UNDER APRON (CU.YD.)	CLASS II d_{50} = 6" 12" DEPTH RIPRAP (CU.YD.)	CLASS III d_{50} = 9" GEO-TEXTILE FILTER (SQ.YD.)	CLASS III d_{50} = 9" GRANULAR FILTER UNDER APRON (CU.YD.)	CLASS III d_{50} = 9" 18" DEPTH RIPRAP (CU.YD.)	CLASS IV d_{50} = 12" GEO-TEXTILE FILTER (SQ.YD.)	CLASS IV d_{50} = 12" GRANULAR FILTER UNDER APRON (CU.YD.)	CLASS IV d_{50} = 12" 24" DEPTH RIPRAP (CU.YD.)
12	8	16.9	0.2	3.0	19.6	0.3	4.4	22.6	0.3	5.9
15	8	18.0	0.2	3.2	20.8	0.3	4.8	23.9	0.4	6.4
18	10	22.4	0.3	4.3	25.8	0.4	6.4	29.0	0.5	8.5
21	10	24.1	0.4	4.7	27.4	0.6	7.1	30.9	0.7	9.4
24	12	29.7	0.5	6.2	33.4	0.8	9.2	37.3	1.0	12.3
27	12	31.4	0.6	6.6	35.2	0.9	9.9	39.2	1.2	13.2
30	14	37.4	0.8	8.2	41.6	1.1	12.3	46.0	1.5	16.4
36	16	45.9	1.1	10.6	50.5	1.6	15.8	55.4	2.1	21.1
42	18	52.8	1.2	12.5	57.8	1.7	18.7	63.0	2.3	24.9
48	20	61.1	1.5	14.8	66.5	2.2	22.2	72.0	2.9	29.6

TABLE OF QUANTITIES
RIPRAP AT RCP-A OUTLETS

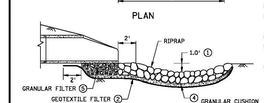
SPAN OF PIPE ARCH (IN.)	L (FT.)	CLASS II d_{50} = 6" GEO-TEXTILE FILTER (SQ.YD.)	CLASS II d_{50} = 6" GRANUL. FILTER UNDER APRON (CU.YD.)	CLASS II d_{50} = 6" 12" DEPTH RIPRAP (CU.YD.)	CLASS III d_{50} = 9" GEO-TEXTILE FILTER (SQ.YD.)	CLASS III d_{50} = 9" GRANUL. FILTER UNDER APRON (CU.YD.)	CLASS III d_{50} = 9" 18" DEPTH RIPRAP (CU.YD.)	CLASS IV d_{50} = 12" GEO-TEXTILE FILTER (SQ.YD.)	CLASS IV d_{50} = 12" GRANUL. FILTER UNDER APRON (CU.YD.)	CLASS IV d_{50} = 12" 24" DEPTH RIPRAP (CU.YD.)
22	10	22.4	0.3	4.1	25.6	0.4	6.1	29.0	0.5	8.1
28	12	29.5	0.5	5.7	33.2	0.7	8.5	37.1	0.9	11.3
36	14	37.3	0.8	7.5	41.5	1.1	11.2	45.8	1.5	14.9
43	16	45.9	1.1	9.5	50.5	1.6	14.3	55.3	2.1	19.0
51	18	52.5	1.2	11.3	57.5	1.7	16.9	62.7	2.3	22.5
58	20	59.9	1.3	13.2	65.2	1.9	19.8	70.7	2.5	26.4



PLAN



SECTION B-B



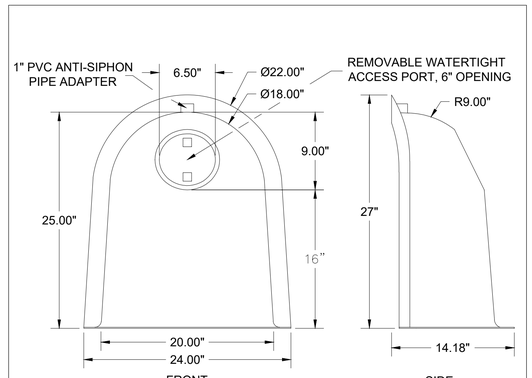
SECTION A-A

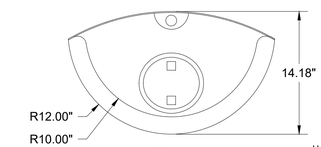
NOTES:
REQUIREMENTS FOR GEOTEXTILE TYPE, RIPRAP SIZE AND THICKNESS WILL BE DESIGNATED IN THE PLANS.

PIPE SIZES LARGER THAN THOSE SHOWN REQUIRE A SPECIAL DESIGN.

① FOR PIPES GREATER THAN OR EQUAL TO 30", USE 1.5'.
② GEOTEXTILE FILTER, SPEC. 3733, SHALL COVER THE BOTTOM AND SIDES OF THE AREA EXCAVATED FOR THE RIPRAP, GRANULAR FILTER MATERIALS.
③ DIMENSION E IS GIVEN ON STANDARD PLATES 3100 AND 3110.
④ GRANULAR FILTER, SPEC. 3601, MAY BE USED AS A CUSHION LAYER. PLACE FILTER PER SPEC. 2511. THE CUSHION LAYER IS INCIDENTAL.
⑤ GRANULAR FILTER OR RIPRAP, SPEC. 3601, TO EXTEND UNDER ENTIRE OPEN PORTION OF PIPE APRON. DEPTH OF MATERIAL UNDER APRON SHALL MATCH RIPRAP DEPTH. WHEN USING RIPRAP INCREASE RIPRAP QUANTITY ACCORDINGLY AND PLACE A 3" LAYER OF 1.5" CRUSHED ROCK UNDER THE APRON TO AID IN DRAINING FOR APRON PLACEMENT. CRUSHED ROCK IS INCIDENTAL.

APPROVED DECEMBER 9, 2013 STATE DESIGN ENGINEER	STATE OF MINNESOTA DEPARTMENT OF TRANSPORTATION RIPRAP AT RCP OUTLETS	SPECIFICATION REFERENCE 3100 3110 3601 3733 2511	STANDARD PLATE NO. 3133D





PLAN

U.S. PATENT #6126817 ADDITONAL PATENTS PENDING

DESIGNED TO FIT
48"-60" DIAM.
STRUCTURES

RECOMMENDED SUMP DEPTH 2.5 TO
3X OUTLET PIPE I.D.

BMP, INC.
53 MT. ARCHER ROAD, LYME, CT. 06371
(800) 504-8008 FAX: (860)434-3195

DESCRIPTION	DATE	SCALE
18R SNOUT OIL & DEBRIS STOP	09/06/99	NONE
	DRAWING NUMBER 18R	

KWIK TRIP

KWIK STAR

KWIK TRIP, Inc.
P.O. BOX 2107
1626 OAK STREET
LA CROSSE, WI 54602-2107
PH. (608) 781-8988
FAX (608) 781-8960

CARLSON McCAIN
3890 PHEASANT RIDGE DRIVE NE, SUITE 100, BLAINE, MN 55449
TEL 763.489-7900 \ FAX 763.489.7959 \ CARLSONMCCAIN.COM

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.

Name: Daniel J. Wilke, P.E.
Signature:
Date: 07/16/24 License #: 53182

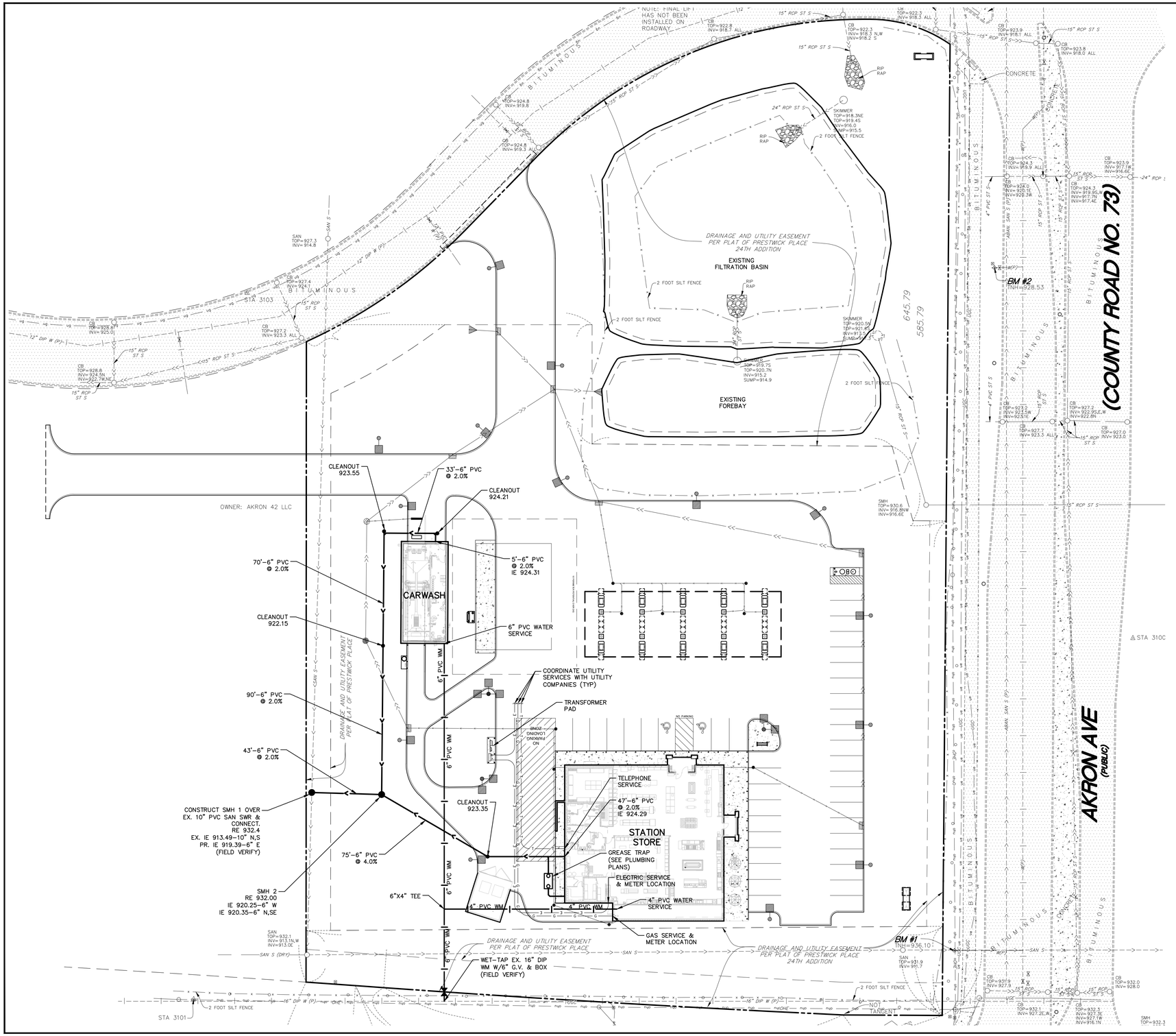
STORM SEWER NOTES & DETAILS

CONVENIENCE STORE #1757 WITH 1-BAY DETACHED CARWASH

145TH ST W & AKRON AVENUE ROSEMOUNT, MINNESOTA

#	DATE	DESCRIPTION

DRAWN BY	DJW
SCALE	GRAPHIC
PROJ. NO.	11004-00
DATE	2024-07-16
SHEET	1757 C301



PLAN LEGEND

	EXISTING	PROPOSED
CURB		
BITUMINOUS		
CONCRETE PAVEMENT		
CONCRETE WALK		
PROPERTY LINE		
EASEMENT LINE		
STORM SEWER		
SANITARY SEWER		
WATER MAIN		
UNDERGROUND GAS	ug ug	G G G
UNDERGROUND FIBER OPTIC	ufo ufo	T T T
UNDERGROUND ELECTRIC	ue ue	E E E
FLARED END SECTION		
COMMUNICATIONS BOX		
MANHOLE		
LIGHT POLE		
SIGN		
WATER VALVE		
HYDRANT		
UTILITY POLE		
HANDHOLE		

0 15 30 60
(IN FEET)

BENCHMARKS

1. TOP OF NUT OF FIRE HYDRANT IN THE NORTHWEST QUADRANT OF AKRON AVE & 145TH STREET

   ELEVATION = 936.10 (NAVD 88)
2. TOP OF NUT OF SECOND FIRE HYDRANT NORTH OF 145TH STREET ON THE WEST SIDE OF AKRON AVE.

   ELEVATION = 928.53 (NAVD 88)

CALL BEFORE YOU DIG

Know what's below. Call before you dig.

KWIK TRIP

KWIK STAR

KWIK TRIP, Inc.
P.O. BOX 2107
1626 OAK STREET
LA CROSSE, WI 54602-2107
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I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Name: Daniel J. Wilke, P.E.

Signature: Dan Wilke

Date: 07/16/24 License #: 53182

UTILITY PLAN

CONVENIENCE STORE #1757 WITH 1-BAY DETACHED CARWASH

145TH ST W & AKRON AVENUE
ROSEMOUNT, MINNESOTA

#	DATE	DESCRIPTION

DRAWN BY	DJW
SCALE	GRAPHIC
PROJ. NO.	11004-00
DATE	2024-07-16
SHEET	1757 C400

GENERAL:

1. Existing boundary, location, topographic, and utility information shown on this plan is from a field survey by **Sunde Land Surveying dated 4/17/24.** The Engineer is not responsible for inaccuracies related to the survey information.
2. Perform all construction work in accordance with State and Local requirements.
3. Perform all construction activity in accordance with the Minnesota Pollution Control Agency GENERAL STORMWATER PERMIT FOR CONSTRUCTION ACTIVITY issued August 1, 2023 and all subsequent amendments thereto.
4. Comply with all applicable local, state, and federal safety regulations. Comply with the work safety practices specified by the Occupational Safety and Health Administration (OSHA). OSHA prohibits entry into "confined spaces," such as manholes and inlets (see 29 CFR Section 1910.146), without undertaking certain specific practices and procedures. Bench or slope sidewalls in order to provide safe working conditions and stability for the placement of engineered fill. Perform excavations in accordance with the requirements of O.S.H.A. 29 CFR, Part 1926, Subpart P, Excavations. The Contractor is responsible for naming the "Competent Individual" in accordance with CFR 1926.6. Sloping or benching for excavations greater than 20 feet deep must be approved by a registered professional engineer (www.osha.gov).
5. Safety is solely the responsibility of the Contractor, who is also solely responsible for the construction means, methods, techniques, sequences or procedures, and for safety precautions and programs in connection with the Work.
6. The Engineer shall not have control over, charge of, or responsibility for the construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Work. The Engineer's review shall not constitute approval of safety precautions or of any construction means, methods, techniques, sequences, or procedures.
7. Examine all local conditions at the site, and assume responsibility as to the grades, contours, and the character of the earth, existing conditions, and other items that may be encountered during excavation work above or below the existing grades. Review the drawings, specifications, and geotechnical report covering this work and become familiar with the anticipated site conditions.
8. Refer to the architectural plans for building and stoop dimensions, site layout and dimensions, pavement sections and details, striping, and other site features.
9. A licensed surveyor shall perform construction staking. The Contractor shall provide and be responsible for the staking. Verify all plan and detail dimensions prior to construction staking. Stake the limits of walkways and curbing prior to valvebox, maintenance hole, and catchbasin installation. Adjust valvebox and maintenance hole locations in order to avoid conflicts with curb and gutter. Adjust catchbasin locations in order to align properly with curb and gutter.
10. Provide temporary fences, barricades, coverings, and other protections in order to preserve existing items to remain, and to prevent injury or damage to person or property.
11. Provide all traffic control required in order to construct the proposed improvements. Traffic control design and associated government approvals are the responsibility of the Contractor. Comply with local authorities and the latest version of the Minnesota Manual on Uniform Traffic Control Devices (MMUTCD), including the Field Manual for Temporary Traffic Control Zone Layouts. If the temporary traffic control zone affects the movement of pedestrians, provide adequate temporary pedestrian access and walkways. If the temporary traffic control zone affects an accessible and detectable pedestrian facility, maintain accessibility and detectability along the alternate pedestrian route in accordance with the provisions for pedestrian and worker safety contained in Part 6 of the MMUTCD.
12. Connect to existing sanitary sewer MH's by coredrilling. Connect to existing storm sewer MH's by either sawcutting or coredrilling. Use saws or drills that provide water to the blade. Meet all City standards and specifications for the the connection. Reconstruct inverts after installation. Use water stop gaskets in order to provide watertight seals when penetrating a structure wall with a pipe. Take measurements before beginning construction to ensure that service connections do not cut into maintenance access structure joints or pipe barrel joints.
13. Completely remove existing concrete and masonry structures that are located within the proposed building and future building expansion areas. All other existing sewer and watermain pipes that are to be abandoned shall either be removed, or completely filled with sand or controlled low strength material (CLSM) also known as flowable concrete fill. Bulkhead ends of the pipe segment to be decommissioned with concrete. All other existing sanitary sewer and storm sewer structures that are to be abandoned in place shall be abandoned as follows: (1) remove castings, rings, and top sections, (2) bulkhead any pipe openings, (3) break two 4-inch diameter holes in the barrel at the bottom of the structures for drainage and cover the holes with geotextile filter fabric, and (4) fill the structures with sand or CLSM.
14. Testing and Inspections: All plumbing installations, including water and sewer services, must be tested and inspected in accordance with the requirements of the Minnesota Plumbing Code (Minnesota Rules Chapter 4714). Coordinate testing and inspection with the State Health Department and the City Public Works Department. No drainage or plumbing work may be covered prior to completing the required tests and inspections.
15. Coordinate building utility connection locations at 2 ft. out from the proposed building with the interior Plumbing Contractor prior to construction. Verify water and sewer service locations, sizes, and elevations with the Mechanical Engineer prior to construction. Coordinate construction and connections with the Mechanical Contractor.
16. The subsurface utility information shown on this plan is utility Quality Level D. This quality level was determined according to the guidelines of CI/ASCE 38-02, entitled "Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data" by the FHA.
17. The locations of existing utilities shown on this plan are from record information. The Engineer does not guarantee that all existing utilities are shown or, if shown, exist in the locations indicated on the plan. It is the Contractor's responsibility to ascertain the final vertical and horizontal location of all existing utilities (including water and sewer lines and appurtenances). Notify the Engineer of any discrepancies.
18. The Contractor is solely responsible for all utility locates. Contact utility companies for locations of all public and private utilities within the work area prior to beginning construction. Contact GOPHER STATE ONE CALL at (651) 454-0002 in the Minneapolis/St. Paul metro area, or 1-800-252-1166 elsewhere in Minnesota for exact locations of existing utilities at least 48 working hours (not including weekends and holidays) before beginning any construction in accordance with Minnesota Statute 216D. Obtain ticket number and meet with representatives of the various utilities at the site. Provide the Owner with the ticket number information. Gopher State One Call is a free service that locates municipal and utility company lines, but does not locate private utility lines. Use an independent locator service or other means in order to obtain locations of private utility lines including, but not limited to, underground electric cables, telephone, TV, and lawn sprinkler lines.
19. Pothole to verify the positions of existing underground facilities at a sufficient number of locations in order to assure that no conflict with the proposed work exists and that sufficient clearance is available.
20. Where existing gas, electric, cable, or telephone utilities conflict with the Work, coordinate the abandonment, relocation, offset, or support of the existing utilities with the appropriate local utility companies. Coordinate new gas meter and gas line installation, electric meter and electric service installation, cable service, and telephone service installation with the local utility companies.
21. When working near existing telephone or electric poles, brace the poles for support. When working around existing underground utilities that become exposed, provide sufficient support in order to prevent excessive stress on the existing piping. The location and preservation of existing underground utilities is solely the responsibility of the Contractor.
22. Temporary support systems are the responsibility of the Contractor, who is also solely responsible for the construction means, methods, techniques, sequences or procedures, and for safety precautions and programs in connection with the temporary support systems. Temporary support systems include, but are not limited to, shoring, sheeting, bracing, anchorages, excavation support walls, directional boring, auger jacking, soil stabilization, and other methods of protecting existing improvements.
23. Arrange for and secure suitable disposal areas off-site. Dispose of all excess soil, waste material, debris, and all materials not designated for salvage. Waste material and debris includes trees, stumps, pipe, concrete, asphaltic concrete, cons, or other waste material from the construction operations. Obtain the rights to any waste areas for disposal of unsuitable or surplus material either shown or not shown on the plans. All work in disposing of such material shall be considered incidental to the work. All disposal must conform to applicable solid waste disposal permit regulations. Obtain all necessary permits at no cost to the Owner.
24. Store and protect existing site features that need to be removed and replaced in connection with the Work. Replace damaged or stolen site features at no additional cost to the Owner.
25. Straight line saw-cut existing bituminous or concrete surfacing at the perimeter of pavement removal areas. Use saws that provide water to the blade. Do not allow the slurry produced by this process to be tracked outside of the immediate work area or discharged into the sewer system. Tack and match all connections to existing bituminous pavement.
26. Relocate overhead power, telephone, and cable lines as required. Seal and report any existing unused on-site wells and septic systems in accordance with Minnesota Department of Health (MDH) requirements. Provide the MDH with a Well and Boring Sealing Record, or certify in writing that there are no unused wells on the property.
27. All materials required for this work shall be new material conforming to the requirements for class, kind, grade, size, quality, and other details specified herein or as shown on the Plans. Do not use recycled or salvaged aggregate, asphaltic pavement, crushed concrete, or scrap shingles. Unless otherwise indicated, the Contractor shall furnish all required materials and labor in order to perform the construction in accordance with the construction documents, specifications, and regulatory agencies.
28. Reconstruct driveways and patch street to match existing pavement section and grade. Sod right-of-way. Restore the public right-of-way at temporary construction entrance locations. Replace any concrete curb and gutter, bituminous pavement, sidewalk, or vegetative cover damaged by the construction activity. Restore damaged turf with sod within the public right-of-way. The work area shown is general and may need to be adjusted in the field.
29. Cut turf edges in order to allow for a uniform straight edge at locations where new sod meets existing turf. No jagged or uneven edges are allowed. Remove topsoil as required at joints between existing and new turf in order to allow the surface of the new sod to be flush with the existing.
30. Document existing conditions (photographs, video, field survey, etc.) in order to enable restoration to match existing conditions and in order to ensure that restored areas have positive drainage similar to existing conditions.
31. Provide positive drainage away from buildings at all times. Provide and maintain temporary drainage throughout construction until the permanent drainage system and structures are in place and operational. Install temporary ditches, piping, pumps, or other means as necessary in order to insure proper drainage at all times. Provide low points at building pads or roadways with positive outfalls. Do not block drainage from or direct excess drainage to adjacent property.
32. Protect all structures and landscaping not labeled for demolition from damage during construction. Provide protective coverings and enclosures as necessary to prevent damage to existing work that is to remain. Existing work to remain may include items such as trees, shrubs, lawns, sidewalks, drives, curbs, utilities, buildings and/or other structures on or adjacent to the site. Provide temporary fences and barricades as required for the safe and proper execution of the work and the protection of persons and property. Provide building surveys and seismic monitoring in locations where demolition, excavation, underpinning, pile driving, compacting, or similar work is to be performed adjacent to or in the vicinity of existing structures. Return any on-site or off-site areas disturbed directly or indirectly due to construction to a condition equal to or better than the existing condition.
33. Protect sub grades from damage by surface water runoff.
34. Full design strength is not available in bituminous pavement areas until the final lift of asphalt is compacted into place. Protect pavement areas from overloading by delivery trucks, construction equipment, and other vehicles.
35. When sawing or drilling concrete or masonry, use saws that provide water to the blade. Do not allow the slurry produced by this process to be tracked outside of the immediate work area or discharged into the sewer system.
36. Adjust all public and private structures including curb stops, valve boxes, maintenance hole castings, catchbasin castings, cleanout covers, and similar items to finished grade. Comply with the requirements of each structure's owner. Structures being reset in paved areas must meet the owner's requirements for traffic loading.
37. 2% maximum slope in all directions in handicapped accessible parking areas. 2% maximum cross slope and 5% maximum longitudinal slope on all sidewalks.
38. Install all pipe with the ASTM identification numbers on the top for inspection. Commence pipe laying at the lowest point in the proposed sewer line. Lay the pipe with the bell end or receiving groove end of the pipe pointing upgrade. When connecting to an existing pipe, uncover the existing pipe in order to allow any adjustments in the proposed line and grade before laying any pipe. Do not lay pipes in water or when the trench conditions are unsuitable for such work.
39. Obtain and pay for all permits, tests, inspections, etc. required by agencies that have jurisdiction over the project including the NPDES permit from the State. The Contractor is responsible for all bonds, letters of credit, or cash sureties related to the work. Execute and inspect work in accordance with all local and state codes, rules, ordinances, or regulations pertaining to the particular type of work involved.
40. Measure pipe lengths from center-of-structure to center-of-structure, or to the end of aprons.
41. Obtain permits from the City for work in the public right-of-way.
42. Refer to the geotechnical report by the Soils Engineer for dewatering requirements.
43. Test boring data shown on the plans were accumulated for designing and estimating purposes. Their appearance on the plan does not constitute a guarantee that conditions other than those indicated will not be encountered.
44. The minimum depth of cover for building and canopy roof drain leaders without insulation is 5 feet. Insulate roof drain leaders at locations where the depth of cover is less than 5 feet. Provide a minimum insulation thickness of 2 inches. The insulation must be at least 4 feet wide and centered on the pipe. Install the insulation boards 6 inches above the tops of the pipes on mechanically compacted and leveled pipe bedding material. Use high density, closed cell, rigid board material equivalent to DOW Styrofoam HI-40 plastic foam insulation.
45. Insulate utility lines at locations indicated on the plans. Provide a minimum insulation thickness of 4 inches. The insulation must be at least 4 feet wide and centered on the pipe. Install the insulation boards 6 inches above the tops of the pipes on mechanically compacted and leveled pipe bedding material. Use high density, closed cell, rigid board material equivalent to DOW Styrofoam Highload 40 Polystyrene Insulation. Individual insulation board dimensions typically measure 4' wide by 8' long by 2" thk.
46. Construct sanitary sewer, watermain, and storm sewer utilities in accordance with the City Engineer's Association of Minnesota Standard Specifications sections 2600, 2611, and 2621 dated 2013, or the latest revised edition.
47. These plans, prepared by Carlson McCain, LLC., do not extend to or include systems pertaining to the safety of the construction contractor or its employees, agents, or representatives in the performance of the work. The seal of Carlson McCain's registered professional engineer hereon does not extend to any such safety systems that may nor or hereafter be incorporated into these plans. The construction contractor shall prepare or obtain the appropriate safety systems which may be required by U.S. Occupational Safety and Health Administration (OSHA) and/or local regulations.
48. Existing utilities shown on this plan are located as accurately as possible. However, the Engineer does not guarantee that all utilities are shown, or if shown are in the exact locations indicated on the plan. It is the Contractor's responsibility to ascertain the final vertical and horizontal location of all existing utilities (including municipal water and sewer lines and appurtenances) and to notify the owners of the utilities a minimum of 48 working hours before starting construction in a given area, requesting location in the field, as exact as possible, of all utilities which may be affected by the construction.
49. Trace Wire: Install locating wires on all conductive and non-conductive storm sewer, sanitary sewer, and water lines in accordance with the Minnesota Rural Water Association (MRWA) Trace Wire Specification Guide and Details (www.mrwa.com/PDF/TracerWireSpecGuideFinalweb9.pdf). Use #12 HDPE-insulated copper-clad steel wire rated for underground service. The color of the insulating jacket shall be as follows: ground=red, storm sewer=green, sanitary sewer=green, and water lines=blue. Install the wire on the bottom side of the pipe below the spring line. Fasten the wire to the pipe with tape or plastic ties at 5' intervals. Do not wrap the trace wire around the corresponding utility. Do not connect the trace wire to existing conductive utilities. Use Copperhead Dycom 3-Way or Locking Snake Bite connectors rated for underground direct bury applications or approved equal at all crossings or service connections. Twist on connectors are not allowed. Trace wire must be properly grounded at all dead ends and services. Install grade-level/in-ground trace wire access boxes and drive-in magnesium grounding anodes at all dead ends, services, and fire hydrants. Trace wire access boxes shall be color coded as follows: storm sewer=green, sanitary sewer=green, and water lines=blue.
50. Detectable Warning Tape: Install detectable underground warning tape directly above all underground utilities at a depth of 457 mm (18 inches) below finished grade, unless otherwise indicated. Underground warning tape shall be 3-inches wide with a minimum 5.0 mil overall thickness. Tape shall be manufactured using a 0.8 mil clear virgin polypropylene film, reverse printed and laminated to a 0.35 mil solid aluminum foil core, and then laminated to a 3.75 mil clear virgin polyethylene film. The aluminum backing makes underground assets easy to find using a non-ferrous locator. Tape shall be printed using a diagonally striped design for maximum visibility and meet the APWA Color-Code standard for identification of buried utilities. Use Pro-Line Safety Products (www.prolinesafety.com) detectable marking tape or approved equal.
51. See architectural for building waterproofing and foundation drainage.
52. Place #3 rebar at 3' on center in all 6" thick concrete pavement locations. Place #4 rebar at 4' on center in all 8" thick concrete pavement locations.
53. Place #4 x 2'-0" tie bar at 3' on center in all concrete curb and gutter.
54. Record as-built information as construction progresses or at appropriate construction intervals. Secure and deliver to the Owner as-built information showing locations, top, and invert elevations of manhole castings, catchbasins, cleanouts, inlet and outlet pipes, valves, hydrants, and related structures. Location ties shall be to permanent landmarks or buildings.
55. Test reports required for project close-out include, but are not limited to: density test reports, bacteriological tests on the water system, pressure tests on the water system, leak tests on the sewer system, and deflection tests on all HDPE pipe.
56. Removing Markings: Markings that are no longer applicable for roadway conditions or restrictions and that might cause confusion for the road user shall be removed or obliterated to be unidentifiable as a marking as soon as practical. Pavement marking obliteration shall remove the non-applicable pavement marking material, and the obliteration method shall minimize pavement scarring. Painting over existing pavement markings with black paint or spraying with asphalt shall not be accepted as a substitute for removal or obliteration.
57. Completely remove marking from locations shown on the plan in accordance with MnDOT Standard Specification Section 2102. Use one or a combination of air blasting, water blasting, and grinding. Provide a dust control system and remove accumulated sand or other materials. Collect, haul, and dispose of dust or residue from removals.

WATER DISTRIBUTION SYSTEM:

1. Bring all site utilities to 2' outside of the building line with the exception of the water service. Extend water service into the building and up to the floor drain for the water meter. Do not install PVC water service under or within any building, structure, or part thereof.
2. CITY REQUIRES A MINIMUM OF 48 HOURS NOTICE PRIOR TO ANY WATER SHUTDOWN.
3. Separation of Water and Sewer: Construct sewer and water services in accordance with Minnesota Rules, part 4714.0721 and Uniform Plumbing Code (UPC) parts 720.0 and 721.0. Provide a minimum horizontal separation of 10 feet between all water and sewer lines, including manholes, catch basins, storm sewer, sanitary sewer, draintile, or other potential sources for contamination. Measure the separation distance from the outer edge of the pipe to the outer edge of the contamination source (outer edge of structures, piping, etc.) At water and sewer crossings, the bottom of the water pipe located within ten feet of the point of crossing must be at least 12-inches above the top of the sewer. When this is not feasible, the sewer pipe material must be approved for use inside of or within a building in accordance with the requirements of Minnesota Rules part 4714.0701 and UPC part 701.0. No joints or connections are allowed on the water line within 10-feet of the crossing.
4. Watermain Depth: Maintain 8-feet of cover over the top of the water lines to the finished grade. Verify elevation of proposed and existing water lines at all utility crossings. Install the water lines at greater depths in order to clear storm sewers, sanitary sewers, or other utilities as required. Include costs to lower water lines in the base bid.
5. Disinfection: Disinfect all completed watermains in accordance with AWWA Standard C651. If the tablet or continuous feed methods are used, disinfect using with water that contains at least 50 ppm of available chlorine in accordance with Minnesota Rules, part 4714.0609 and UPC part 609.9. Do not use the tablet method on solvent-welded plastic or on screwed-joint steel pipe because of the danger of fire or explosion from the reaction of the joint compounds with the calcium hypochlorite. Retain the treated water in the pipeline for at least 24 hours. Measure the chlorine residual at the end of the 24 hour period. The free chlorine residual must be at least 10 mg/l measured at any point in the line. Measurement of the chlorine concentration at regular intervals shall be in accordance with Standard Methods, AWWA M-12, or using appropriate chlorine test kits.
6. Testing: Pressure test and perform bacteriological tests on all water lines under the supervision of the City Public Works Department. Notify the City at least 24 working hours prior to any testing. Pressure test the water system in accordance with the UPC part 609.4. Pressurize the waterline to a water pressure of 1034-kPa (150-psi) gauge pressure (measured at the point of lowest elevation) by means of a pump connected to the pipe in a satisfactory manner. Do not add water to the watermain in order to maintain the required pressure during the water main pressure testing. Minnesota Department of Labor and Industry The test section of pipe shall withstand the test without leaking for a period of not less than 15 minutes. Minnesota Department of Health The watermain shall be pressure tested at 150-psi for at least two hours with not more than a 2-psi pressure drop during the last hour of the test.
7. All water supply piping connected to municipal water main must have a 150 psi minimum pressure rating.
8. Copper tube for water services must comply with ASTM B88 and shall have a weight not less than Type L (in accordance with Minnesota Rules part 4714.0604 and UPC part 604.0.)
9. Ductile iron pipe (DIP) water services must comply with AWWA C151/ANSI A21.51 or AWWA C115/ANSI A21.15 (See Minnesota Rules part 4714.0604 and UPC part 604.0.). Use Thickness Class 52 DIP with push-on joints. Use petroleum resistant gaskets, Nitrile (NBR), or approved equal. Use only ANSI 304 stainless steel bolts and nuts on all watermain fittings, valves, and hydrants. The exterior of ductile iron pipe shall be coated with a layer of arc-sprayed zinc per ISO 8179. The interior cement mortar lining shall be applied without asphalt seal coating. Polyethylene encasement is required on all ductile iron pipe. Use V-Bio Enhanced Polyethylene Encasement or approved equal.
10. Polyvinyl Chloride (PVC) Building Water Services must comply with ASTM D1785, ASTM D2241, or AWWA C900; pressure rated for water (See Minnesota Rules part 4714.0604 and UPC part 604.0.). Do not install PVC water service pipe under or within any building, structure, or part thereof.
11. Polyvinyl Chloride (PVC) Watermain: Use AWWA C900 for all PVC watermain furnished with integral elastomeric bell and spigot joints; minimum pressure Class 150; dimension ratio not greater than 18; laying length 20 feet. Use EBAA Iron, Inc., "Series 2000 PV Megalug," or approved equal for restraint on C900 PVC watermain. Use only ANSI 304 stainless steel bolts and nuts on all watermain fittings, valves, and hydrants.
12. Use mechanical joint restraint devices for joint restraint on all watermain bends having a vertical or horizontal deflection of 22-1/2 degrees or greater, all valves, stubs, extensions, tees, crosses, plugs, all hydrant valves, and all hydrants in accordance with City requirements. Use "Series 1100 Megalug" manufactured by EBAA Iron Inc., Eastland, Texas, or approved equal, installed in accordance with manufacturer's recommendations for restraint on Ductile Iron Pipe. Restraining devices are to have epoxy coating or approved equivalent. Restraining device hardware shall be ANSI 304 stainless steel, or approved equivalent.
13. Watermain Valves: At all valve locations which require a 12" or smaller valve, install gate valves which are of the compression resilient seated (CRS) type. Use American Flow Control's Series 2500 Ductile Iron Resilient Wedge Gate Valve, or approved equal. Gate valves shall conform to AWWA C509. Install cast iron valve boxes conforming to ASTM A48 at each valve location. Valve boxes shall be the three-piece type with 5-1/4" shafts. Use Tyler 6860-G with No. 6 base, or equivalent. Valve boxes shall have at least 6" of adjustment above and below finished grade. Drop covers on valve boxes shall be round and bear the word "WATER" cast on the top. Use Tyler 6860-G "Stayput" covers with extended skirt, or equivalent. All valve hardware shall be ANSI 304 stainless steel, or approved equivalent.
14. Curb Valves and Boxes: Use Mueller H-10334 extension type curb box with Minneapolis pattern base, or approved equal, at all 2" through 2" curb stop locations. Stationary rod is required on all curb stops. Use Mueller Company Mark II Orseal No. H-15154N curb stop, or approved equal, and stainless steel stem rod.
15. Fire hydrants shall be in accordance with the requirements of the local municipality. Do not connect hydrant drains to sanitary sewers or storm sewers. Do not locate hydrants within 10 feet of sanitary sewers or storm sewers. When placing fire hydrants in locations where the groundwater table is less than 8 feet below the ground surface, plug the hydrant drain holes and equip the hydrants with a tag stating the need for pumping after use. Maintain a 3-foot clear space around the circumference of all fire hydrants. All hydrant hardware shall be ANSI 304 stainless steel, or approved equivalent.
16. Do not connect new watermain to existing until the new water main is pressure tested and disinfected.
17. Trace Wire: Install locating wires on all conductive and non-conductive storm sewer, sanitary sewer, and water lines in accordance with the Minnesota Rural Water Association (MRWA) Trace Wire Specification Guide and Details (www.mrwa.com/PDF/TracerWireSpecGuideFinalweb9.pdf). Use #12 HDPE-insulated copper-clad steel wire rated for underground service. The color of the insulating jacket shall be as follows: ground=red, storm sewer=green, sanitary sewer=green, and water lines=blue. Install the wire on the bottom side of the pipe below the spring line. Fasten the wire to the pipe with tape or plastic ties at 5' intervals. Do not wrap the trace wire around the corresponding utility. Do not connect the trace wire to existing conductive utilities. Use Copperhead Dycom 3-Way or Locking Snake Bite connectors rated for underground direct bury applications or approved equal at all crossings or service connections. Twist on connectors are not allowed. Trace wire must be properly grounded at all dead ends and services. Install grade-level/in-ground trace wire access boxes and drive-in magnesium grounding anodes at all dead ends, services, and fire hydrants. Trace wire access boxes shall be color coded as follows: storm sewer=green, sanitary sewer=green, and water lines=blue.
18. Detectable Warning Tape: Install detectable underground warning tape directly above all underground utilities at a depth of 457 mm (18 inches) below finished grade, unless otherwise indicated. Underground warning tape shall be 3-inches wide with a minimum 5.0 mil overall thickness. Tape shall be manufactured using a 0.8 mil clear virgin polypropylene film, reverse printed and laminated to a 0.35 mil solid aluminum foil core, and then laminated to a 3.75 mil clear virgin polyethylene film. The aluminum backing makes underground assets easy to find using a non-ferrous locator. Tape shall be printed using a diagonally striped design for maximum visibility and meet the APWA Color-Code standard for identification of buried utilities. Use Pro-Line Safety Products (www.prolinesafety.com) detectable marking tape or approved equal.
19. Threaded hose connections including hose bibbs and hydrants must include a back flow prevention device in accordance with Minnesota Rules, part 4714.0603 and UPC part 603.0. Wall hydrants must meet ASSE Standard 1019 (see Table 603.2). Where permitted by the administrative authority, wall hydrants may utilize non-removable ASSE 1052 backflow preventer or non-removable ASSE 1011 vacuum breakers and provision is made to protect from freezing (see Minnesota Rules, Chapter 4714, Sections 603.5.7, 312.6, and 301.1.2).
20. All newly installed or replacement pipes, pipe fittings, plumbing fittings and fixtures, including backflow preventers, that are installed on potable water systems or systems that are designed to distribute water for potable use, are required to meet the Reduction of Lead in Drinking Water Act, which establishes a maximum lead content of 0.25 percent by weighted average of the wetted surfaces. Solder and flux for potable water systems shall contain less than 0.2 percent lead. Joints must include non-corrosive non-toxic paste-type flux complying with ASTM B813 (see Minnesota Rules, Chapter 4714, Section 605.3.4). See Minnesota Rules, part 4714.0604 and UPC part 604.11.
21. Do not exceed the manufacturer's specifications for curvature of pipe and deflection at pipe joints. Securely close all open ends of pipe and fittings with watertight plugs when work is not in progress. Keep the interior of all pipes clean and remove any dirt or debris from joint surfaces after the pipes have been lowered into the trench. Install all valves plumb and located according to the plans.
22. Insulate the watermain at locations indicated on the plans. Provide a minimum insulation thickness of 4 inches. The insulation must be at least 4 feet wide and centered on the pipe. Install the insulation boards 6 inches above the tops of the pipes on mechanically compacted and leveled pipe bedding material. Use high density, closed cell, rigid board material equivalent to DOW Styrofoam Highload 40 Polystyrene Insulation. Individual insulation board dimensions typically measure 4' wide by 8' long by 2" thk.

SANITARY SEWER:

1. Unless otherwise indicated, use reinforced, precast, concrete maintenance holes conforming to ASTM C478, furnished with precast bases. Sanitary sewer maintenance holes shall be supplied with pre-formed inverts and flexible neoprene sleeve connections for all lateral lines 375 mm (15 inches) in diameter or less, unless otherwise indicated. Joints for all precast maintenance hole sections shall have confined, rubber "O"-ring gaskets in accordance with ASTM C443. These joints are normally used in sewers to hold infiltration and exfiltration to a practical minimum and are adequate for hydrostatic heads up to 30'. The inside barrel diameter shall not be less than 48 inches.
2. All joints and connections in the sewer system shall be gastight or watertight. Use flexible compression joints to make watertight connections to manholes in accordance with Minnesota Rules part 4714.0719.6. Where permitted by the administrative authority, approved resilient rubber joints or waterstop gaskets must be used in order to make watertight connections to manholes and other structures. Use Fernco "Concrete Manhole Adaptors" or "Large Diameter Waterstops", Press-Seal "Waterstop Grouting Rings", or approved equal. Cement mortar joints are permitted only for repairs or connections to existing lines having such joints.
3. The building sewer starts 2 feet outside of the building. See Uniform Plumbing Code (UPC) part 715.1. Material installed within 2 feet of the building must be of materials approved for use inside of or within the building.
4. The exterior sanitary sewer piping must comply with the following requirements: (A) Double wyes may not be used for drainage fittings in the horizontal position (see Minnesota Rules, Chapter 4714, Section 310.5). Proper pipe slope cannot be maintained on both of the offset branches. (B) Changes in direction in drainage piping must be made by appropriate use of wyes and bends (see Minnesota Rules, Chapter 4714, Section 706.0). Tees are not allowed where the direction of flow changes from either vertical to horizontal or horizontal to horizontal.
5. Pipe: Use solid-core, Schedule 40 Polyvinyl Chloride (PVC) Plastic Pipe for all designated PVC sanitary sewer services outside of the building. The PVC pipe shall meet or exceed the industry standards and requirements as set forth by the American Society for Testing and Materials (ASTM) D1785 and D2665. Fittings must comply with ASTM D1866, D2665, or F794. Joints must be approved mechanical or push-on utilizing an elastomeric seal. Use of solvent cement joints is allowed for building services. Solvent cement joints in PVC pipe must include use of ASTM F656 purple primer and cement in accordance with Uniform Plumbing Code (UPC), part 605.13.2. Pipe with solvent cement joints shall be joined with PVC cement conforming to ASTM D2564. The installation must comply with ASTM D2321, which requires open-trench installation on a continuous granular bed.
6. Cleanouts: Install cleanouts on all sanitary sewer services in accordance with UPC part 719.0 and 1101.12. The distance between cleanouts in horizontal piping shall not exceed 100 feet for pipes 4-inch and over in size. Cleanouts shall be of the same nominal size as the pipes they serve. Include frost sleeves and concrete frame and pipe support. Install a meter box frame and solid lid (Neenah R-1914-A, or approved equal) over all cleanouts.
7. Testing: Pressure test all sanitary sewer lines in accordance with the Minnesota Rules parts 4714.0712 and 4714.0723 and UPC parts 712.0 and 723.0. Test all flexible sanitary sewer lines for deflection after the sewer line has been installed and backfill has been in place for at least 30 days. No pipe shall exceed a deflection of 5%. If the test fails, make necessary repairs and retest.
8. Install flexible watertight frame/chimney seals on all sanitary sewer maintenance holes in order to seal the outside of the chimney from the cast iron frame down to the cone. The seal shall be a continuous seamless band made of high quality EPDM (Ethylene Propylene Diene Monomer) rubber with a minimum thickness of 65 mils. Use Internal/External Adapter Seal as manufactured by Adaptor, Inc. (www.adaptorinc.com/wp-content/uploads/2019/04/ADAP_IEManholeSeal.pdf), Infi-Shield Uni-band one piece molded sealing system as manufactured bySealing Systems, Inc. (www.sealsealingsystems.com), or approved equal.
9. Use Neenah Foundry Co. R-1642 casting with self-sealing, solid, type B lid, or approved equal, on all sanitary sewer maintenance holes. Covers shall bear the "Sanitary Sewer" label.
10. Trace Wire: Install locating wires on all conductive and non-conductive storm sewer, sanitary sewer, and water lines in accordance with the Minnesota Rural Water Association (MRWA) Trace Wire Specification Guide and Details (www.mrwa.com/PDF/TracerWireSpecGuideFinalweb9.pdf). Use #12 HDPE-insulated copper-clad steel wire rated for underground service. The color of the insulating jacket shall be as follows: ground=red, storm sewer=green, sanitary sewer=green, and water lines=blue. Install the wire on the bottom side of the pipe below the spring line. Fasten the wire to the pipe with tape or plastic ties at 5' intervals. Do not wrap the trace wire around the corresponding utility. Do not connect the trace wire to existing conductive utilities. Use Copperhead Dycom 3-Way or Locking Snake Bite connectors rated for underground direct bury applications or approved equal at all crossings or service connections. Twist on connectors are not allowed. Trace wire must be properly grounded at all dead ends and services. Install grade-level/in-ground trace wire access boxes and drive-in magnesium grounding anodes at all dead ends, services, and fire hydrants. Trace wire access boxes shall be color coded as follows: storm sewer=green, sanitary sewer=green, and water lines=blue.
11. Detectable Warning Tape: Install detectable underground warning tape directly above all underground utilities at a depth of 457 mm (18 inches) below finished grade, unless otherwise indicated. Underground warning tape shall be 3-inches wide with a minimum 5.0 mil overall thickness. Tape shall be manufactured using a 0.8 mil clear virgin polypropylene film, reverse printed and laminated to a 0.35 mil solid aluminum foil core, and then laminated to a 3.75 mil clear virgin polyethylene film. The aluminum backing makes underground assets easy to find using a non-ferrous locator. Tape shall be printed using a diagonally striped design for maximum visibility and meet the APWA Color-Code standard for identification of buried utilities. Use Pro-Line Safety Products (www.prolinesafety.com) detectable marking tape or approved equal.
12. The minimum depth of cover for sanitary sewer without insulation is 5 feet. Insulate sanitary sewer services at locations where the depth of cover is less than 5 feet. Provide a minimum insulation thickness of 4 inches. The insulation must be at least 4 feet wide and centered on the pipe. Install the insulation boards 6 inches above the tops of the pipes on mechanically compacted and leveled pipe bedding material. Use high density, closed cell, rigid board material equivalent to DOW Styrofoam Highload 40 Polystyrene Insulation. Individual insulation board dimensions typically measure 4' wide by 8' long by 2" thk.
13. Install all pipe with the ASTM identification numbers on the top for inspection. Commence pipe laying at the lowest point in the proposed sewer line. Lay the pipe with the bell end or receiving groove end of the pipe pointing upgrade. When connecting to an existing pipe, uncover the existing pipe in order to allow any adjustments in the proposed line and grade before laying any pipe. Do not lay pipes in water or when the trench conditions are unsuitable for such work.
14. All saddle tee or wye fittings must provide an integrally molded pipe stop in the branch for positive protection against service pipe insertion beyond the inside of the sewer main pipe wall.
15. Terminate all new sewer stubs with a water-tight gasketed cap properly braced in order to withstand the infiltration-exfiltration test. Install grade-level/in-ground trace wire access boxes and drive-in magnesium grounding anodes at the end of all stubs.
16. Televise all existing lines prior to connection.

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

Name: Daniel J. Wilke, P.E.
Signature: Dan Wilke
Date: 07/16/24 License #: 53182

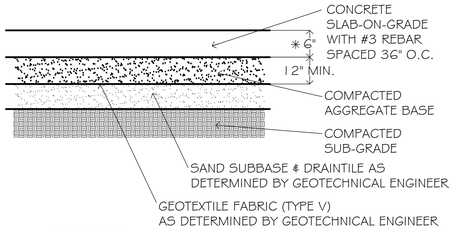
UTILITY NOTES

CONVENIENCE STORE #1757
WITH 1-BAY DETACHED CARWASH

145TH ST W & AKRON AVENUE
ROSEMOUNT, MINNESOTA

#	DATE	DESCRIPTION

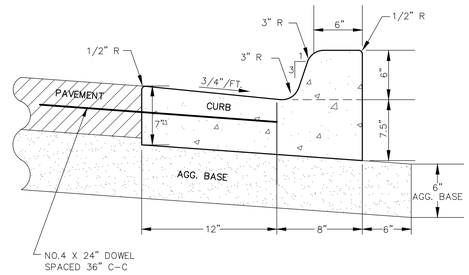
DRAWN BY	DJW
SCALE	GRAPHIC
PROJ. NO.	11004-00
DATE	2024-07-16
SHEET	1757 C401



HEAVY DUTY
INCREASE TO 8" THICK W/ #4 REBAR SPACED 36" O.C. AS NOTED ON PLANS
(I.E. OVER TANKS & AT ENTRANCES)

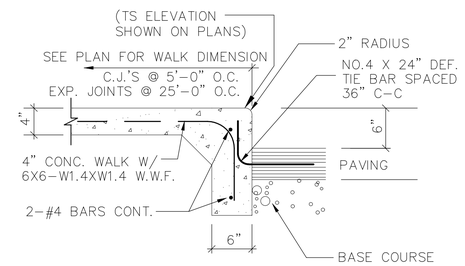
NOTE:
PAVEMENT SECTION TO BE VERIFIED W/ GEOTECHNICAL REPORT.

1 | 6" CONCRETE PAVEMENT SECTION (LIGHT DUTY)
C500 | NO SCALE

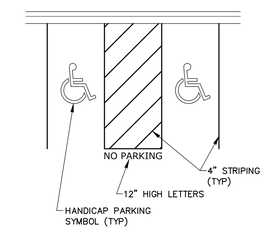


* TIPOUT CURB SHALL SLOPE OUT AT 3/4" PER FOOT.

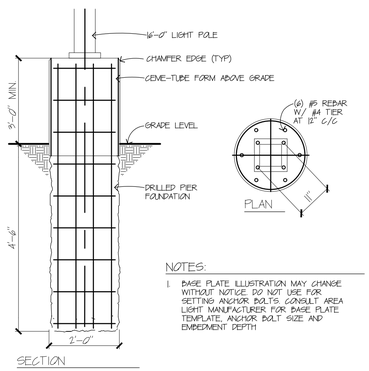
2 | B-612 CONCRETE CURB & GUTTER
C500 | NO SCALE



3 | SIDEWALK/ CURB DETAIL
C500 | NO SCALE



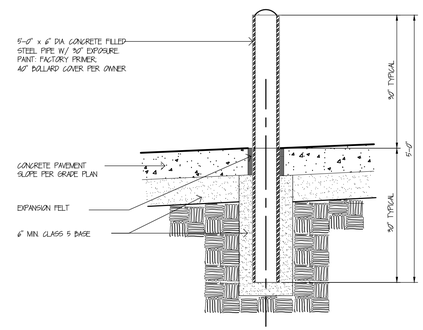
4 | HANDICAP PARKING SPACE STRIPING
C500 | NO SCALE



NOTES:
1. BASE PLATE ILLUSTRATION MAY CHANGE WITHOUT NOTICE. DO NOT USE FOR SETTING ANCHOR BOLTS. CONSULT AREA LIGHT MANUFACTURER FOR BASE PLATE TEMPLATE, ANCHOR BOLT SIZE AND EMBEDMENT DEPTH

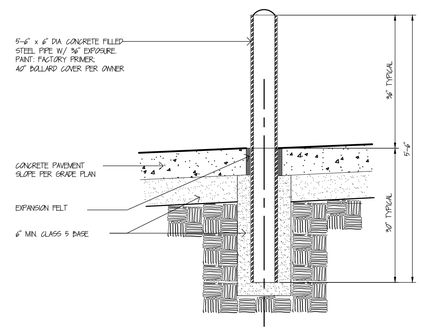
5 | ROUND AREALIGHT FOUNDATION
C500 | NO SCALE

NOTE: SEE ARCHITECTURAL PLANS FOR REMOVABLE BOLLARD LOCATION AND DETAIL

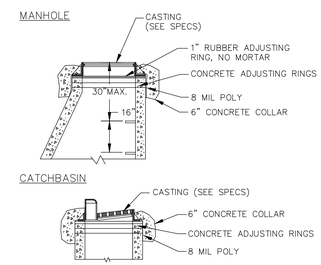


6 | 6" PIPE BOLLARD - 5'
C500 | NO SCALE

NOTE: SEE ARCHITECTURAL PLANS FOR REMOVABLE BOLLARD LOCATION AND DETAIL

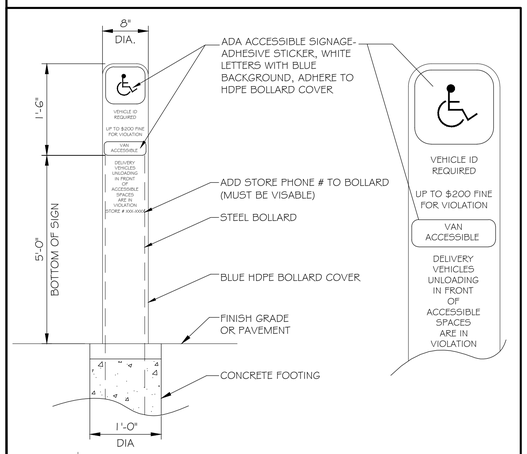


7 | 6" PIPE BOLLARD - 5'-6"
C500 | NO SCALE

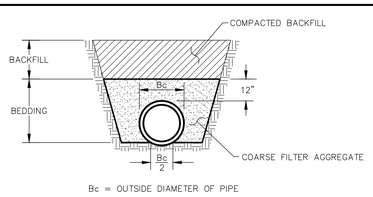


NOTES:
1. USE MINIMUM OF 2-0.2' ADJUSTING RINGS, MAXIMUM OF 5-0.2' ADJUSTING RINGS, ALL SET IN MORTAR.
2. MANHOLE STEPS SHALL BE PER MNDOT PLATE 4180, TYPE W. STEPS SHALL BE LOCATED ON UPSTREAM WALL FOR PIPE SIZES UP TO AND INCLUDING 15" AND ON SIDE WALL FOR GREATER THAN 15".
3. LIDS FOR SANITARY SEWER SHALL BE MARKED "SANITARY"

8 | ADJUSTING RINGS & STEPS
C500 | NO SCALE

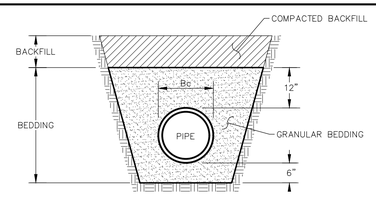


9 | ADA BOLLARD SIGNAGE
C500 | NO SCALE

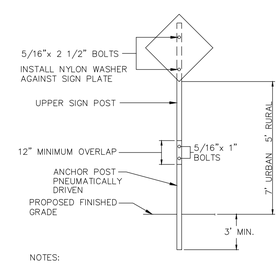


Bc = OUTSIDE DIAMETER OF PIPE

10 | DIP & RCP PIPE BEDDING
C500 | NO SCALE

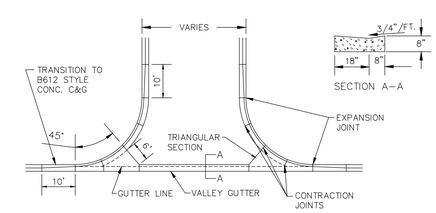


11 | PVC PIPE BEDDING
C500 | NO SCALE



NOTES:
1. MATERIALS AND INSTALLATION SHALL BE IN ACCORDANCE WITH CITY SPECIFICATIONS.
2. SIGN PANELS-REFLECTIVE SHEETING, VIP DIAMOND GRADE.
3. BOLTS SHALL BE TAMPER PROOF.
4. FLANGED CHANNEL SIGN POSTS SHALL BE PAINTED GREEN, 3 LB./L.F. AND 7' LONG.
5. SIGNS INSTALLED IN CONCRETE SHALL HAVE AN APPROVED BREAK-AWAY DEVICE.
6. EDGE OF SIGN SHALL BE MINIMUM 18" FROM BACK OF CURB.

12 | TRAFFIC SIGN INSTALLATION
C500 | NO SCALE



13 | CONCRETE VALLEY GUTTER
C500 | NO SCALE

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

Name: Daniel J. Wilke, P.E.
Signature: Dan Wilke
Date: 07/16/24 License #: 53182

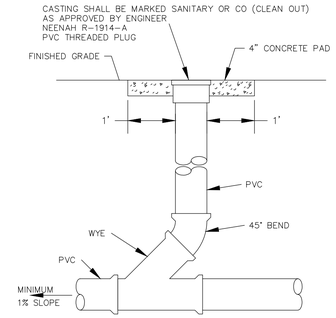
DETAILS

CONVENIENCE STORE #1757
WITH 1-BAY DETACHED CARWASH

145TH ST W & AKRON AVENUE
ROSEMOUNT, MINNESOTA

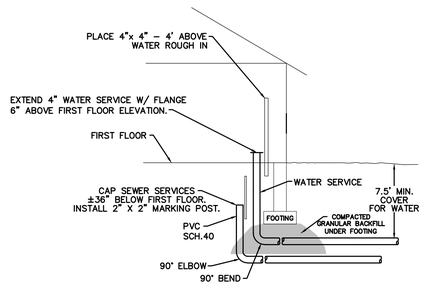
#	DATE	DESCRIPTION

DRAWN BY	DJW
SCALE	GRAPHIC
PROJ. NO.	11004-00
DATE	2024-07-16
SHEET	1757 C500



NOTES:
- ALL JOINTS SHALL BE SOLVENT WELD EXCEPT AS NOTED.
- CLEAN OUTS ARE REQUIRED AT 100' SPACING AND AT CHANGE OF DIRECTION.
- ALL CLEAN OUTS SHALL BE EQUIPPED WITH A FROST SLEEVE.

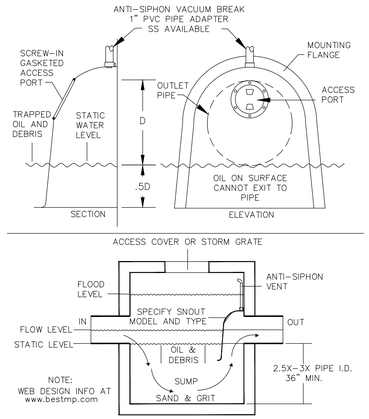
1 | SERVICE CLEAN OUT
C501 | NO SCALE



WATER NOTES: 4" WATER SERVICE W/FLANGE SHALL BE EXTENDED TO 6" ABOVE FIRST FLOOR ELEVATION. ALL SERVICES SHALL BE MARKED WITH A 4" X 4" POST, 4' ABOVE GRADE.

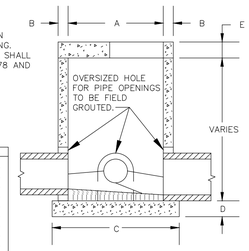
SEWER NOTES: SANITARY SEWER SERVICES FOR BUILDINGS SHALL BE EXTENDED VERTICALLY TO APPROXIMATELY 36" BELOW FIRST FLOOR ELEVATION AND CAPPED. ALL SERVICES SHALL BE MARKED WITH A 2" X 2" POST.

2 | SANITARY & WATER SERVICE INSTALLATION
C501 | NO SCALE



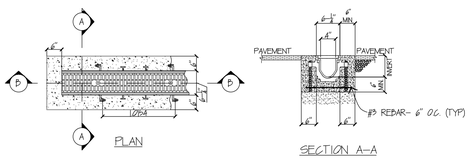
3 | "SNOUT" OIL-WATER-DEBRIS SEPARATOR
C501 | NO SCALE

NOTES:
1. 54" THRU 120" DIA. STRUCTURES ARE MANUFACTURED WITH BELL END FACING DOWN.
2. STRUCTURES ARE MANUFACTURED IN ACCORDANCE WITH ASTM C-478 AND WIDOT 611 WITH RUBBER GASKET JOINTS.
3. PROVIDE MORTAR FILLETS TO FIT THE BOTTOM PORTION OF PIPE TO DIRECT FLOW TO OUTLET HALF-WAY UP PIPE MINIMUM.
4. COVER SLAB DESIGN VARIES WITH CASTING.
5. REINFORCING STEEL SHALL BE PER ASTM C-478 AND WIDOT 611.



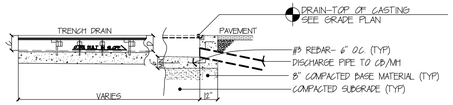
A	B	C	D	E
48"	5"	64"	8"	8"
54"	5.5"	72"	8"	8"
60"	6"	78"	8"	8"
66"	6.5"	85"	8"	8"
72"	7"	92"	8"	8"
78"	7.5"	100"	8"	8"
84"	8"	106"	8"	8"
90"	8.5"	114"	8"	8"
96"	9"	120"	8"	8"
102"	9.5"	127"	12"	8"
108"	10"	132"	12"	12"
120"	10"	146"	12"	12"

4 | STANDARD STORM SEWER CATCH BASIN/MANHOLE & MANHOLE
C501 | NO SCALE



PLAN

SECTION A-A



SECTION B-B

TRENCH SHALL BE "PERMA-TRENCH Z 886 SYSTEM- SERIES 8600N

5 | Z 886 TRENCH DRAIN DETAIL
C501 | NO SCALE

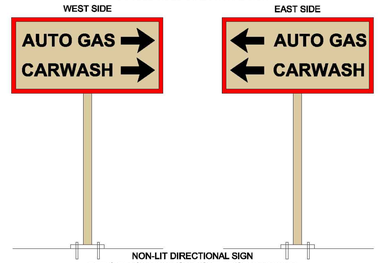
SINGLE SIDED SIGN

12" X 18" ALUMINUM SIGN
QTY: 3

6 | 2 HOUR PARKING SIGN
C501 | NO SCALE

DOUBLE SIDED DIRECTIONAL SIGN

WEST SIDE | EAST SIDE



NON-LIT DIRECTIONAL SIGN
RED & BLACK VINYL ON LIGHT BEIGE ALUMINUM
1'-6"H X 3'-0"W X 4'-6"T= 4.50 SQ FT

7 | DOUBLE SIDED DIRECTIONAL SIGN
C501 | NO SCALE

SINGLE SIDED DIRECTIONAL SIGN

NORTH SIDE

NON-LIT DIRECTIONAL SIGN
RED & BLACK VINYL ON LIGHT BEIGE ALUMINUM
1'-6"H X 3'-0"W X 4'-6"T= 4.50 SQ FT

8 | DOUBLE SIDED DIRECTIONAL SIGN
C501 | NO SCALE

EAST SIDE

NON-LIT DIRECTIONAL SIGN
RED & BLACK VINYL ON LIGHT BEIGE ALUMINUM
1'-6"H X 3'-0"W X 4'-6"T= 4.50 SQ FT

9 | CARWASH DO NOT ENTER SIGN
C501 | NO SCALE

EAST SIDE

NON-LIT DIRECTIONAL SIGN
RED & BLACK VINYL ON LIGHT BEIGE ALUMINUM
1'-6"H X 3'-0"W X 4'-6"T= 4.50 SQ FT

10 | CARWASH DIRECTIONAL SIGN
C501 | NO SCALE

KWIK TRIP

KWIK STAR

KWIK TRIP, Inc.
P.O. BOX 2107
1626 OAK STREET
LA CROSSE, WI 54602-2107
PH. (608) 781-8988
FAX (608) 781-8960

CARLSON McCAIN
3890 PHEASANT RIDGE DRIVE NE, SUITE 100, BLAINE, MN 55449
TEL 763.489-7900 \ FAX 763.489.7959 \ CARLSONMCCAIN.COM

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.

Name: Daniel J. Wilke, P.E.
Signature: Dan Wilke
Date: 07/16/24 License #: 53182

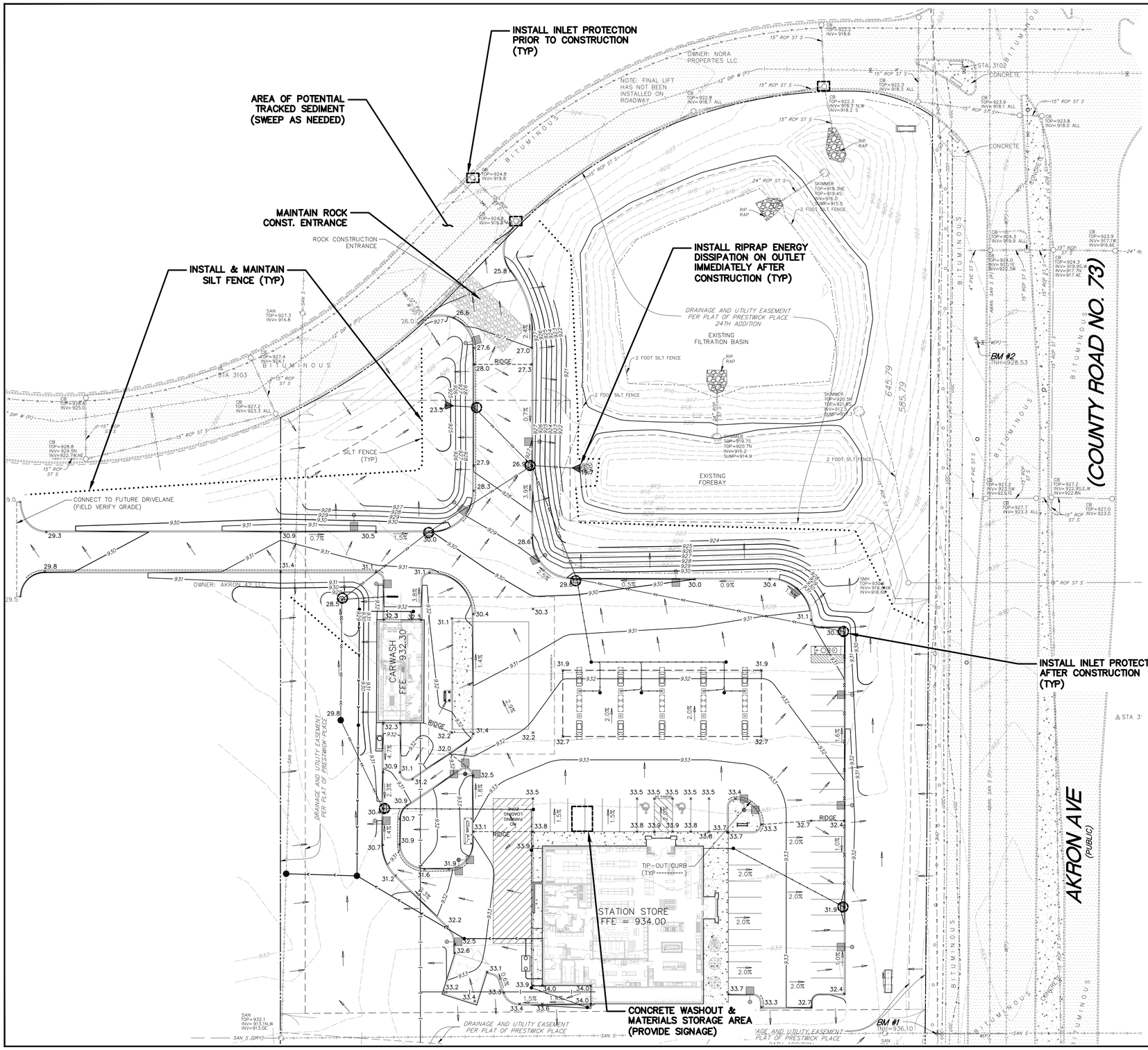
DETAILS

CONVENIENCE STORE #1757
WITH 1-BAY DETACHED CARWASH

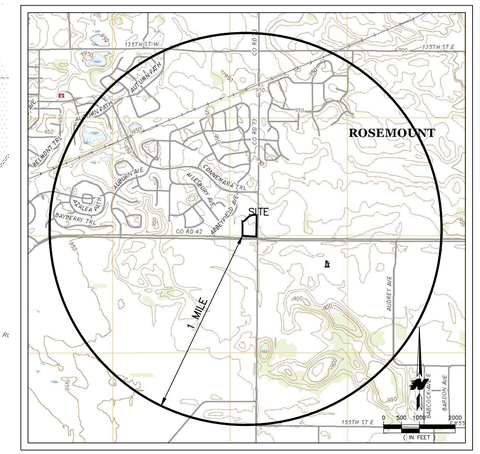
145TH ST W & AKRON AVENUE
ROSEMOUNT, MINNESOTA

#	DATE	DESCRIPTION

DRAWN BY	DJW
SCALE	GRAPHIC
PROJ. NO.	11004-00
DATE	2024-07-16
SHEET	1757 C501



SITE LOCATION MAP



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

Name: Daniel J. Wilke, P.E.
Signature: Dan Wilke
Date: 07/16/24 License #: 53182

EROSION CONTROL PLAN

CONVENIENCE STORE #1757 WITH 1-BAY DETACHED CARWASH

145TH ST W & AKRON AVENUE
ROSEMOUNT, MINNESOTA

0 20 40 80
(IN FEET)

BENCHMARKS

1. TOP OF NUT OF FIRE HYDRANT IN THE NORTHWEST QUADRANT OF AKRON AVE & 145TH STREET

   ELEVATION = 936.10 (NAVD 88)

2. TOP OF NUT OF SECOND FIRE HYDRANT NORTH OF 145TH STREET ON THE WEST SIDE OF AKRON AVE.

   ELEVATION = 928.53 (NAVD 88)

CALL BEFORE YOU DIG

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

#	DATE	DESCRIPTION

DRAWN BY	DJW
SCALE	GRAPHIC
PROJ. NO.	11004-00
DATE	2024-07-16
SHEET	1757 C600

GENERAL INFORMATION
MINNESOTA'S CONSTRUCTION STORMWATER PERMIT IS AN EXTENSION OF THE NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM STORMWATER PROGRAM, WHICH IS PART OF THE FEDERAL CLEAN WATER ACT. REGULATED PARTIES MUST DEVELOP A STORMWATER POLLUTION PREVENTION PLAN (SWPPP). THE SWPPP PROVIDES INFORMATION ON THE EXISTING AND PROPOSED SITE CONDITIONS, CONTROL MEASURES FOR STORMWATER POLLUTION PREVENTION BEFORE, DURING AND AFTER CONSTRUCTION, INSPECTION, MAINTENANCE AND INFORMATION RELATED TO THE PERMANENT STORMWATER MANAGEMENT SYSTEM. THE SWPPP SHALL BE KEPT ON SITE AT ALL TIMES DURING ACTIVE CONSTRUCTION.

PROJECT INFORMATION
PROJECT NAME: CONVENIENCE STORE 1757 WITH DETACHED CARWASH
PROJECT LOCATION: ROSEMOUNT, DAKOTA COUNTY, MINNESOTA
PROJECT OWNER: KWIK TRIP, INC.

RESPONSIBLE PARTIES
THE OWNER MUST IDENTIFY A PERSON KNOWLEDGEABLE AND EXPERIENCED IN THE APPLICATION OF EROSION PREVENTION AND SEDIMENT CONTROL BMP'S WHO WILL OVERSEE THE IMPLEMENTATION OF THE SWPPP, AND THE INSTALLATION, INSPECTION AND MAINTENANCE OF THE EROSION PREVENTION AND SEDIMENT CONTROL BMP'S.

SITE MANAGER: EVAN ROTHWELL – KWIK TRIP INC.

TRAINING DOCUMENTATION: CONSTRUCTION SITE MANAGEMENT (5/31/25 EXPIRATION) – UNIVERSITY OF MN

EXISTING SITE CONDITIONS
THE SITE IS LOCATED IN THE NORTHWEST QUADRANT OF THE INTERSECTION OF 145TH/ STREET W AND AKRON AVENUE IN ROSEMOUNT, DAKOTA COUNTY, MINNESOTA. THE SITE CONSISTS OF LOT 1, BLOCK 2 OF THE PRESTWICK PLACE 24TH/ ADDITION PLAT. THE SITE IS BOUNDED ON THE NORTH BY AN UNNAMED ROAD CONSTRUCTED FOR THE DEVELOPMENT. ON THE WEST BY UNDEVELOPED PROPERTY, ON THE SOUTH BY 145TH/ STREET W, AND ON THE EAST BY AKRON AVENUE. THE SITE IS CURRENTLY GRASSLAND THAT WAS GRADED FOR DEVELOPMENT.

THE PROPOSED SITE BOUNDARY CONSISTS OF 4.798 ACRES. THE SITE IS A PART OF PRESTWICK PLACE STORMWATER MANAGEMENT PLAN THAT DESIGNED AND CONSTRUCTED A STORMWATER POND FOR THE SITE. THE PRESTWICK PLACE STORMWATER MANAGEMENT PLAN ASSUMED THAT THE SITE WOULD CONTAIN 3.599 ACRES OF IMPERVIOUS SURFACE.

THE SITE HAS A GENERALLY FLAT TOPOGRAPHY GENERALLY SLOPING TO THE STORMWATER POND LOCATED IN THE NORTHEASTERN CORNER OF THE SITE, WITH SLOPES GENERALLY RANGING FROM 0.5% TO 33% OVER THE DEVELOPED AREA. ELEVATIONS AT THE SITE RANGE FROM 934 IN THE SOUTHEAST CORNER OF THE SITE, DOWN TO ABOUT 915 IN THE NORTHEAST CORNER OF THE SITE AT THE BOTTOM OF THE EXISTING STORMWATER POND. STORMWATER FROM THE SITE DRAINS OVERLAND OR TO STORM SEWER TO THE NORTHEAST TO THE EXISTING STORMWATER POND. THE POND OUTLETS TO A REGIONAL POND LOCATED EAST OF THE SITE ACROSS AKRON AVENUE.

PROPOSED SITE CONDITIONS
KWIK TRIP, INC. PLANS ON DEVELOPING THE SITE INTO A CONVENIENCE STORE WITH ONE FUELING CANOPY, A DETACHED CARWASH, AND ASSOCIATED PARKING AND DRIVE AREAS. DURING CONSTRUCTION, APPROXIMATELY 2.4 ACRES WILL BE DISTURBED. AFTER THE SITE IS CONSTRUCTED, THE SITE WILL CONTAIN APPROXIMATELY 1.708 ACRES OF IMPERVIOUS SURFACE, WHICH IS APPROXIMATELY 1.891 ACRES BELOW THE DESIGN IMPERVIOUS AREA.

THE EXISTING STORMWATER POND WAS CONSTRUCTED TO PROVIDE WATER QUALITY AND RATE CONTROL FOR THE SITE. STORMWATER FROM THE MAJORITY OF THE DEVELOPED PORTION OF THE SITE, INCLUDING ALL FUELING AREAS, WILL BE COLLECTED IN STORM SEWER AND ROUTED TO THE EXISTING STORMWATER POND FOREBAY. ALL REMAINING AREAS NOT COLLECTED BY STORM SEWER WILL FLOW TO THE EXISTING POND VIA OVERLAND FLOW.

SOIL INFORMATION
ACCORDING TO THE PRESTWICK PLACE STORMWATER MANAGEMENT PLAN NEAR SURFACE SOILS GENERALLY FALL WITHIN THE HYDROLOGIC SOIL GROUP (HSG) "A".

WETLAND CONSIDERATIONS
THERE ARE NO KNOWN WETLANDS ONSITE.

STORMWATER RECEIVING WATERS
STORMWATER FROM THE MAJORITY OF THE DEVELOPED PORTION OF THE SITE, INCLUDING ALL FUELING AREAS, WILL BE COLLECTED IN STORM SEWER AND ROUTED TO THE EXISTING STORMWATER POND FOREBAY. ALL REMAINING AREAS NOT COLLECTED BY STORM SEWER WILL FLOW TO THE EXISTING POND VIA OVERLAND FLOW. THE POND OUTLETS TO A REGIONAL POND LOCATED EAST OF THE SITE ACROSS AKRON AVENUE.

SPECIAL/IMPAIRED WATER CONSIDERATIONS
THERE ARE NO SPECIAL OR IMPAIRED WATERS WITHIN 1 MILE OF THE SITE.

STORMWATER MANAGEMENT PLAN
THE PRESTWICK PLACE STORMWATER MANAGEMENT PLAN DESIGNED THE CURRENT STORMWATER MANAGEMENT SYSTEM ASSUMING THAT THE PROPOSED SITE WOULD CONTAIN 3.599 ACRES OF IMPERVIOUS SURFACE. KWIK TRIP PROPOSES A SITE THAT CONTAINS 1.708 ACRES OF IMPERVIOUS SURFACE, WHICH IS APPROXIMATELY 1.891 ACRES BELOW THE DESIGN IMPERVIOUS AREA. THEREFORE NO ADDITIONAL RATE CONTROL OR WATER QUALITY TREATMENT IS REQUIRED FOR THE SITE.

THE EXISTING STORMWATER POND WILL PROVIDE WATER QUALITY TREATMENT FOR THE SITE. PRETREATMENT FOR THE STORMWATER TREATMENT FACILITIES WILL BE PROVIDED BY SUMP MANHOLES EQUIPPED WITH SNOUT OIL/WATER/DEBRIS SEPARATORS.

PRIOR TO START OF CONSTRUCTION
THE FOLLOWING STORMWATER POLLUTION PREVENTION MEASURES SHALL BE IMPLEMENTED PRIOR TO CONSTRUCTION. REFER TO GRADING AND EROSION CONTROL PLANS FOR LOCATIONS.

1. SILT FENCE
   SILT FENCE SHALL BE INSTALLED AT THE LIMIT OF GRADING ON ANY FILL SLOPE. ADDITIONAL SILT FENCE MAY BE REQUIRED IN CUT SLOPE AREAS. SILT FENCE SHALL ALSO BE INSTALLED AROUND ANY INFILTRATION/FILTRATION PRACTICE.

2. ROCK CONSTRUCTION ENTRANCE
   ROCK CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE FIELD ENTRANCES TO THE SITE.

3. CATCH BASINS
   ALL CATCH BASINS SHALL BE PROTECTED WITH INLET PROTECTION DEVICES APPROVED BY THE LOCAL GOVERNING UNIT. THESE SHALL INCLUDE, BUT ARE NOT LIMITED TO, WMCO PROTECTION DEVICES, INFRASAFE PROTECTION DEVICES, FILTER FABRIC, BIO ROLLS AND STRAW BALES.

DURING CONSTRUCTION
THE FOLLOWING STORMWATER POLLUTION PREVENTION MEASURES SHALL BE IMPLEMENTED DURING CONSTRUCTION. REFER TO GRADING AND EROSION CONTROL PLANS FOR LOCATIONS.

1. PHASED GRADING
   TO THE EXTENT POSSIBLE, GRADING SHALL BE PHASED TO MINIMIZE THE AMOUNT OF DISTURBED AREAS DURING SITE CONSTRUCTION.

2. TRACKED SEDIMENT
   ANY SEDIMENT TRACKED FROM THE SITE ONTO THE STREET SHALL BE REMOVED IMMEDIATELY UPON DETECTION. THE ROCK CONSTRUCTION ENTRANCE SHALL BE INSPECTED AND REPAIRED IF INUNDATED WITH SEDIMENT.

3. STOCKPILES
   STOCKPILES SHALL BE PLACED IN AN AREA THAT WILL MINIMIZE THE NEED FOR RELOCATION. IF A STOCKPILE WILL REMAIN IN PLACE FOR AN EXTENDED PERIOD OF TIME, STABILIZATION MEASURES SHALL BE IMPLEMENTED, INCLUDING BUT NOT LIMITED TO, SEEDING AND SILT FENCING. TEMPORARY STOCKPILES MUST HAVE SILT FENCE OR OTHER EFFECTIVE SEDIMENT CONTROLS AND CANNOT BE PLACED IN SURFACE WATERS, INCLUDING STORMWATER CONVEYANCES SUCH AS CURB AND GUTTER SYSTEMS, CONDUITS OR DITCHES.

4. TOPSOIL
   UPON GRADING COMPLETION, A MINIMUM OF 4 INCHES OF TOPSOIL SHALL BE PLACED OVER ALL DISTURBED AREAS, EXCLUDING PROPOSED STREETS AND PARKING AREAS.

5. RESTORATION
   ALL DISTURBED AREAS NOT ACTIVELY WORKED SHALL BE RESTORED WITH SEED AND MULCH, EROSION CONTROL BLANKET AND/OR SOD WITHIN 14 DAYS.

6. SLOPES
   IN ORDER TO MAINTAIN SHEET FLOW AND MINIMIZE RILLS AND/OR GULLIES, THERE SHALL BE NO UNBROKEN SLOPE LENGTH OF GREATER THAN 75 FEET FOR SLOPES WITH A GRADE OF 3:1 OR STEEPER.

7. DRAINAGE DITCHES
   THE NORMAL WETTED PERIMETER OF ANY TEMPORARY OR PERMANENT DRAINAGE DITCH THAT DRAINS WATER FROM THE SITE, OR DIVERTS WATER AROUND THE SITE, MUST BE STABILIZED WITHIN 200 LINEAL FEET FROM THE PROPERTY EDGE, OR FROM THE POINT OF DISCHARGE TO ANY SURFACE WATER. STABILIZATION MUST BE COMPLETED WITHIN 24 HOURS OF CONNECTING TO A SURFACE WATER.

8. PIPE OUTLETS
   PIPE OUTLETS MUST BE PROVIDED WITH TEMPORARY OR PERMANENT ENERGY DISSIPATION WITHIN 24 HOURS OF CONNECTION TO A SURFACE WATER.

9. CATCH BASINS
   ALL CATCH BASINS SHALL BE PROTECTED WITH INLET PROTECTION DEVICES APPROVED BY THE LOCAL GOVERNING UNIT. THESE SHALL INCLUDE, BUT ARE NOT LIMITED TO, WMCO PROTECTION DEVICES, INFRASAFE PROTECTION DEVICES, FILTER FABRIC, BIO ROLLS AND STRAW BALES.

10. DUST
    CONSTRUCTION DUST SHALL BE CONTAINED TO THE EXTENT POSSIBLE. IF THE SITE BECOMES EXCESSIVELY DUSTY, APPROPRIATE MEASURES SHALL BE TAKEN TO REDUCE DUST BEING TRANSPORTED FROM THE SITE. DUST CONTROL MEASURES INCLUDE, BUT ARE NOT LIMITED TO, WATERING AND CALCIUM CHLORIDE APPLICATION.

11. DEWATERING
    DEWATERING ACTIVITIES SHALL BE CONDUCTED WITH AND APPROVED BY THE LOCAL GOVERNING UNIT. IF THERE WILL BE ANY DEWATERING OR BASIN DRAINING THAT MAY HAVE TURBID OR SEDIMENT LADEN DISCHARGE, THE WATER MUST BE DISCHARGED TO A TEMPORARY OR PERMANENT SEDIMENTATION BASIN ON THE PROJECT SITE WHENEVER POSSIBLE. APPROPRIATE BMPS SHALL BE USED FOR EROSION AND SEDIMENT CONTROL AND ENERGY DISSIPATION.

12. CONSTRUCTION MATERIALS AND DEBRIS
    CONSTRUCTION MATERIALS SHALL BE STORED IN AN ORDERLY MANNER AND IN AN AREA THAT WILL MINIMIZE CONFLICTS WITH OTHER CONSTRUCTION ACTIVITIES. CONSTRUCTION DEBRIS SHALL BE CONTAINED IN DUMPSTERS AND REMOVED FROM THE SITE AS NECESSARY.

13. CHEMICALS
    CHEMICALS SHALL BE STORED IN A SAFE AREA IN SEALED CONTAINERS WITH THE ORIGINAL LABELING AND MATERIAL SAFETY DATA SHEETS AVAILABLE.

14. SPILLS AND CONTAMINATION
    IF FUEL, OIL OR A HAZARDOUS CHEMICAL IS SPILLED OR DETECTED DURING CONSTRUCTION ACTIVITIES, ALL APPROPRIATE AGENCIES SHALL BE IMMEDIATELY NOTIFIED, INCLUDING, BUT NOT LIMITED TO, THE MINNESOTA DUTY OFFICER AT 800–422–0798.

15. CONCRETE WASHOUT AREA
    PERMITTEES MUST PROVIDE EFFECTIVE CONTAINMENT FOR ALL LIQUID AND SOLID WASTES GENERATED BY WASHOUT OPERATIONS (E.G., CONCRETE, STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS AND OTHER CONSTRUCTION MATERIALS) RELATED TO THE CONSTRUCTION ACTIVITY. PERMITTEES MUST PREVENT LIQUID AND SOLID WASHOUT WASTES FROM CONTACTING THE GROUND AND MUST DESIGN THE CONTAINMENT SO IT DOES NOT RESULT IN RUNOFF FROM THE WASHOUT OPERATIONS OR AREAS. PERMITTEES MUST PROPERLY DISPOSE LIQUID AND SOLID WASTES IN COMPLIANCE WITH MPCA RULES. PERMITTEES MUST INSTALL A SIGN INDICATING THE LOCATION OF THE WASHOUT FACILITY.

POST CONSTRUCTION
WHEN THE SITE HAS BEEN COMPLETELY CONSTRUCTED, THE SITE MUST UNDERGO FINAL STABILIZATION. FINAL STABILIZATION OCCURS WHEN ALL OF THE GRADING, INFRASTRUCTURE AND BUILDING ACTIVITIES HAVE BEEN COMPLETED. TO ACHIEVE FINAL STABILIZATION, THE FOLLOWING MEASURES SHALL BE COMPLETED.

1. ALL DISTURBED AREAS WITHOUT PERMANENT IMPERVIOUS SURFACES SHALL BE STABILIZED BY A UNIFORM PERENNIAL VEGETATIVE COVER. AREAS NOT REQUIRING SOD OR EROSION CONTROL BLANKET SHALL BE SEEDED AND MULCHED.

2. SEDIMENT FROM CONVEYANCES AND TEMPORARY SEDIMENTATION BASINS THAT ARE TO BE USED AS PERMANENT WATER QUALITY MANAGEMENT BASINS SHALL BE CLEANED OUT. SEDIMENTATION BASINS SHALL BE SUFFICIENTLY CLEANED OUT TO RETURN THE BASIN TO DESIGN CAPACITY. SEDIMENT MUST BE STABILIZED TO PREVENT IT FROM BEING WASHED BACK INTO THE BASIN OR CONVEYANCES DISCHARGING OFF-SITE OR TO SURFACE WATERS.

3. WHEN STABILIZED VEGETATION HAS BEEN ESTABLISHED OVER 70 PERCENT OF THE PERVIOUS SURFACE AREA, ALL SYNTHETIC TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED. THIS INCLUDES, BUT IS NOT LIMITED TO, SILT FENCE, TREE FENCE AND CATCH BASIN INLET PROTECTION DEVICES.

SWPPP DRAWING UPDATES
UPDATE SWPPP DRAWING FOR LOCATIONS OF CONSTRUCTION DUMPSTER, PORTABLE TOILET, EQUIPMENT STAGING AREA(S), FUELING AREA(S), ETC. WHEN THEIR RESPECTIVE LOCATIONS ARE KNOWN.

INSPECTIONS & RECORD KEEPING
STORMWATER POLLUTION PREVENTION INSPECTIONS SHALL OCCUR ONCE EVERY SEVEN (7) DAYS DURING ACTIVE CONSTRUCTION AND WITHIN 24 HOURS AFTER A RAINFALL EVENT GREATER THAN 0.5 INCHES IN 24 HOURS. INSPECTIONS MAY BE CEASED DURING FROZEN GROUND CONDITIONS. WHERE WORK HAS BEEN SUSPENDED DUE TO FROZEN GROUND CONDITIONS, THE REQUIRED INSPECTIONS AND MAINTENANCE MUST TAKE PLACE WITHIN 24 HOURS AFTER RUNOFF OCCURS AT THE SITE OR PRIOR TO RESUMING CONSTRUCTION, WHICHEVER COMES FIRST. DURING THE COURSE OF CONSTRUCTION, IT MAY BE DETERMINED THAT ADDITIONAL STORMWATER POLLUTION PREVENTION MEASURES MAY BE NEEDED, OR CERTAIN MEASURES ARE NOT PRACTICAL TO INSTALL. IN THESE CASES, AN AMENDMENT TO THE SWPPP SHALL BE MADE, AND SUPPORTING REASONS SHALL BE DOCUMENTED IN THE SWPPP.

1. THE EXCAVATOR IS RESPONSIBLE FOR ALL EROSION CONTROL INSPECTIONS.

2. RECORD NAME OF INSPECTOR AND DATE AND TIME OF INSPECTION.

3. RECORD RAINFALL AMOUNT SINCE MOST RECENT INPSECTION.

4. INSPECT ROCK CONSTRUCTION ENTRANCES FOR SEDIMENTATION. INSPECT ADJACENT STREETS FOR SEDIMENT TRACKING.

5. INSPECT SITE FOR EXCESSIVE EROSION AND SEDIMENT ACCUMULATION.

   A. INSPECT SILT FENCE AND OTHER TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES FOR EROSION, SEDIMENTATION AND MALFUNCTIONING.
   B. INSPECT FLARED END SECTIONS FOR EROSION AND SEDIMENTATION.
   C. INSPECT PONDS, INFILTRATION BASINS, TEMPORARY SEDIMENTATION BASINS AND ALL OTHER BMP'S FOR EROSION AND SEDIMENTATION.
   D. INSPECT SURFACE WATERS, INCLUDING DRAINAGE DITCHES AND CONVEYANCE SYSTEMS FOR EVIDENCE OF SEDIMENT BEING DEPOSITED BY EROSION.

6. INSPECT SITE AND ADJACENT PROPERTIES FOR CONSTRUCTION DEBRIS, TRASH AND SPILLS.

7. INSPECT STABILIZED AREAS FOR EROSION.

8. RECORD RECOMMENDED REPAIRS, MAINTENANCE AND/OR REPLACEMENTS REQUIRED TO ENSURE EROSION AND SEDIMENTATION CONTROL MEASURES ARE SUFFICIENT.

9. RECORD RECOMMENDED AMENDMENTS TO THE SWPPP.

10. RECORD REPAIRS, MAINTENANCE AND/OR REPLACEMENTS THAT WERE COMPLETED SINCE THE LAST INSPECTION.

NOTE: FOR AREAS THAT HAVE UNDERGONE FINAL STABILIZATION, INSPECTIONS CAN BE REDUCED TO ONCE PER MONTH.

MAINTENANCE
THE OWNER/CONTRACTOR IS RESPONSIBLE FOR THE OPERATION, INSPECTION AND MAINTENANCE OF ALL STORMWATER POLLUTION PREVENTION MEASURES FOR THE DURATION OF THE PROJECT. THE FOLLOWING GUIDELINES SHALL BE USED TO DETERMINE NECESSARY REPAIRS, MAINTENANCE AND/OR REPLACEMENT OF THE EROSION AND SEDIMENTATION CONTROL MEASURES.

1. ROCK CONSTRUCTION ENTRANCES SHALL BE REPAIRED OR REPLACED IF THE ROCK BECOMES INUNDATED WITH SEDIMENT AND/OR EXCESSIVE SEDIMENT IS BEING TRACKED FROM THE SITE. SEDIMENT TRACKED ONTO ADJACENT STREETS SHALL BE REMOVED. MEASURES SHALL BE TAKEN IMMEDIATELY UPON DISCOVERY.

2. SILT FENCE SHALL BE REPAIRED OR REPLACED WHEN SEDIMENT REACHES 1/3 THE HEIGHT OF THE SILT FENCE, THE SILT FENCE IS DAMAGED AND/OR THE SILT FENCE BECOMES NONFUNCTIONAL. MEASURES SHALL BE TAKEN WITHIN 24 HOURS OF DISCOVERY.

3. CATCH BASIN INLET PROTECTION DEVICES SHALL BE CLEANED WHEN SEDIMENT REACHES ⅓ THE HEIGHT OF THE SEDIMENT TRAP AND/OR REPAIRED OR REPLACED IF THE DEVICE BECOMES NONFUNCTIONAL. MEASURES SHALL BE TAKEN WITHIN 72 HOURS OF DISCOVERY.

4. FLARED END SECTIONS SHALL BE CLEANED IF DEBRIS IS RESTRICTING FLOW OR IF SEDIMENT HAS ACCUMULATED AT THE OUTLET. IF A FLARED END SECTION BECOMES NONFUNCTIONAL OR DAMAGED, IT SHALL BE REPAIRED OR REPLACED. MEASURES SHALL BE TAKEN WITHIN 72 HOURS OF DISCOVERY.

5. IF SEDIMENT IS OBSERVED OFF–SITE OR NEAR SURFACE WATERS, THE SOURCE OF SEDIMENT SHALL BE DETECTED AND ADDITIONAL MEASURES SHALL BE IMPLEMENTED. THE PERMITEE(S) SHALL COORDINATE SEDIMENT RETRIEVAL FROM SURFACE WATERS WITH ALL APPROPRIATE AGENCIES. MEASURES SHALL BE TAKEN WITHIN 7 DAYS OF DISCOVERY.

6. PONDS, INFILTRATION BASINS, TEMPORARY SEDIMENTATION BASINS AND ALL OTHER BMP'S SHALL BE CLEANED IF DEBRIS IS PRESENT AND/OR EXCESSIVE SEDIMENTATION HAS OCCURRED. TEMPORARY AND PERMANENT SEDIMENTATION BASINS MUST BE DRAINED AND THE SEDIMENT REMOVED WHEN SEDIMENT HAS FILLED THE BASIN TO 1/2 THE STORAGE VOLUME. NO SEDIMENT SHALL BE ALLOWED TO ACCUMULATE IN INFILTRATION BASINS. MEASURES SHALL BE TAKEN WITHIN 72 HOURS OF DISCOVERY.

NOTICE OF TERMINATION
THE PERMITEE(S) MUST SUBMIT A NOTICE OF TERMINATION (NOT) TO THE MPCA WITHIN 30 DAYS AFTER FINAL STABILIZATION IS COMPLETE, OR ANOTHER OWNER/OPERATOR (PERMITEE) HAS ASSUMED CONTROL OVER ALL AREAS OF THE SITE THAT HAVE NOT UNDERGONE FINAL STABILIZATION.

QUANTITIES
THE FOLLOWING TABLE PROVIDES ESTIMATED QUANTITIES FOR STORMWATER POLLUTION PREVENTION THROUGHOUT THE PROJECT.

ITEM	UNIT	ESTIMATED QUANTITY
ROCK ENTRANCE	EA.	1
SILT FENCE	L.F.	850
INLET PROTECTION	EA.	11
TURF ESTABLISHMENT	AC.	1.0

SWPPP DESIGN CERTIFICATION	SWPPP INSTALLER CERTIFICATION	SWPPP INSPECTOR CERTIFICATION
I, Dan Wilke, hereby certify that I have completed designer SWPP- Erosion and Stormwater Management Certification Program My certification expires May 2026	I hereby certify that I have completed Installer SWPP- Erosion and Stormwater Management Certification Program signed ____ expiration ____	I hereby certify that I have completed Inspector SWPP- Erosion and Stormwater Management Certification Program signed ____ expiration ____

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

Name: Daniel J. Wilke, P.E.
Signature: Dan Wilke
Date: 07/16/24 License #: 53182

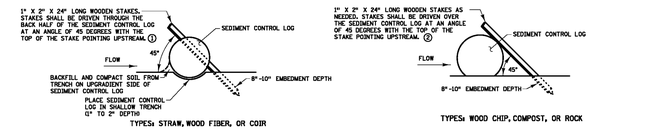
EROSION CONTROL NOTES

CONVENIENCE STORE #1757
WITH 1-BAY DETACHED CARWASH

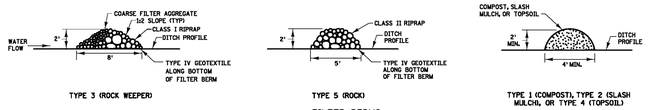
145TH ST W & AKRON AVENUE
ROSEMOUNT, MINNESOTA

#	DATE	DESCRIPTION

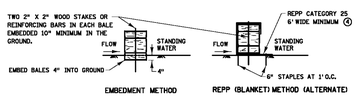
DRAWN BY	DJW
SCALE	GRAPHIC
PROJ. NO.	11004-00
DATE	2024-07-16
SHEET	1757 C601



SEDIMENT CONTROL LOGS



FILTER BERMS



BALE BARRIERS⑤

NOTES:

REPP = ROLLED EROSION PREVENTION PRODUCT.

SEE SPECS. 2573, 3149, 3874, 3882, 3885, 3886, AND 3897.

① SPACE BETWEEN STAKES SHALL BE A MAXIMUM OF 1' FOR DITCH CHECKS OR 2' FOR OTHER APPLICATIONS.

② PLACE STAKES AS NEEDED TO PREVENT MOVEMENT OF SEDIMENT CONTROL LOGS PLACED ON SLOPES OR AS NEEDED DUE TO OTHER FACTORS. STAKES SHALL BE INCIDENTAL.

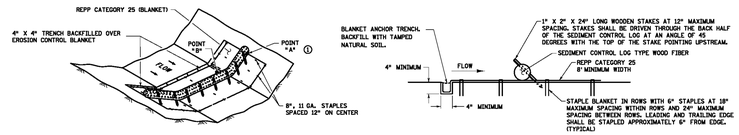
③ TO BE USED FOR CRITICAL PERIMETER CONTROL AREAS WHERE STANDING WATER OCCURS 6" MAXIMUM DEPTH. BALES SHALL CONSIST OF TYPE 1 MULCH OF APPROXIMATELY 14" X 18" X 36" LONG. BALES SHALL BE PLACED ON EDGE AND BUTTED TIGHT TO ADJACENT BALES.

④ INSTEAD OF TRENCHING, PLACE BALE ON THE REPP (BLANKET) AND WRAP BLANKET AROUND THE BALE. PLACE STAKE THROUGH BALE AND BLANKET.

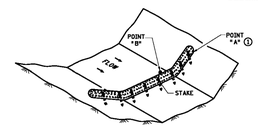
REVISION:	STANDARD PLAN 5-297.405	2 OF 8	TEMPORARY SEDIMENT CONTROL
APPROVED: JANUARY 8, 2020 MARC KANDROSKI CHIEF ENVIRONMENTAL OFFICER	APPROVED: 1-8-2020 REVISED:		FILTER BERMS, SEDIMENT CONTROL LOGS, AND BALE BARRIERS
MINNESOTA DEPARTMENT OF TRANSPORTATION	STATE DESIGN ENGINEER	STATE PROJ. NO. (T.H.)	SHEET NO. OF SHEETS

ROCK DITCH CHECKS
FILTER BERMS TYPE 3 (ROCK WEEPER) OR FILTER TYPE 5 (ROCK) ③
FOR USE ON ROUGH-GRADED AREAS
ONLY FOR USE OUTSIDE CLEAR ZONE ②

DITCH CHECK SPACING
FOR ALL FILTER BERM TYPES



SEDIMENT CONTROL LOG TYPE REPP (BLANKET) SYSTEM ④



SEDIMENT CONTROL LOG TYPE WOOD FIBER, OR TYPE COMPOST ⑤
FOR USE ON ROUGH GRADED AREAS

NOTES:

REPP = ROLLED EROSION PREVENTION PRODUCT.

SEE SPECS. 2573, 3601, 3733, 3885, 3886 & 3889.

FOR DITCH CHECKS, PLACE SEDIMENT CONTROL LOG PERPENDICULAR TO FLOW AND IN A CRESCENT SHAPE WITH THE ENDS FACING UPSTREAM.

APPROXIMATE SPACING BETWEEN EACH DITCH CHECK SHOULD BE DETERMINED FROM THE FOLLOWING SPACING FORMULA:

$$\text{APPROXIMATE SPACING OF DITCH CHECKS (FT)} \; Y = \frac{\text{DITCH CHECK HEIGHT (FT)}}{\text{\% CHANNEL SLOPE}} \times 100$$

① POINT "A" MUST BE A MINIMUM OF 6" HIGHER THAN POINT "B" TO ENSURE THAT WATER FLOWS OVER THE DIKE AND NOT AROUND THE ENDS.

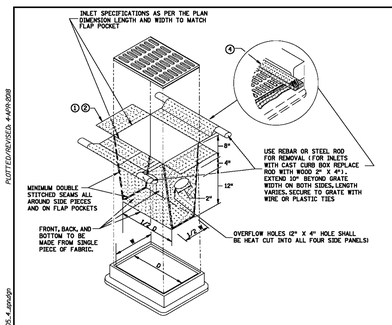
② ROCK DITCH CHECKS PLACED WITHIN THE CLEAR ZONE ARE TO BE 18" OR LESS IN HEIGHT. A 1:6 APPROACH AND DEPARTURE SLOPE SHALL BE PROVIDED.

③ DITCH GRADE 3% - 5%, MAX. FLOW VELOCITY 12 FT./SEC.

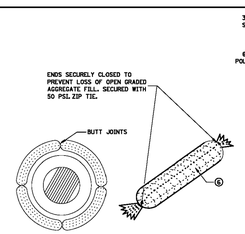
④ DITCH GRADE 1.5% - 3%, MAX. FLOW VELOCITY 4.5 FT./SEC.

⑤ DITCH GRADE 1.5% - 3%, MAX. FLOW VELOCITY 1.5 FT./SEC.

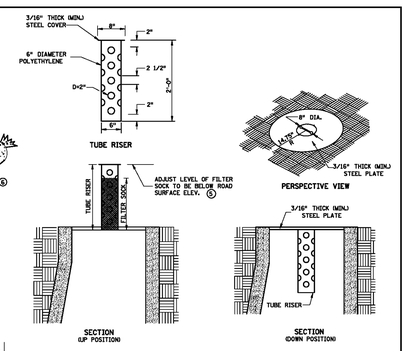
REVISION:	STANDARD PLAN 5-297.405	3 OF 8	TEMPORARY SEDIMENT CONTROL
APPROVED: JANUARY 8, 2020 MARC KANDROSKI CHIEF ENVIRONMENTAL OFFICER	APPROVED: 1-8-2020 REVISED:		DITCH CHECK
MINNESOTA DEPARTMENT OF TRANSPORTATION	STATE DESIGN ENGINEER	STATE PROJ. NO. (T.H.)	SHEET NO. OF SHEETS

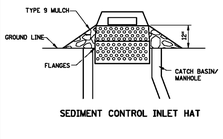


FILTER BAG INSERT ③
(CAN BE INSTALLED IN ANY INLET TYPE WITH OR WITHOUT A CURB BOX)



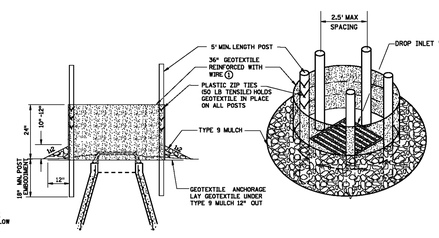
ROCK LOG/COMPOST LOG





SEDIMENT CONTROL INLET HAT

NOTE:
THE SEDIMENT CONTROL BARRIER SHALL BE A METAL OR PLASTIC/POLYETHYLENE RISER SIZED TO FIT INSIDE THE CATCH BASIN/MANHOLE. HAVE PERFORATIONS TO ALLOW FOR WATER INFILTRATION. HAVE AN OVERFLOW OPENING. FLANGES AND A LID/COVER.



SILT FENCE RING AND ROCK FILTER BERM
USE WHERE INLET DRAINS IN AN AREA WITH SLOPES AT 1:3 or LESS

NOTES:
SEE SPECS. 2573, 3137, & 3886.

DEVICES MUST BE ADJUSTED ACCORDINGLY AS TO NOT CAUSE FLOODING ON ROADWAY THAT WOULD IMPEDE TRAFFIC FLOW.

① ALL GEOTEXTILE USED FOR INLET PROTECTION SHALL BE MONOFILAMENT IN BOTH DIRECTIONS, MEETING SPEC. 3886.

② FINISHED SIZE, INCLUDING POCKETS WHERE REQUIRED SHALL EXTEND A MINIMUM OF 10 INCHES AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.

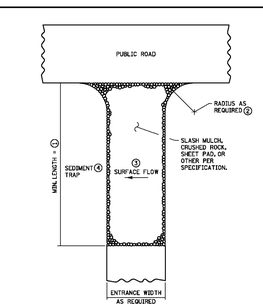
③ INSTALLATION NOTES:
DO NOT PLACE FILTER BAG INSERT IN INLETS SHALLOWER THAN 30 INCHES. MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE. THE PLACED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE OF 3 INCHES BETWEEN THE INLET WALLS AND THE BAG. MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES. WHERE NECESSARY THE CONTRACTOR SHALL CLINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3 INCH SIDE CLEARANCE.

④ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2 INCH X 4 INCH OR USE A ROCK SOCK OR SAND BAGS IN PLACE OF THE FLAP POCKETS.

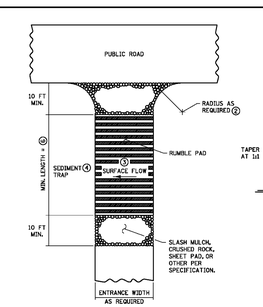
⑤ SOCK HEIGHT MUST NOT BE SO HIGH AS TO SLOW DOWN WATER FILTRATION TO CAUSE FLOODING OF THE ROADWAY.

⑥ GEOTEXTILE SOCK BETWEEN 4-10 FEET LONG AND 4-6 INCH DIAMETER. SEAM TO BE JOINED BY TWO ROWS OF STITCHING WITH A PLASTIC MESH BACKING OR PROVIDE A HEAT BONDED SEAM (OR APPROVED EQUIVALENT). FILL ROCK LOG WITH OPEN GRADED AGGREGATE CONSISTING OF SOUND DURABLE PARTICLES OF COARSE AGGREGATE CONFORMING TO SPEC. 3137 TABLE 3137-1; CA-3 GRADATION.

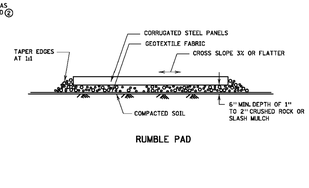
REVISION:	STANDARD PLAN 5-297.405	4 OF 8	TEMPORARY SEDIMENT CONTROL
APPROVED: 2-28-2017 DEP ENVIRONMENTAL OFFICER	APPROVED: 2-28-2017 REVISED:		STORM DRAIN INLET PROTECTION
MINNESOTA DEPARTMENT OF TRANSPORTATION	STATE DESIGN ENGINEER	STATE PROJ. NO. (T.H.)	SHEET NO. OF SHEETS



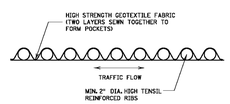
SLASH MULCH, CRUSHED ROCK, OR SHEET PAD CONSTRUCTION EXIT ⑤⑦



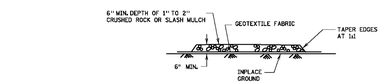
RUMBLE PAD CONSTRUCTION EXIT ⑤⑦



RUMBLE PAD



SHEET PAD



SLASH MULCH OR CRUSHED ROCK

NOTES:
SEE SPECS. 2573 & 3882.

① MINIMUM LENGTH SHALL BE THE GREATER OF 50 FEET OR A LENGTH SUFFICIENT TO ALLOW A MINIMUM OF 5 TIRE ROTATIONS ON THE PROVIDED PAD. MINIMUM LENGTH SHALL BE CALCULATED USING THE LARGEST TIRE WHICH WILL BE USED IN TYPICAL OPERATIONS.

② PROVIDE RADIUS OR WIDEN PAD SUFFICIENTLY TO PREVENT VEHICLE TIRES FROM TRACKING OFF OF PAD WHEN LEAVING SITE.

③ IF RUNOFF FROM DISTURBED AREAS FLOWS TOWARD CONSTRUCTION EXITS, PREVENT RUNOFF FROM DRAINING DIRECTLY TO PUBLIC ROAD OVER CONSTRUCTION EXIT BY CROWNING THE EXIT OR SLOPING TO ONE SIDE. IF SURFACE GRADING IS INSUFFICIENT, PROVIDE OTHER MEANS OF INTERCEPTING RUNOFF.

④ IF RUNOFF FROM CONSTRUCTION EXITS WILL DRAIN OFF OF PROJECT SITE, PROVIDE SEDIMENT TRAP WITH STABILIZED OVERFLOW.

⑤ IF A TIRE WASH OFF IS REQUIRED THE CONSTRUCTION EXITS SHALL BE GRADED TO DRAIN THE WASH WATER TO A SEDIMENT TRAP.

⑥ MINIMUM LENGTH OF RUMBLE PAD SHALL BE 30 FEET, OR AS REQUIRED TO REMOVE SEDIMENT FROM TIRES. IF SIGNIFICANT SEDIMENT IS TRACKED FROM THE SITE, THE RUMBLE PAD SHALL BE LENGTHENED OR THE DESIGN MODIFIED TO PROVIDE ADDITIONAL VIBRATION. WASH-OFF LENGTH SHALL BE AS REQUIRED TO EFFECTIVELY REMOVE CONSTRUCTION SEDIMENT FROM VEHICLE TIRES.

⑦ MAINTENANCE OF CONSTRUCTION EXITS SHALL OCCUR WHEN THE EFFECTIVENESS OF SEDIMENT REMOVAL HAS BEEN REDUCED. MAINTENANCE SHALL CONSIST OF REMOVING SEDIMENT AND CLEANING THE MATERIALS OR PLACING ADDITIONAL MATERIAL (SLASH MULCH OR CRUSHED ROCK) OVER SEDIMENT FILLED MATERIAL TO RESTORE EFFECTIVENESS.

REVISION:	STANDARD PLAN 5-297.405	5 OF 8	TEMPORARY SEDIMENT CONTROL
APPROVED: 2-28-2017 DEP ENVIRONMENTAL OFFICER	APPROVED: 2-28-2017 REVISED:		STABILIZED CONSTRUCTION EXIT
MINNESOTA DEPARTMENT OF TRANSPORTATION	STATE DESIGN ENGINEER	STATE PROJ. NO. (T.H.)	SHEET NO. OF SHEETS

PLOTTED/REVISED: 24-JAN-2020
PLOT NAME: #405_2.dgn
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PLOTTED/REVISED: 24-JAN-2020
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PLOTTED/REVISED: 4-APR-2018
PLOT NAME: #405_4.dgn
PATH & FILENAME: O:\Design\Standards\Development\New Border\#405_Series\#405_4.dgn
PLOTTED/REVISED: 4-APR-2018
PLOT NAME: #405_5.dgn
PATH & FILENAME: O:\Design\Standards\Development\New Border\#405_Series\#405_5.dgn

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

Name: Daniel J. Wilke, P.E.
Signature: Dan Wilke
Date: 07/16/24 License #: 53182

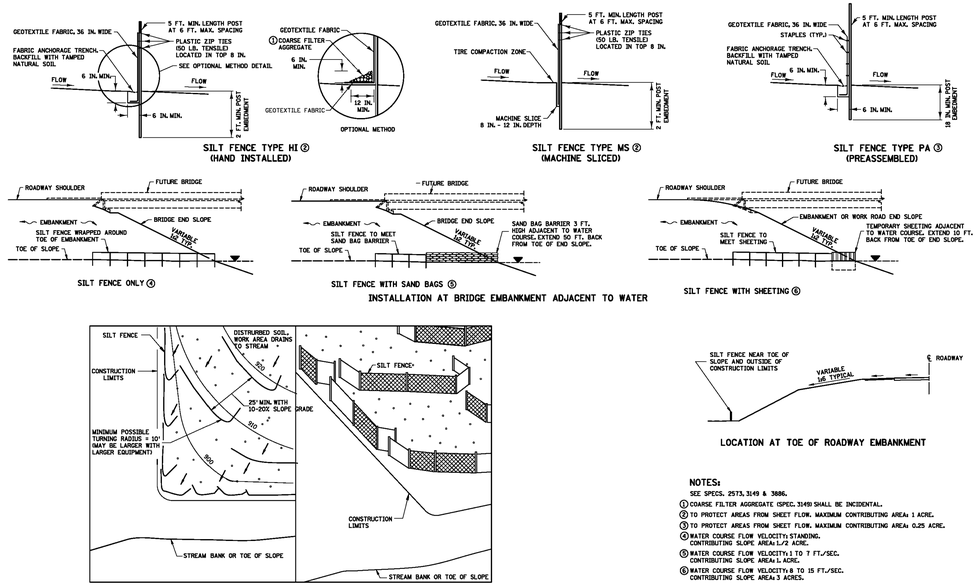
EROSION CONTROL DETAILS

CONVENIENCE STORE #1757 WITH 1-BAY DETACHED CARWASH

145TH ST W & AKRON AVENUE
ROSEMOUNT, MINNESOTA

#	DATE	DESCRIPTION

DRAWN BY	DJW
SCALE	GRAPHIC
PROJ. NO.	11004-00
DATE	2024-07-16
SHEET	1757 C602



NOTES:

SEE SPECS. 2573, 3149 & 3886.

① COARSE FILTER AGGREGATE (SPEC. 3149) SHALL BE INCIDENTAL.

② TO PROTECT AREAS FROM SHEET FLOW. MAXIMUM CONTRIBUTING AREA: 1 ACRE.

③ TO PROTECT AREAS FROM SHEET FLOW. MAXIMUM CONTRIBUTING AREA: 0.25 ACRE.

④ WATER COURSE FLOW VELOCITY: STANDING. CONTRIBUTING SLOPE AREA: 1/2 ACRE.

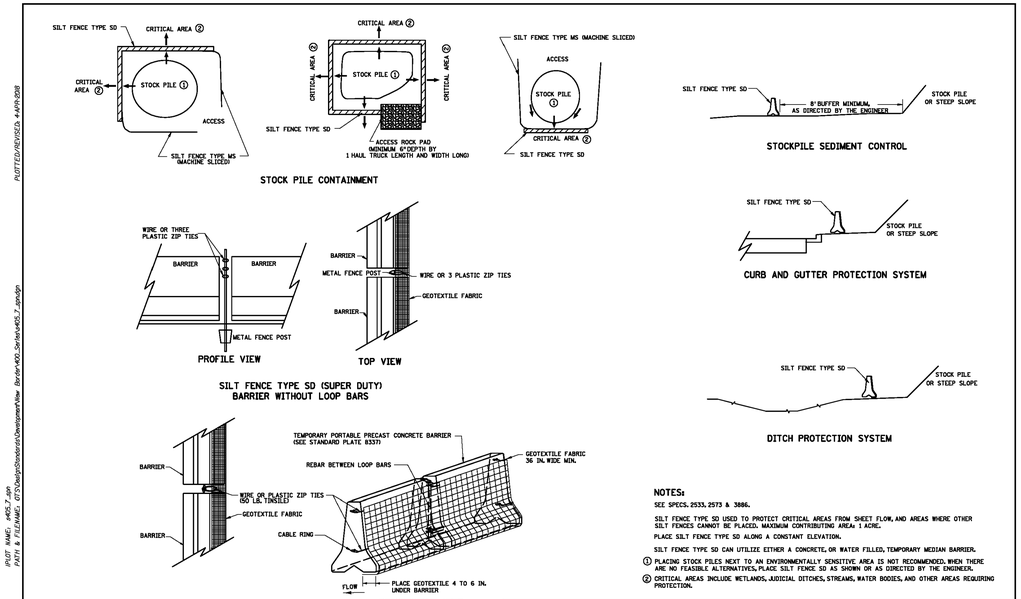
⑤ WATER COURSE FLOW VELOCITY: 1 TO 7 FT./SEC. CONTRIBUTING SLOPE AREA: 1 ACRE.

⑥ WATER COURSE FLOW VELOCITY: 8 TO 15 FT./SEC. CONTRIBUTING SLOPE AREA: 3 ACRES.

REVISION:
APPROVED: 2-28-2017
CHIEF ENVIRONMENTAL OFFICER

MINNESOTA DEPARTMENT OF TRANSPORTATION — STATE DESIGN ENGINEER

STANDARD PLAN 5-297.405	6 OF 8	TEMPORARY SEMENT CONTROL
APPROVED: 2-28-2017 REVISED:		SILT FENCE
STATE PROJ. NO.	(T.H.)	SHEET NO. OF SHEETS



NOTES:

SEE SPECS. 2533, 2573 & 3886.

SILT FENCE TYPE SD USED TO PROTECT CRITICAL AREAS FROM SHEET FLOW, AND AREAS WHERE OTHER SILT FENCES CANNOT BE PLACED. MAXIMUM CONTRIBUTING AREA: 1 ACRE.

PLACE SILT FENCE TYPE SD ALONG A CONSTANT ELEVATION.

SILT FENCE TYPE SD CAN UTILIZE EITHER A CONCRETE, OR WATER FILLED, TEMPORARY MEDIAN BARRIER.

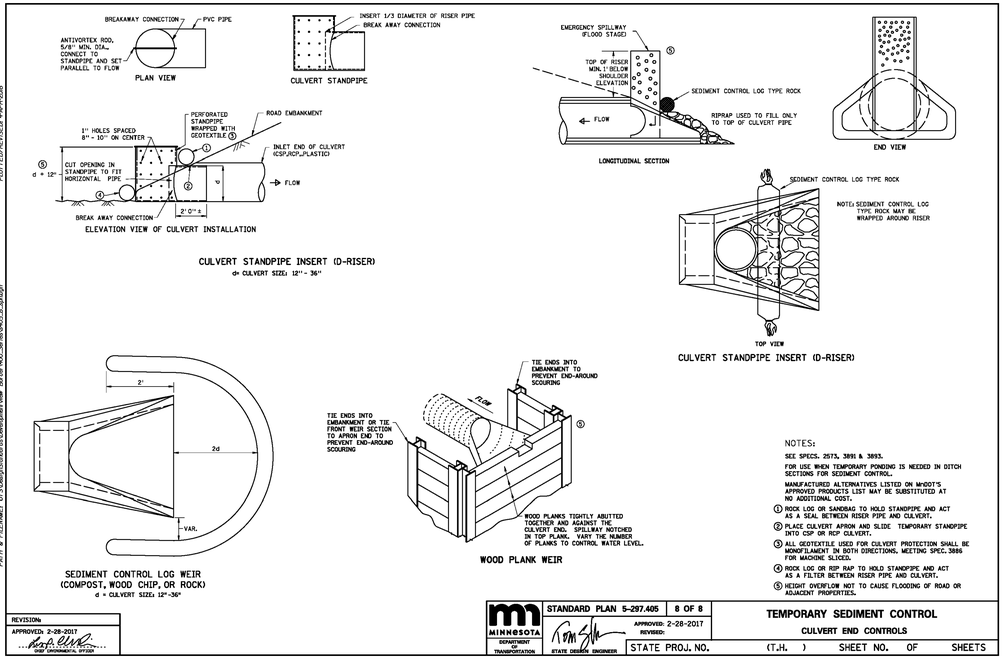
① PLACING STOCK PILES NEXT TO AN ENVIRONMENTALLY SENSITIVE AREA IS NOT RECOMMENDED. WHEN THERE ARE NO FEASIBLE ALTERNATIVES, PLACE SILT FENCE SD AS SHOWN OR AS DIRECTED BY THE ENGINEER.

② CRITICAL AREAS INCLUDE WETLANDS, JUDICIAL DITCHES, STREAMS, WATER BODIES, AND OTHER AREAS REQUIRING PROTECTION.

REVISION:
APPROVED: 2-28-2017
CHIEF ENVIRONMENTAL OFFICER

MINNESOTA DEPARTMENT OF TRANSPORTATION — STATE DESIGN ENGINEER

STANDARD PLAN 5-297.405	7 OF 8	TEMPORARY SEDIMENT CONTROL
APPROVED: 2-28-2017 REVISED:		SUPER DUTY SILT FENCE
STATE PROJ. NO.	(T.H.)	SHEET NO. OF SHEETS



NOTES:

SEE SPECS. 2573, 3891 & 3893.

FOR USE WHEN TEMPORARY PONDING IS NEEDED IN DITCH SECTIONS FOR SEDIMENT CONTROL.

MANUFACTURED ALTERNATIVES LISTED ON MnDOT'S APPROVED PRODUCTS LIST MAY BE SUBSTITUTED AT NO ADDITIONAL COST.

① ROCK LOG OR SANDBAG TO HOLD STANDPIPE AND ACT AS A SEAL BETWEEN RISER PIPE AND CULVERT.

② PLACE CULVERT APRON AND SLIDE TEMPORARY STANDPIPE INTO CSP OR RCP CULVERT.

③ ALL GEOTEXTILE USED FOR CULVERT PROTECTION SHALL BE MONOFILAMENT IN BOTH DIRECTIONS, MEETING SPEC. 3886 FOR WACHINE SLICED.

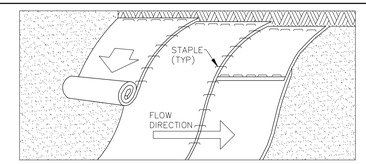
④ ROCK LOG OR RIP RAP TO HOLD STANDPIPE AND ACT AS A FILTER BETWEEN RISER PIPE AND CULVERT.

⑤ HEIGHT OVERFLOW NOT TO CAUSE FLOODING OF ROAD OR ADJACENT PROPERTIES.

REVISION:
APPROVED: 2-28-2017
CHIEF ENVIRONMENTAL OFFICER

MINNESOTA DEPARTMENT OF TRANSPORTATION — STATE DESIGN ENGINEER

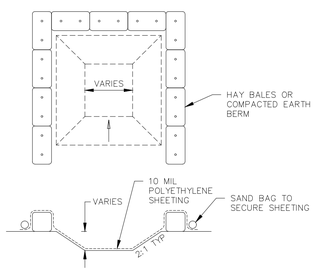
STANDARD PLAN 5-297.405	8 OF 8	TEMPORARY SEDIMENT CONTROL
APPROVED: 2-28-2017 REVISED:		CULVERT END CONTROLS
STATE PROJ. NO.	(T.H.)	SHEET NO. OF SHEETS



NOTES:

1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING APPLICATION OF LIME, FERTILIZER AND/OR SEED.
2. BEGIN AT THE TOP OF THE SLOPE (OR CHANNEL) BY ANCHORING THE BLANKET IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
3. ROLL THE BLANKETS DOWN (STARTING DOWNSTREAM PROCEEDING UPSTREAM) HORIZONTALLY ACROSS THE SLOPE.
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH A MINIMUM 4" OVERLAP.
5. WHEN BLANKETS MUST BE SPLICED DOWN THE SLOPE, PLACE BLANKETS END OVER END (SHINGLE STYLE) WITH MINIMUM 6" OVERLAP. USE A DOUBLE ROW OF STAGGERED STAPLES 4" APART TO SECURE BLANKETS.
6. IN HIGH FLOW CHANNEL APPLICATIONS, A STAPLE CHECK SLOT IS RECOMMENDED AT 30 TO 40 FOOT INTERVALS. USE A ROW OF STAPLES 4" APART OVER ENTIRE WIDTH OF THE CHANNEL. PLACE A SECOND ROW 4" BELOW THE FIRST ROW IN A STAGGERED PATTERN.
7. THE TERMINAL ENDS OF THE BLANKETS MUST BE ANCHORED IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.

1 SWP4 — EROSION CONTROL BLANKET
NO SCALE



NOTES:

1. THE WASHOUT MUST HAVE SUFFICIENT VOLUME TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS.
2. LIQUID AND SOLID WASHOUT WASTE SHALL NOT CONTACT THE GROUND.
3. LIQUID AND SOLID WASHOUT WASTE SHALL BE DISPOSED OF IN COMPLIANCE WITH MPCA RULES.
4. A SIGN SHALL BE INSTALLED INDICATING THE LOCATION OF THE WASHOUT FACILITY.

2 SWP4 — CONCRETE WASHOUT
NO SCALE

1. TURF ESTABLISHMENT SHALL APPLY TO ALL DISTURBED AREAS AND SHALL BE ACCORDING TO MnDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION (LATEST EDITION) EXCEPT AS MODIFIED BELOW.
2. TURF ESTABLISHMENT SHALL OCCUR AS SOON AS POSSIBLE BUT IN NO CASE MORE THAN 7 DAYS.
3. SEED: MnDOT MIXTURE 25-141 AT 60 POUNDS PER ACRE.
4. DORMANT SEED: SHALL BE APPLIED AT TWICE THE NORMAL RATE AFTER NOVEMBER 1ST.
5. MULCH: TYPE 1 AT 2 TONS PER ACRE (DISK ANCHORED).
6. FERTILIZER: TYPE 10-10-10 AT 200 POUNDS PER ACRE.

3 SWP4 — TURF ESTABLISHMENT
NO SCALE

KWIK TRIP

KWIK STAR

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

Name: Daniel J. Wilke, P.E.
Signature:
Date: 07/16/24 License #: 53182

EROSION CONTROL DETAILS

CONVENIENCE STORE #1757 WITH 1-BAY DETACHED CARWASH

145TH ST W & AKRON AVENUE
ROSEMOUNT, MINNESOTA

#	DATE	DESCRIPTION

DRAWN BY	DJW
SCALE	GRAPHIC
PROJ. NO.	11004-00
DATE	2024-07-16
SHEET	1757 C603

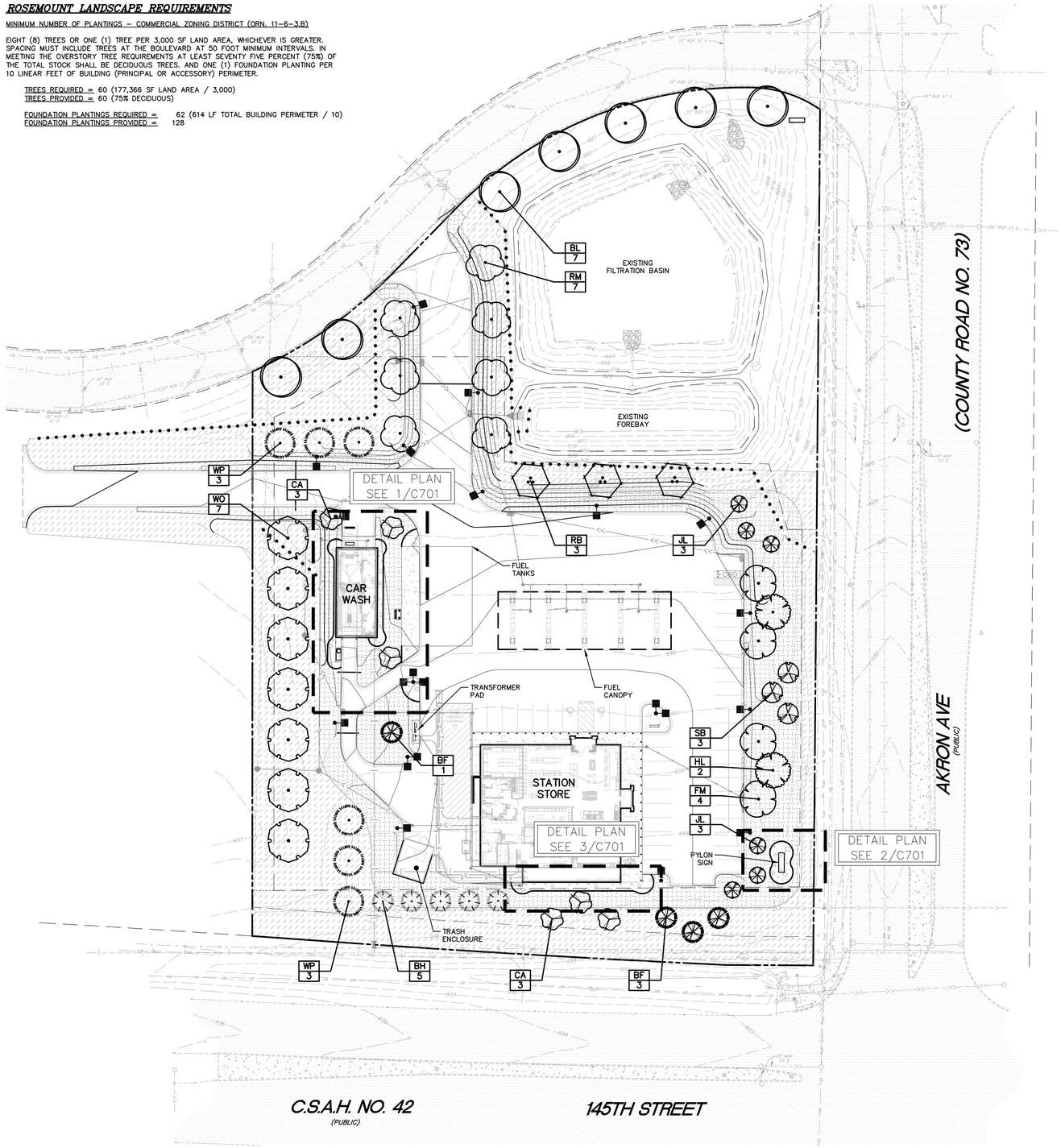
ROSEMOUNT LANDSCAPE REQUIREMENTS

MINIMUM NUMBER OF PLANTINGS – COMMERCIAL ZONING DISTRICT (ORN. 11–6–3,B)

EIGHT (8) TREES OR ONE (1) TREE PER 3,000 SF LAND AREA, WHICHEVER IS GREATER. SPACING MUST INCLUDE TREES AT THE BOULEVARD AT 50 FOOT MINIMUM INTERVALS. IN MEETING THE OVERSTORY TREE REQUIREMENTS AT LEAST SEVENTY FIVE PERCENT (75%) OF THE TOTAL STOCK SHALL BE DECIDUOUS TREES. AND ONE (1) FOUNDATION PLANTING PER 10 LINEAR FEET OF BUILDING (PRINCIPAL OR ACCESSORY) PERIMETER.

TREES REQUIRED = 60 (177,366 SF LAND AREA / 3,000)
TREES PROVIDED = 60 (75% DECIDUOUS)

FOUNDATION PLANTINGS REQUIRED = 62 (614 LF TOTAL BUILDING PERIMETER / 10)
FOUNDATION PLANTINGS PROVIDED = 128

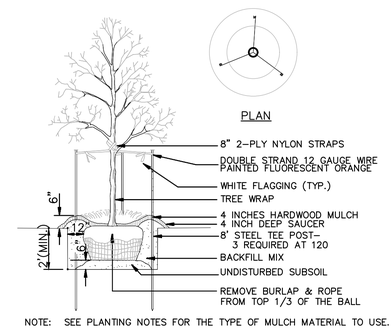


1 C700 OVERALL LANDSCAPE PLAN

0 20 40 80 (IN FEET)

LANDSCAPE PLAN NOTES

1. EXISTING CONDITIONS. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS PRIOR TO BIDDING AND CONSTRUCTION START. ANY DISCREPANCIES FOUND THAT AFFECT THE WORK SHALL BE REPORTED TO THE OWNER/LANDSCAPE ARCHITECT FOR CLARIFICATION PRIOR TO BIDDING OR APPROVING ANY ADDITIONAL WORK REQUIRED.
2. UTILITY LOCATES. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND VERIFYING ALL PUBLIC AND PRIVATE UTILITIES, INCLUDING IRRIGATION LINES, AT LEAST 48 HOURS BEFORE EXCAVATING OR IN ACCORDANCE WITH STATE LAW. IN MINNESOTA, CALL GOPHER STATE ONE–CALL AT 651–454–0002 FOR FIELD LOCATION OF PUBLIC UNDERGROUND UTILITY LINES. ALL LOCATES AND ITEMS NOTED AS 'FIELD VERIFY' ON THE PLANS SHALL BE VERIFIED BY THE CONTRACTOR AT THEIR EXPENSE.
3. PERMITS. CONTRACTOR SHALL VERIFY WITH THE OWNER/LANDSCAPE ARCHITECT THAT THE REQUIRED PERMITS HAVE BEEN OBTAINED PRIOR TO CONSTRUCTION START. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL APPLICABLE CODES, REGULATIONS, AND PERMITS GOVERNING THE WORK.
4. EXISTING ITEMS TO REMAIN. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING PAVEMENT, STRUCTURES, UTILITIES, TREES, SITE AMENITIES, ETC. THAT ARE TO REMAIN FROM DAMAGE DURING CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTING ANY DAMAGE (AT CONTRACTOR'S EXPENSE) TO EXISTING ITEMS TO REMAIN.
5. CONSTRUCTION STAGING AND ACCESS. CONTRACTOR SHALL VERIFY THE LOCATION FOR CONSTRUCTION STAGING AND SITE ACCESS WITH THE OWNER/LANDSCAPE ARCHITECT PRIOR TO CONSTRUCTION START. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING PEDESTRIAN AND VEHICLE ACCESS WITHIN AND ADJACENT TO THE SITE THROUGHOUT THE CONSTRUCTION PERIOD UNLESS OTHERWISE NOTED. LONG–TERM STORAGE OF MATERIALS OR SUPPLIES ON–SITE WILL NOT BE PERMITTED. ALL WASTE AND/OR UNUSED MATERIAL SHALL BE PROMPTLY REMOVED FROM THE SITE.
6. SITE REMOVALS. REFER TO CIVIL PLANS FOR GENERAL SITE REMOVALS. ALL ITEMS NOTED TO BE REMOVED SHALL BE COMPLETED BY THE CONTRACTOR AND IMMEDIATELY DISPOSED OF OFF–SITE, IN ACCORDANCE WITH LOCAL REGULATIONS, UNLESS OTHERWISE NOTED. COORDINATE WITH OWNER/LANDSCAPE ARCHITECT FOR ANY ITEMS NOTED AS 'REMOVED BY OTHERS' OR 'REMOVE AND SALVAGE.'
7. UTILITY COORDINATION. REFER TO CIVIL PLAN SHEETS FOR INFORMATION RELATED TO PROPOSED UTILITIES. COORDINATE WITH ELECTRICAL CONTRACTORS FOR SITE ELECTRICAL WORK AND SITE LIGHTING.
8. CONSTRUCTION STAKING. UNLESS OTHERWISE NOTED, CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING CONTROL POINTS AND ALL CONSTRUCTION FIELD STAKING DURING THE COURSE OF THE PROJECT.
9. DIMENSIONS. DIMENSIONS TAKE PRECEDENCE OVER SCALE. DIMENSIONS ARE TO FACE OF CURB, EDGE OF PAVEMENT/WALKWAY, OR OUTSIDE FACE OF BUILDING UNLESS OTHERWISE NOTED.
10. PLAN QUANTITIES. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL MATERIAL QUANTITIES PER PLAN. MATERIAL SCHEDULES ARE PROVIDED SOLELY FOR CONTRACTOR'S CONVENIENCE.
11. REFERENCE SPECIFICATIONS. THE FOLLOWING SPECIFICATIONS SHALL GOVERN THIS PROJECT ACCORDING TO THE FOLLOWING ORDER:
    1. ADDENDA, WITH THOSE OF A LATER DATE HAVING PRECEDENCE OVER THOSE OF AN EARLIER DATE.
    2. LANDSCAPE SPECIFICATIONS.
    3. PLAN DRAWINGS.
    4. PLANT / MATERIAL SCHEDULES.
    5. CITY STANDARD SPECIFICATIONS AND DETAILS.
    6. MnDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION, LATEST EDITION.



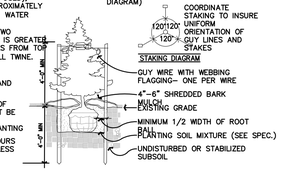
NOTE: SEE PLANTING NOTES FOR THE TYPE OF MULCH MATERIAL TO USE.

A DECIDUOUS TREE PLANTING DETAIL
NOT TO SCALE

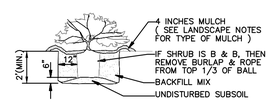
1. SCARIFY BOTTOM AND SIDES OF HOLE PRIOR TO PLANTING
2. TRIM OUT DEAD WOOD AND WEAK AND/OR DEFORMED TWIGS. DO NOT CUT A LEADER. DO NOT PAINT CUTS.
3. SET PLANT ON UNDISTURBED NATIVE SOIL OR THOROUGHLY COMPACTED BACKFILL SOIL. INSTALL PLANT SO THE ROOT FLARE IS AT OR UP TO 2" ABOVE THE FINISHED GRADE.
4. PLACE PLANT IN PLANTING HOLE WITH BURLAP AND WIRE BASKET, (IF USED), INTACT. BACKFILL WITHIN APPROXIMATELY 12" OF THE TOP OF ROOTBALL. WATER PLANT. REMOVE TOP 1/3 OF THE BASKET OR THE TOP TWO HORIZONTAL RINGS, WHICHEVER IS GREATER. REMOVE ALL BURLAP AND NAILS FROM TOP 1/3 OF THE BALL. REMOVE ALL TWINE.
5. PLUMB AND BACKFILL WITH BACKFILL SOIL.
6. WATER TO SETTLE PLANTS AND FILL VOIDS.
7. WATER WITHIN TWO HOURS OF INSTALLATION. WATERING MUST BE SUFFICIENT TO THOROUGHLY SATURATE ROOT BALL AND PLANTING HOLE.
8. PLACE MULCH WITHIN 48 HOURS OF THE SECOND WATERING UNLESS SOIL MOISTURE IS EXCESSIVE.

NOTE: GUY ASSEMBLY OPTIONAL BUT CONTRACTOR ASSUMES FULL RESPONSIBILITY FOR MAINTAINING TREE IN A PLUMB POSITION FOR THE DURATION OF THE GUARANTEE PERIOD

GUY ASSEMBLY– 16" POLYPROPYLENE OR POLYETHYLENE (40 MIL) 1–1/2" WIDE STRAP (TYP.) DOUBLE STRAND 10 GA. WIRE, 2–7' ROLLED STEEL POSTS (MnDOT 3401) @ 180° O.C. (SEE STAKING DIAGRAM)



B CONIFEROUS TREE PLANTING DETAIL
NOT TO SCALE



C SHRUB & CONTAINER PLANTING DETAIL
NOT TO SCALE

CALL BEFORE YOU DIG

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

Name: Ryan J. Ruttger, RLA
Signature:
Date: 07/16/24 License #: 56346

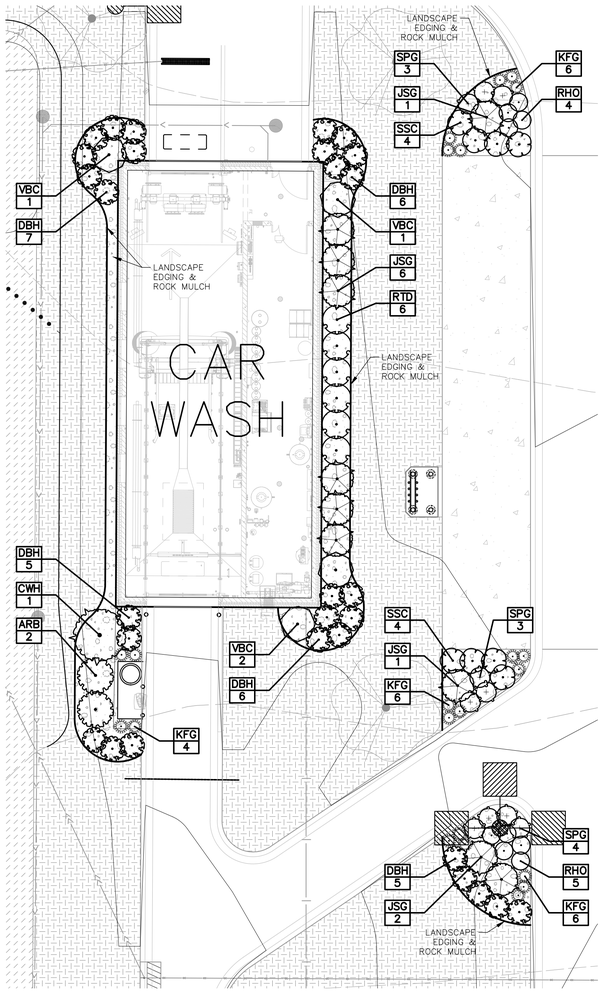
LANDSCAPE PLAN

CONVENIENCE STORE #1757 WITH 1-BAY DETACHED CARWASH

145TH ST W & AKRON AVENUE
ROSEMOUNT, MINNESOTA

#	DATE	DESCRIPTION

DRAWN BY	RJR
SCALE	GRAPHIC
PROJ. NO.	11004-00
DATE	2024-07-16
SHEET	1757 C700



1 LANDSCAPE PLAN ENLARGEMENT
C701

PLANT SCHEDULE

SYMBOL	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER
TREES						
	RM	7	Acer rubrum `Northwood`	Northwood Red Maple	2.5" Cal.	B&B
	FM	4	Acer x freemanii `Sienna`	Sienna Glen Maple	2.5" Cal.	B&B
	RB	3	Betula nigra Clump Form, 2.5" Cal Equivalent	River Birch Multi-Trunk	10` Ht.	B&B
	HL	2	Gleditsia triacanthos inermis `Harve`	Northern Acclaim Thornless Honey Locust	2.5" Cal.	B&B
	WO	7	Quercus bicolor	Swamp White Oak	2.5" Cal.	B&B
	BL	7	Tilia americana `Boulevard`	Boulevard Linden	2.5" Cal.	B&B
CONIFEROUS TREES						
	BF	4	Abies balsamea	Balsam Fir	6` Ht.	B&B
	BH	5	Picea glauca densata	Black Hills Spruce	6` Ht.	B&B
	WP	6	Pinus strobus	White Pine	6` Ht.	B&B
ORNAMENTAL TREES						
	SB	3	Amelanchier x grandiflora `Autumn Brilliance` Clump Form, 1.5" Cal Equivalent	Autumn Brilliance Serviceberry	7` Ht.	B&B
	CA	6	Malus x `Prairifire`	Prairifire Crabapple	1.5" Cal.	B&B
	JL	6	Syringa reticulata `Ivory Silk` White Flowers	Ivory Silk Japanese Tree Lilac	1.5" Cal.	B&B

SYMBOL	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER
SHRUBS						
	SSC	8	Clethra alnifolia `Hummingbird`	Summersweet	#5 Cont.	
	RTD	8	Cornus sericea `Alleman`s Compact`	Dwarf Red Twig Dogwood	#5 Cont.	
	DBH	44	Diervilla lonicera	Dwarf Bush Honeysuckle	#5 Cont.	
	CWH	2	Hamamelis virginiana	Common Witch Hazel	#5 Cont.	
	NBS	8	Physocarpus opulifolius `Seward` TM	Summer Wine Seward Ninebark	#5 Cont.	
	RHO	9	Rhododendron x `P.J.M.`	PJM Rhododendron	#5 Cont.	
	SPG	18	Spiraea x bumalda `Goldflame`	Goldflame Spirea	#5 Cont.	
	MKL	3	Syringa patula `Miss Kim`	Miss Kim Lilac	#5 Cont.	
	VBC	6	Viburnum trilobum `Bailey Compact`	Bailey`s Compact American Cranberry Bush	#5 Cont.	
EVERGREEN SHRUBS						
	JSG	14	Juniperus chinensis `Sea Green`	Sea Green Juniper	#5 Cont.	
	ARB	8	Thuja occidentalis `BailJohn`	Technito Arborvitae	6` Ht.	B&B
GRASSES						
	KFG	43	Calamagrostis x acutiflora `Karl Foerster`	Feather Reed Grass	#3 Cont.	
PERENNIALS						
	DLB	28	Hemerocallis x `Baja` Red Flowers	Baja Daylily	#1 Cont.	
GROUND COVERS						
	ROCK	2,027 sf	Rock Mulch Non-Woven Geotextile Incidental	1.5" Trap Rock Mulch	4" Depth	
	SOD	31,092 sf	Turf Sod Bluegrass	Kentucky Bluegrass	sod	
	TI	54,934 sf	Type I - Native Seed Mix Refer to notes for acceptable seeding methods. Seeding Rate 50.0 lb/ac	MnDOT Seed Mix 35-241	seed	

LANDSCAPE SPECIFICATIONS

1. TREE PROTECTION. ALL TREES NOT SPECIFICALLY NOTED OR MARKED ON SITE FOR REMOVAL SHALL REMAIN PROTECTED AND UNDISTURBED DURING CONSTRUCTION. TREE PROTECTION SHALL EXTEND TO THE DRIP LINE, WITHIN WHICH NO CONSTRUCTION ACTIVITY, MATERIAL STORAGE, OR VEHICLE PARKING SHALL BE PERMITTED. TREE PROTECTION FENCING SHALL BE ERECTED PRIOR TO CONSTRUCTION START PER PLANS OR AS DIRECTED BY OWNER/LANDSCAPE ARCHITECT AND SHALL CONSIST OF 4' TALL HEAVY DUTY ORANGE CONSTRUCTION FENCING WITH 6' STEEL FENCE POSTS SPACED 6' O.C. MAX.

2. EROSION CONTROL. REFER TO CIVIL PLAN SHEETS FOR STORMWATER POLLUTION PREVENTION PLAN (SWPPP), AND TEMPORARY AND PERMANENT STORMWATER BMPS, INCLUDING SILT FENCE, BIO-ROLLS, INLET PROTECTION, EROSION CONTROL BLANKETING, DUST CONTROL, SWEEPING AND ROCK CONSTRUCTION ENTRANCE. ALL DISTURBED AREAS SHALL RECEIVE PERMANENT STABILIZATION IN ACCORDANCE WITH THE LANDSCAPE PLAN WITHIN 7 DAYS AFTER CONSTRUCTION ACTIVITY IN THE DISTURBED AREA HAS CEASED. IN THE EVENT PERMANENT STABILIZATION CANNOT BE IMPLEMENTED WITHIN 7 DAYS, TEMPORARY STABILIZATION BMPS MUST BE IMPLEMENTED WITHIN 7 DAYS USING.

3. CLEARING AND GRUBBING. CONTRACTOR SHALL BE RESPONSIBLE FOR CLEARING AND GRUBBING ALL AREAS INDICATED AS BEING DISTURBED OR OTHERWISE SHOWN ON PLANS. CLEARING AND GRUBBING SHALL INCLUDE REMOVAL AND DISPOSAL OF ALL TREES, STUMPS, BRUSH, GRASS, ROOTS AND OTHER ORGANIC MATERIAL AT AN APPROVED OFF-SITE DISPOSAL LOCATION.

4. SOIL PREPARATION. REFER TO GEOTECHNICAL REPORT FOR ANY REQUIRED SOIL CORRECTIONS, AMENDMENTS OR ADDITIONAL INFORMATION (IF APPLICABLE). EXISTING TOPSOIL SHALL BE STRIPPED FROM ALL DISTURBED AREAS AND STOCKPILED IN AN APPROVED LOCATION FOR RE-SPREAD. ALL AREAS WHERE SOIL HAS BEEN COMPACTED BY CONSTRUCTION ACTIVITY AND THAT ARE INDICATED TO BE SODDED, SEEDED OR PLANTING BED SHALL BE DE-COMPACTED TO A MINIMUM DEPTH OF 12 INCHES BY SOIL RIPPING, TILLING OR OTHER APPROVED SOIL LOOSENING METHOD.

5. TOPSOIL MATERIAL. ALL EXISTING, AMENDED OR IMPORTED TOPSOIL SHALL MEET THE REQUIREMENTS OF MNDOT TOPSOIL TYPE A. A MINIMUM 4 INCH DEPTH OF TOPSOIL SHALL BE PLACED ON ALL AREAS TO BE SODDED OR SEEDED. A MINIMUM 12 INCH DEPTH OF TOPSOIL SHALL BE PLACED WITHIN ALL PLANTING BED AREAS. ALL TOPSOIL SHALL BE FINE GRADED, RAKED AND DRAGGED TO PROVIDE A SMOOTH, UNIFORM SURFACE. TOPSOIL GRADES SHALL BE WITHIN .1 FEET OF INDICATED FINISHED GRADE AND SHALL BE TRUE TO GRADIENTS SHOWN ON PLANS. REFER TO CIVIL PLAN SHEETS FOR FILTRATION BASIN SOIL REQUIREMENTS.

6. SEEDING AND TURF ESTABLISHMENT. CONTRACTOR SHALL OBTAIN OWNER/LANDSCAPE ARCHITECT'S APPROVAL OF FINAL GRADES AND TOPSOIL PREP PRIOR TO SEEDING. APPLY 12-12-12 GRANULAR STARTER FERTILIZER AT A RATE OF 250 LBS PER ACRE PRIOR TO SEEDING.. SEEDS SHALL BE SOWED IN 2 PERPENDICULAR PASSES, EACH PASS AT ONE-HALF THE INDICATED RATE, VIA BROADCAST SPREADER, DROP SEEDER OR DRILL SEEDER. FOLLOWING SEED APPLICATION, INSTALL TYPE 3N EROSION CONTROL BLANKET ON ALL SLOPES GREATER THAN 4:1. IN ALL OTHER AREAS, APPLY HYDROMULCH COVER (MUST BE A SEPARATE OPERATION FROM SEEDING) AT A TARGETED DRY WEIGHT RATE OF 3500 LBS PER ACRE. SOIL SHALL BE KEPT MOIST DURING ESTABLISHMENT WITH ADDITIONAL RE-SEEDING AS NECESSARY TO ACHIEVE A HEALTHY, UNIFORM STAND OF GRASS, FREE OF WEEDS AND WITH COVERAGE EXCEEDING 75% IN ANY 10'x10' AREA PRIOR TO FINAL ACCEPTANCE.

7. SODDING. CONTRACTOR SHALL OBTAIN OWNER/LANDSCAPE ARCHITECT'S APPROVAL OF FINAL GRADES AND TOPSOIL PREP PRIOR TO SODDING. APPLY 12-12-12 GRANULAR STARTER FERTILIZER AT A RATE OF 250 LBS PER ACRE PRIOR TO SODDING AND ROLL TOPSOIL TO CREATE A UNIFORM SURFACE FOR LAYING SOD. SOD SHALL NOT BE CUT MORE THAN 24-HOURS IN ADVANCE OF INSTALLATION. CONTRACTOR SHALL KEEP SOD MOIST FOR A MINIMUM OF 30 DAYS AND SHALL BE RESPONSIBLE FOR MAINTAINING THE SOD UNTIL FINAL ACCEPTANCE.

8. PLANT MATERIAL. ALL PLANTING STOCK SHALL CONFORM TO THE "AMERICAN STANDARD FOR NURSERY STOCK," ANSI-Z60, LATEST EDITION, OF THE AMERICAN ASSOCIATION OF NURSERYMEN, INC. AND SHALL CONSTITUTE MINIMUM QUALITY REQUIREMENTS FOR PLANT MATERIAL. OWNER/LANDSCAPE ARCHITECT RESERVE THE RIGHT TO REJECT ANY PLANTS WHICH ARE DEEMED UNSATISFACTORY BEFORE, DURING, OR AFTER INSTALLATION. NO SUBSTITUTION OF PLANT MATERIAL SHALL BE ACCEPTED UNLESS APPROVED IN WRITING BY THE OWNER/LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.

9. PLANT MATERIAL SUBSTITUTIONS. ALL REQUESTS FOR PLANT SUBSTITUTIONS SHALL BE MADE IN WRITING TO THE OWNER/LANDSCAPE ARCHITECT AND MUST BE APPROVED BY THE CITY.

10. PLANT INSTALLATION AND ESTABLISHMENT. REFER TO STANDARD PLANTING DETAILS. CONTRACTOR SHALL STAKE TREE LOCATIONS FOR APPROVAL BY OWNER/LANDSCAPE ARCHITECT PRIOR TO PLANTING. ANY PLANT MATERIAL WHICH DIES, TURNS BROWN, OR DEFOLIATES (PRIOR TO TOTAL ACCEPTANCE OF THE WORK) SHALL BE PROMPTLY REMOVED FROM THE SITE AND REPLACED WITH MATERIAL OF THE SAME SPECIES, QUANTITY, AND SIZE.

11. MULCH MATERIAL. DOUBLE SHREDDED HARDWOOD MULCH OR ROCK MULCH AS INDICATED ON PLANS. ALL MULCH SHALL BE CLEAN AND FREE OF NOXIOUS WEEDS, SOIL, OR OTHER DELETERIOUS MATERIAL, AND SHALL BE INSTALLED OVER A NON-WOVEN GEOTEXTILE FABRIC (INCIDENTAL) OR OTHER APPROVED WEED BARRIER TO A MINIMUM SETTLED DEPTH OF 4". MULCH SHALL BE HELD BACK FROM PLANT STEMS/TRUNKS A MINIMUM OF 3". WOOD MULCH SHALL BE PLACED AROUND INDIVIDUAL TREES TO A 4' MINIMUM DIAMETER. MULCH SHALL BE INSTALLED WITHIN 48-HOURS OF PLANT INSTALLATION.

12. LANDSCAPE EDGING. INSTALL LANDSCAPE EDGING BETWEEN ALL MULCH AREAS AND TURF. EDGING SHALL BE COMMERCIAL GRADE BLACK POLYETHYLENE OR VINYL EDGING, 0.1 INCH THICK BY 5 INCHES DEEP, V-LIPPED BOTTOM, HORIZONTALLY GROOVED, 1-INCH ROUND TOP, EXTRUDED IN STANDARD LENGTHS, WITH 9-INCH STEEL ANGLE STAKES.

13. IRRIGATION. DESIGN, FURNISH AND INSTALL A COMPLETE UNDERGROUND IRRIGATION SYSTEM FROM APPROVED POINT(S)-OF-CONNECTION WITHIN THE SITE COVERING ALL TURF AND PLANTING AREAS AS SHOWN ON THE LANDSCAPE PLAN. INCLUDES FLOW/PRESSURE TESTING, PLANS WITH DESIGN CALCULATIONS, AS-BUILT DRAWINGS, LABOR, MATERIALS, EQUIPMENT, AND SERVICES FOR THE TESTING, ADJUSTING, RETESTING AND READJUSTING AS REQUIRED TO PLACE THE SYSTEM IN AN APPROVED OPERATING CONDITION. THE IRRIGATION SYSTEM SHALL INCLUDE THE DESIGN AND INSTALLATION OF THE FOLLOWING: PIPING, METER AND BACKFLOW ASSEMBLIES, SPRINKLER HEADS, CABINETS, VALVES AND VALVE BOXES, CONTROLLERS, CONTROL WIRING, FITTINGS, ELECTRICAL CONNECTIONS, QUICK-COUPLERS, ALL OTHER NECESSARY ACCESSORIES, SYSTEM MANUALS, 1-YEAR MAINTENANCE PERIOD INCLUDING 1 FALL WINTERIZATION AND 1 SPRING START-UP. IRRIGATION PLANS TO BE PREPARED BY A QUALIFIED IRRIGATION DESIGNER AND SUBMITTED TO OWNER/LANDSCAPE ARCHITECT FOR APPROVAL.

14. MAINTENANCE. MAINTENANCE SHALL BEGIN IMMEDIATELY AFTER EACH PORTION OF THE WORK IS IN PLACE. PLANT MATERIAL SHALL BE PROTECTED AND MAINTAINED UNTIL THE INSTALLATION OF THE PLANTS IS COMPLETE, INSPECTION HAS BEEN MADE, AND PLANTINGS ARE ACCEPTED EXCLUSIVE OF THE GUARANTEE. MAINTENANCE SHALL INCLUDE MOWING, TRIMMING, WATERING, FERTILIZING, WEED AND PESTICIDE CONTROL, MULCHING, REMOVAL OF DEAD MATERIALS, RE-SETTING PLANTS TO PROPER GRADE AND KEEPING PLANTS IN A PLUMB POSITION. AFTER ACCEPTANCE, THE OWNER SHALL ASSUME MAINTENANCE RESPONSIBILITIES. HOWEVER, THE CONTRACTOR SHALL RETAIN RESPONSIBILITY FOR ALL PLANT MATERIAL THROUGH THE COMPLETION OF THE WARRANTY PERIOD.

15. WATERING. UPON ESTABLISHMENT OF SEED AND INSTALLATION OF PLANTS, CONTRACTOR SHALL MAINTAIN A WATERING SCHEDULE WHICH WILL THOROUGHLY WATER ALL PLANTS AND TURF AREAS A MINIMUM OF ONCE A WEEK. MORE FREQUENT WATERING MAY BE REQUIRED DURING PERIODS OF HOT, DRY WEATHER. CONTRACTOR SHALL MAKE THE NECESSARY ARRANGEMENTS FOR WATER. IN THE ABSENCE OF PERMANENT IRRIGATION, TEMPORARY IRRIGATION, TREE WATERING BAGS, OR HAND-WATERING ARE ACCEPTABLE.

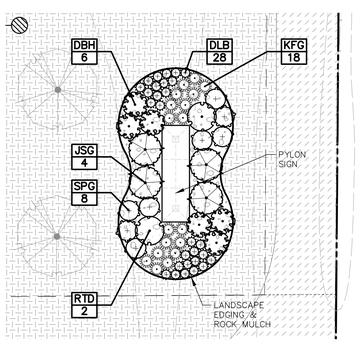
16. NATIVE PLANT ESTABLISHMENT. THIS PROJECT INCLUDES ONE OR MORE NATIVE PLANT SEED MIXES CONSISTING OF A VARIETY OF GRASSES, SEDGES AND FLOWERING FORBS. BECAUSE THESE PLANTS TYPICALLY HAVE A LONGER GERMINATION PERIOD, A COVER CROP SPECIES IS REQUIRED TO PROVIDE TEMPORARY COVER AND STABILIZATION. MAINTENANCE OF THESE SEEDED AREAS IS CRITICAL DURING THE FIRST SEVERAL YEARS TO ESTABLISH A SUCCESSFUL NATIVE PLANT COMMUNITY. SEEDED AREAS SHALL BE MOWED / WEED-WHIPPED TO A HEIGHT OF 6-10 INCHES IN MID-JULY AND EARLY SEPTEMBER DURING THE FIRST 2-3 YEARS OF ESTABLISHMENT. IN ADDITION, ALL NON-NATIVE SPECIES / WEEDS SHALL BE SPOT SPRAYED NO LESS THAN 3 TIMES A YEAR WITH HERBICIDE BY A LICENSED APPLICATOR. RE-SEEDING AS NECESSARY SHALL OCCUR IN MAY. A NATIVE PLANT COMMUNITY SHALL BE CONSIDERED SUCCESSFULLY ESTABLISHED NO SOONER THAT 3 YEARS AFTER INITIAL SEEDING - ONCE THE COVER CROP HAS BEEN SUFFICIENTLY REPLACED BY NATIVE PLANTS AND THE AREA IS FREE OF ALL NON-NATIVE AND INVASIVE SPECIES. AT THIS TIME, MAINTENANCE CAN BE REDUCED TO MOWING / WEED-WHIPPING TO A HEIGHT OF 6-10 INCHES ONCE A YEAR IN EARLY SEPTEMBER AND SPOT SPRAYING OF HERBACIDE ONLY AS NEEDED. REFER TO MNDOT SEEDING MANUAL FOR ADDITIONAL INFORMATION ON PLANTING, ESTABLISHING AND MAINTAINING NATIVE SEED MIXES.

17. FINAL ACCEPTANCE. UPON SUBSTANTIAL COMPLETION OF THE WORK, CONTRACTOR SHALL REQUEST FINAL ACCEPTANCE OF THE WORK IN WRITING BY THE OWNER/LANDSCAPE ARCHITECT. IF ANY WORK IS FOUND TO BE INCOMPLETE OR UNSATISFACTORY IN THE OPINION OF THE OWNER/LANDSCAPE ARCHITECT, A WRITTEN PUNCH LIST WILL BE PREPARED LISTING ALL ITEMS THAT REQUIRE COMPLETING OR CORRECTING BEFORE FINAL ACCEPTANCE.

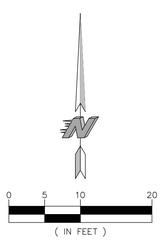
18. WARRANTY. ALL PLANTS, MATERIALS AND WORKMANSHIP SHALL BE GUARANTEED FOR TWO (2) YEARS FROM THE DATE OF FINAL ACCEPTANCE, UNLESS OTHERWISE SPECIFIED. THE GUARANTEE SHALL COVER THE FULL COST OF REPLACEMENT INCLUDING LABOR AND MATERIAL.

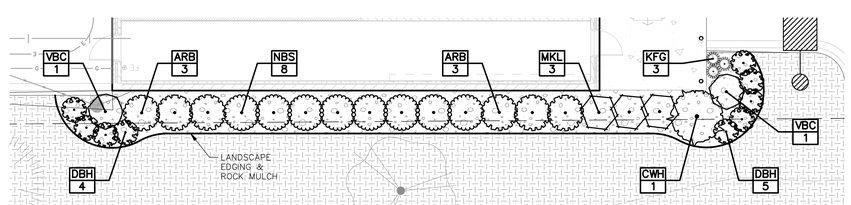
LANDSCAPE QUANTITIES

±450 LF POLY EDGING - BLACK



2 MONUMENT SIGN
C701





3 LANDSCAPE PLAN ENLARGEMENT
C701

KWIK TRIP

KWIK STAR

KWIK TRIP, Inc.
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3890 PHEASANT RIDGE DRIVE NE, SUITE 100, BLAINE, MN 55449
TEL 763.489-7900 \ FAX 763.489.7959 \ CARLSONMCCAIN.COM

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

Name: Ryan J. Ruttger, RLA
Signature:
Date: 07/16/24 License #: 56346

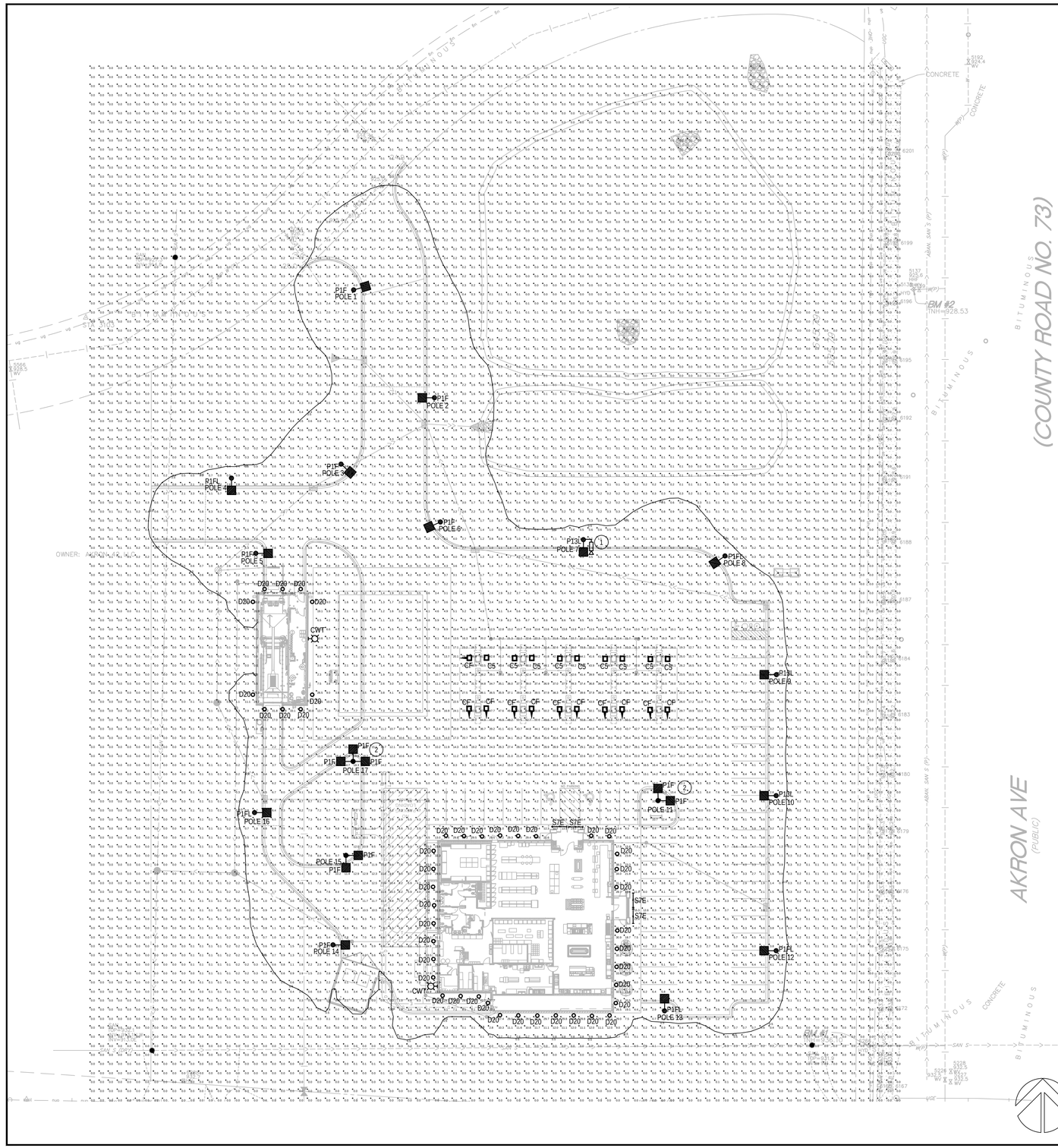
LANDSCAPE PLAN

CONVENIENCE STORE #1757
WITH 1-BAY DETACHED CARWASH

145TH ST W & AKRON AVENUE
ROSEMOUNT, MINNESOTA

#	DATE	DESCRIPTION

DRAWN BY	RJR
SCALE	GRAPHIC
PROJ. NO.	11004-00
DATE	2024-07-16
SHEET	1757 C701



CALCULATION STATISTICS

OVERALL SITE:
AVERAGE: 3.1
MAXIMUM: 54.8
MINIMUM: 0.0

FIXTURE QUANTITIES

D20 - 45
S7E - 4
CF - 11
C5 - 9
CWT - 2
P13L - 3
P1F - 13
P1FL - 5

PROVIDE (17) 16' POLES.

GENERAL NOTES:

1. FOOTCANDLE LEVELS SHOWN ON THIS PLAN ARE CALCULATED AT GRADE LEVEL.
2. ALL POLES SHALL BE INSTALLED A MINIMUM OF 3'-0" FROM BACK OF CURB TO EDGE OF POLE BASE UNLESS NOTED.
3. POLE THAT ARE LOCATED AT CORNER OF ISLAND SHALL BE A MINIMUM OF 6'-0" FROM BACK OF CURB TO EDGE OF POLE BASE. POLES THAT MUST BE INSTALLED LESS THAN 6'-0" FROM BACK OF CURB TO EDGE OF POLE BASE SHALL HAVE PROTECTIVE BOLLARDS INSTALLED AROUND THE POLE BASE. COORDINATE WITH KWIK TRIP PRIOR TO INSTALLATION.

KEYED NOTES:

1. COORDINATE LOCATION AND MOUNTING HEIGHT OF SECURITY CAMERA WITH OWNER.
2. CONTRACTOR SHALL POLE MOUNT FIXTURE 6'-0" FROM BACK OF CURB TO EDGE OF POLE BASE.

FIXTURE TYPES:

D20 - RECESSED LED DOWNLIGHT
GOTHAM EVO-35/30-8AR-WD-120-TRW

S7E - LED STRIP LIGHT MOUNTED IN GABLE LITHONIA
TZL1N-L96-10000LM-FST-MVOLT

CF - LSI LIGHTING: SCV-LED-23L-SCFT-UNV-DIM-50-WHT MOUNTED UNDER GAS CANOPY MOUNT FIXTURES WITH FORWARD THROW OPTIC AIMING IN DIRECTION OF ARROW.

C5 - LSI LIGHTING: SCV-LED-15L-SC-UNV-DIM-50-WHT MOUNTED UNDER GAS CANOPY

CWT - LED WALL PACK LSI LIGHTING: XPWS3-FT-LED-48-350-CW-UE-BLK
FOOTCANDLES CALCULATED AT MOUNTING HEIGHT OF 8'-6" AFG.

P13L- LSI LIGHTING: MRS-LED-18L-SIL-3-UNV-50-70CRI-WHT-IL

P1F- LSI LIGHTING: MRS-LED-18L-SIL-FT-UNV-50-70CRI-WHT

P1FL- LSI LIGHTING: MRS-LED-18L-SIL-FT-UNV-50-70CRI-WHT-IL

FIXTURE SYMBOLS:

LED LIGHT MOUNTED UNDER FUEL CANOPIES

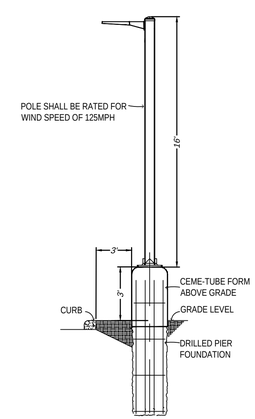
LED STRIP LIGHT MOUNTED IN GABLE

RECESSED LED DOWNLIGHT

WALL MOUNTED LED FIXTURE

POLE MOUNTED LED FIXTURE

CAMERA



LOT LIGHT ELEVATION DETAIL

NOT TO SCALE

PHOTOMETRIC SITE PLAN

SCALE: 1" = 30'-0"

2024-0195.18

GRAEF
275 West Wisconsin Avenue, Suite 300
Milwaukee, WI 53203
414 / 259 1500
414 / 259 0037 fax

KWIK TRIP

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3890 PHEASANT RIDGE DRIVE NE, SUITE 100, BLAINE, MN 55449
TEL 763.489-7900 \ FAX 763.489.7959 \ CARLSONMCCAIN.COM

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.

Name: Daniel Brand

Signature:

Date: 06/28/23 License #: 58388

PRELIMINARY

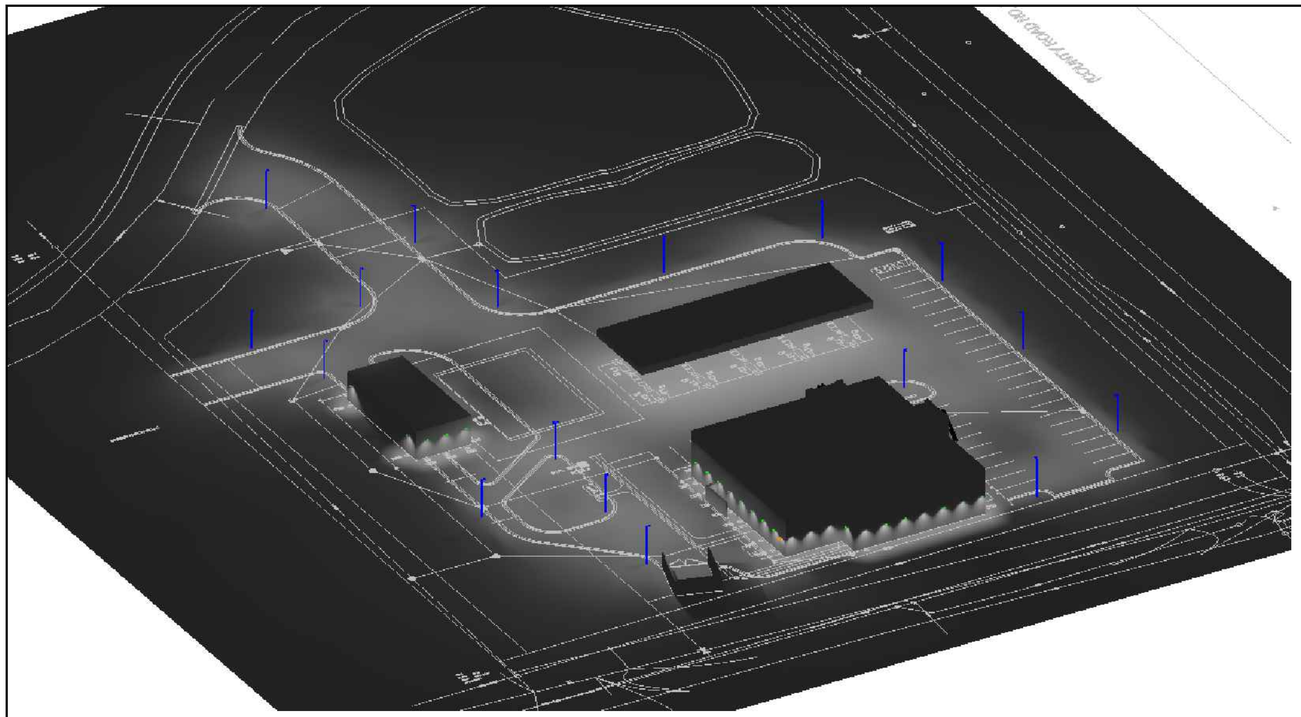
PHOTOMETRIC SITE PLAN

CONVENIENCE STORE #1757 WITH 1-BAY DETACHED CARWASH

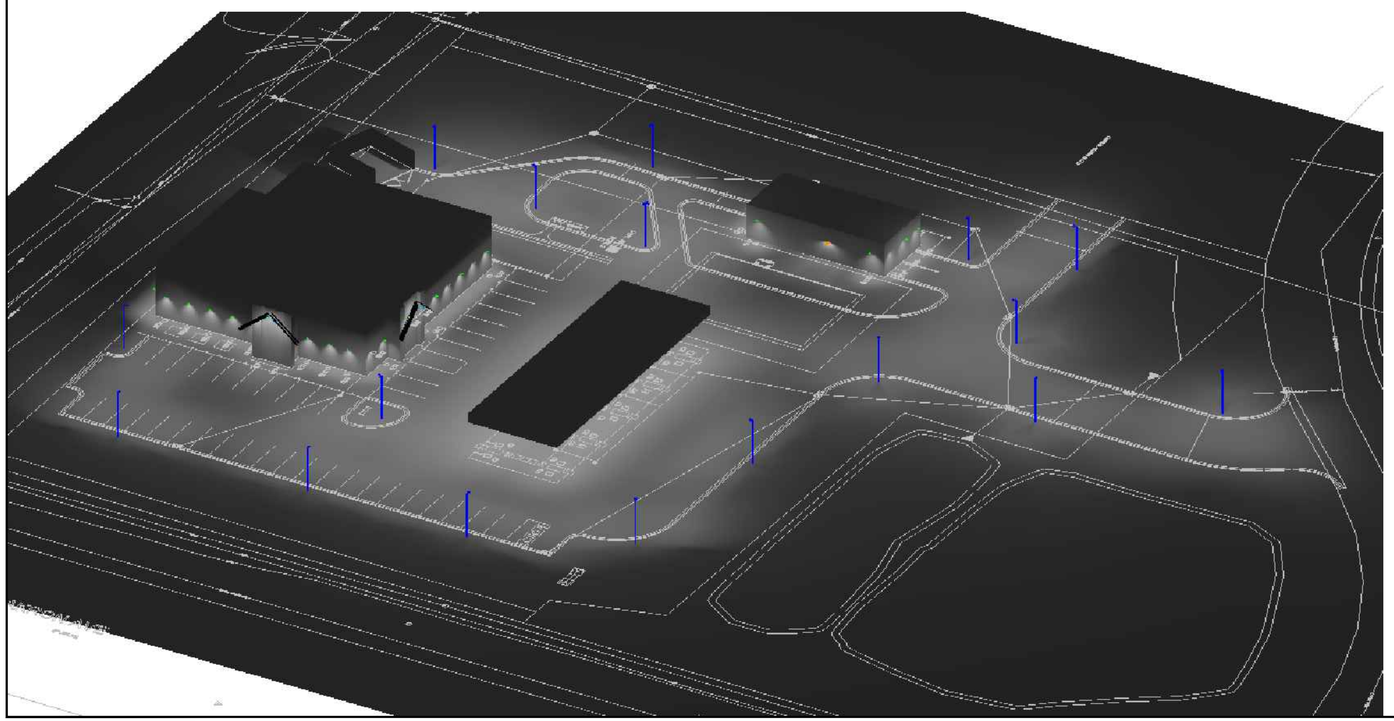
145TH STREET W & AKRON AVENUE
ROSEMOUNT, MINNESOTA

#	DATE	DESCRIPTION

DRAWN BY	BDB
SCALE	GRAPHIC
PROJ. NO.	11004-00
DATE	2023-08-28
SHEET	C800



PHOTOMETRIC RENDERING PLAN
NOT TO SCALE



PHOTOMETRIC RENDERING PLAN
NOT TO SCALE

2024-0195.18

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Milwaukee, WI 53203
414 / 259 1500
414 / 259 0037 fax

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TEL 763.489-7900 \ FAX 763.489.7959 \ CARLSONMCCAIN.COM

Name: _____
Signature: _____ License #: _____
PRELIMINARY

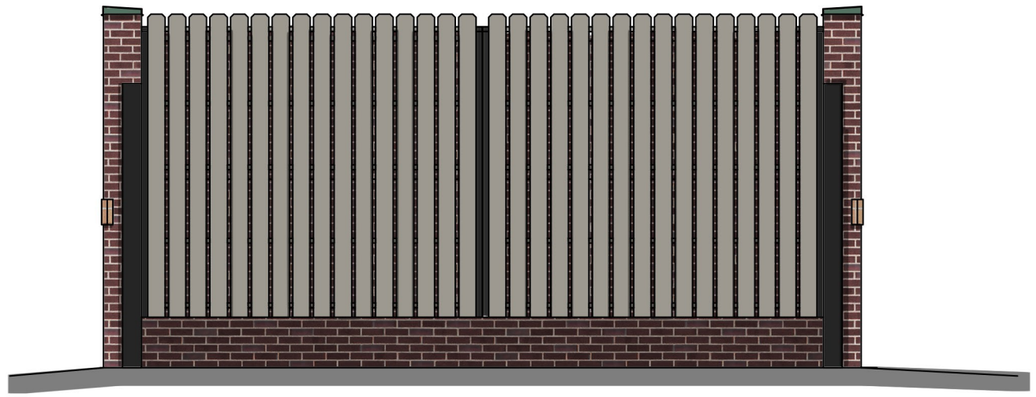
PHOTOMETRIC RENDERING PLANS

CONVENIENCE STORE #1757
WITH 1-BAY DETACHED CARWASH

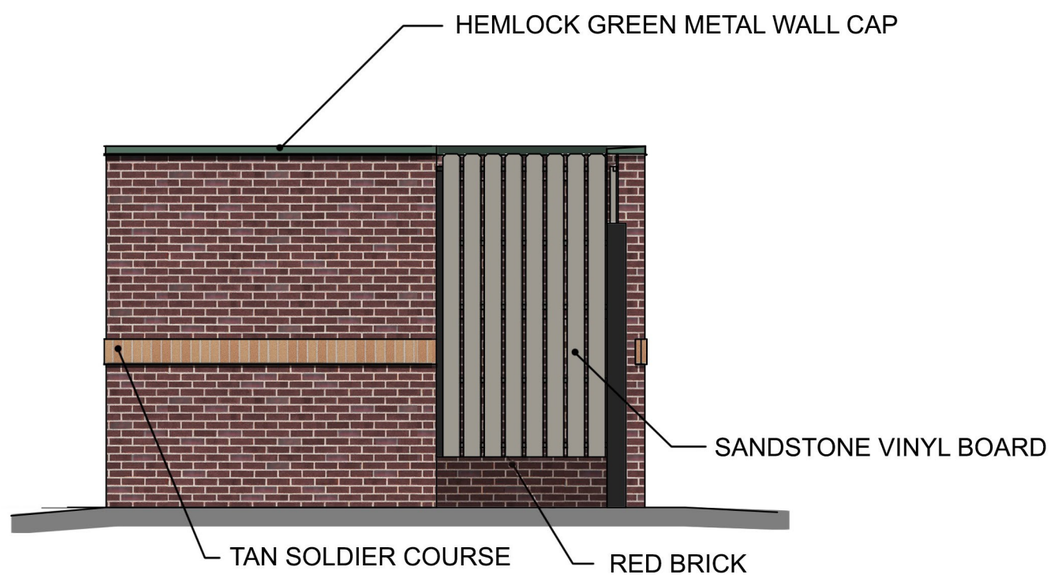
C145TH STREET W & AKRON AVENUE
ROSEMOUNT, MINNESOTA

#	DATE	DESCRIPTION

DRAWN BY	DLC
SCALE	GRAPHIC
PROJ. NO.	11004-00
DATE	2023-08-28
SHEET	C801



TRASH ENCLOSURE - FRONT ELEVATION



TRASH ENCLOSURE - SIDE ELEVATION

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LA CROSSE, WI 54602-2107
PH. (608) 781-8988
FAX (608) 781-8960

FRONT LEFT VIEW

FRONT RIGHT VIEW

REAR RIGHT VIEW

REAR LEFT VIEW

FRONT ELEVATION

KWIK TRIP

KWIK STAR

KWIK TRIP, Inc.
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LA CROSSE, WI 54602-2107
PH. (608) 781-8988
FAX (608) 781-8960

EXTERIOR ELEVATIONS
LEFT HAND GEN 3

ENTER LEFT VIEW

EXIT RIGHT VIEW

ENTER RIGHT VIEW

EXIT LEFT VIEW

FRONT ELEVATION

KWIK TRIP

KWIK STAR

KWIK TRIP, Inc.
P.O. BOX 2107
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LA CROSSE, WI 54602-2107
PH. (608) 781-8988
FAX (608) 781-8960

EXTERIOR ELEVATIONS
DETACHED LEFT HAND CARWASH

Memorandum

To: Brian Erickson, City Engineer
Nick Egger, Director of Public Works

From: Amanda Sachi, PE
Laura Pietila, PE
Kris Keller, PE

Date: August 20, 2024

Re: Kwik Trip – Store 1757
Engineering Review
WSB Project No. 026374-000

We reviewed the documents provided by Carlson McCain on August 6, 2024. Documents reviewed include:

- Kwik Trip – Store 1757 - Site Plans – prepared by Carlson McCain, dated 7/16/24

Additional redline comments are provided on the submitted civil plans. Applicant should provide responses to each comment and redline comment. We offer the following comments below.

Engineering Review:

1. General
    a. The project consists of the construction of an approximately 9,000 sf convenience store together with a carwash and parking area with stormwater management facilities on a 4.80-acre site on Lot 1 Block 2 from Prestwick Place 24th Addition.
    b. The site is located north of CSAH 42/145th Street and west of Akron Avenue.

2. Existing Conditions/Site Demolition Plan
    a. Verify with Public Works whether the existing service serving Lot 1 Block 2 would need to be removed or abandoned.

3. Site Plan
    a. Compare plans and coordinate grading with O2B childcare site to the west
        i. Provide access easements and agreements
    b. Install commercial apron or valley gutter at entrance utilizing current City Standard Detail Plates
    c. Verify with Planning whether sidewalk/pedestrian access to a trail at the limits of the development will be required

4. Grading and Drainage Plan
    a. Provide EOFs of all low points in the paved and greenspace areas
    b. Coordinate grading with adjacent proposed O2B Childcare site to the west
        i. Discrepancies exist between proposed grades along the shared property line

701 XENIA AVENUE S | SUITE 300 | MINNEAPOLIS, MN | 55416 | 763.541.4800 | WSBENG.COM

c. Any grading on adjacent property will require the approval and permission of the adjacent property owner.

5. Utility Plans
    a. Fire Official to review fire coverage and hydrant spacing
        i. Additional hydrant(s) on site may be required
    b. Provide top and bottom of pipe elevations at utility crossings
        i. Maintain minimum 18" separation between water and sewer
        ii. Insulate if separation between storm sewer and water is less than 36"
    c. Consider making connection to existing 12" DIP watermain
        i. Coordinate with City Public Works whether it will be necessary to remove or abandon service if unused

6. Erosion and Sediment Control Plans
    a. No comments.

7. Details & Specifications
    a. Utilize current City Standard Detail Plates
    b. Provide City detail for commercial entrance or valley gutter

8. Landscape Plan
    a. No comments.

ROSEMOUNT
PARKS AND RECREATION

M E M O R A N D U M

To: Adam Kienberger, Community Development Director
Anthony Nemcek, Senior Planner
Julia Hogan, Planner

From: Dan Schultz, Parks and Recreation Director

Date: August 13, 2024

Subject: Kwik Trip Project

The Parks and Recreation Department recently reviewed the plans for the Kwik Trip project. After reviewing the plans, the Parks and Recreation Department staff has the following comments:

Parks Dedication
The parks dedication requirement for a commercial development is either a 10% of the total property area as land dedication, a cash dedication in-lieu of land or combination of the two.

Staff is recommending that the City collect cash in-lieu of land for the development that is currently being processed. The cash dedication for the 4.79-acre development $43,110.00 (.479 acres x $90,000 per acre). This amount is to be paid when the building permit is issued.

Please let me know if you have any questions about this memo.

ROSEMOUNT MINNESOTA

EXECUTIVE SUMMARY

Planning Commission Regular Meeting: August 27, 2024
Tenative City Council Meeting:

AGENDA ITEM:	Request by David Weekley Homes for a Variance from the Rear Yard Setback Requirement for Principal Structures in the R-1 PUD - Low Density Traditional Residential Planned Unit Development Zoning District.	**AGENDA SECTION:** PUBLIC HEARINGS
PREPARED BY:	Julia Hogan, Planner	**AGENDA NO.** 6.c.
ATTACHMENTS:	Resolution, Site Location, Site Plan, Applicant's Narrative	**APPROVED BY:** AK
RECOMMENDED ACTION: Motion by the Planning Commission acting as the Board of Appeals and Adjustments to adopt a resolution approving a variance from the R-1 PUD – Low Density Traditional Residential Planned Unit Development rear yard setback standard for principal structures from twenty (20) feet to sixteen (16) feet at 15035 Ardgillan Road.		

BACKGROUND

SUMMARY

Applicant and Owner:	David Weekley Homes
Location:	15035 Ardgillan Road
Area in Acres:	4,006 Square Feet
Comp. Guide Plan Designation:	MUR - Mixed Use Residential
Current Zoning:	R-1 PUD - Low Density Traditional Residential Planned Unit Development District

The Planning Commission, acting as the Board of Appeals and Adjustments, is being asked to consider an application from David Weekley Homes for a variance from the minimum rear yard setback requirement for principal structures in order to facilitate the construction of a new home at 15035 Ardgillan Road in the R-1 PUD – Low Density Traditional Residential Planned Unit Development zoning district. The applicant is requesting a variance that would reduce the minimum rear yard setback for principal structures from 20 feet to 16 feet. Staff recommends that the Planning Commission acting as the Board of Appeals and Adjustments approve the variance request.

BACKGROUND

The subject property is located between Ardgillan Road and 151st Street West within the Amber Fields 10th Addition subdivision. The Amber Fields 10th Addition is part of the Amber Fields 5th Addition preliminary plat area which was approved by City Council in July 2022 and consisted of 124 single-

family lots. Also approved with the preliminary plat for the 5th addition was a final plat and a minor amendment to the Amber Fields Planned Unit Development Agreement. Requested deviations from the zoning code with that amendment include:

- A deviation to reduce the minimum lot area to 3,435 square feet and 4,590 square feet for corner lots.
- A deviation to reduce the minimum lot width to 38.17 feet and 51 feet for corner lots.
- A deviation to reduce the front yard setback to 20 feet.
- A deviation to increase the maximum gross density to 6.82 dwelling units/acre.

Along with those requested deviations, there were additional deviations from the zoning code that were approved with the original Amber Fields Planned Unit Development Agreement. Some of those deviations included increasing the impervious surface coverage, decreasing the side yard, front yard and rear yard setback standards, and decreasing the minimum lot width and area. Amber Fields 10th Addition was the second and final phase of development for the original Amber Fields 5th Addition preliminary plat area. The 10th addition final plat was approved by City Council in April 2023 and consisted of the remaining 75 single-family lots.

The applicant is requesting a variance to reduce the minimum rear yard setback standard from 20-feet to 16-feet for a property that is located within Amber Fields 10th Addition. On the submitted site plan it shows that the northwest area of the lot is angled, which is causing the issue of meeting the minimum rear yard setback standard for that portion of the rear yard area. This lot abuts two outlot - Outlot B, located directly west and is reserved as open space, and Outlot A, located northeast of the parcel and also used as open space. Both outlots contain drainage and utility easements over them. The proposed home is able to meet the 20 foot minimum rear yard setback requirement in the northeast portion of the rear yard but is only able to meet a setback of 16-feet from the northwest area. The applicant submitted a narrative which speaks to the needs for the variance request. In that narrative the applicant spoke about why the home itself would not be able to be reduced in size so that it could meet the rear setback requirement. If the home size was decreased, the functionality of multiple rooms in the house would be affected. The attached garage would also not be able to be reduced as there are standards within the zoning code for minimum square footage of attached garages. The proposed home would not be able to be moved further forward to the front property line as it currently meets the minimum front yard setback requirement of 20 feet. The applicant explored alternative designs for the home but was not able to make one work without the need for a variance.

ISSUE ANALYSIS

Variance Standards

According to Section 11-9-5.G, there are five criteria for the Board of Appeals and Adjustments to review when considering a variance request. The five criteria used to assess each request along with staff's findings for each are listed below. While weighing a variance request against these criteria, there are also two key issues to consider. The first is whether the applicant has reasonable use of their property without the variance. The second is whether the project can be redesigned to eliminate or reduce the need for a variance. The Board of Zoning Appeals must approve or deny each request

based on findings related to each of the five standards.

1. *The variance request is in harmony with the purposes and intent of the ordinance.*

Finding: Staff finds that the request is in harmony with the purposes and intent of the ordinance. Single-family detached dwellings are a permitted use within the R-1 PUD zoning district.

2. *The variance is consistent with the comprehensive plan.*

Finding: The site is designated as Low Density Traditional Residential. The variance request is consistent with that designation.

3. *The property owner proposes to use the property in a reasonable manner.*

Finding: The variance permits the property owners to use the property in a reasonable manner. The subject property is proposed to contain a single-family detached dwelling with a patio, which is consistent with the majority of the properties within this subdivision.

4. *There are unique circumstances to the property which are not created by the landowner.*

Finding: Staff finds that there are unique circumstances to the property. A portion of the northwest corner of the lot is shaped at an angle due to the shape of the land where this block of homes was platted. There are also larger drainage and utility easement areas that are shown to be across Outlots A and B, which both abut this lot. The proposed home would not be able to be moved closer to the front property line as it would not meet the minimum front yard setback requirement of 20 feet, and would not be able to be decreased in size due to factors such as functionality of the interior of the home and the minimum garage square footage that is required for single-family detached dwellings.

5. *Granting of the variance does not alter the essential character of the locality.*

Finding: Staff finds the requested variance would not alter the essential character of the locality. The surrounding neighborhood is made up of single-family detached homes with a vast majority of them being similar in size to the proposed home.

RECOMMENDATION

Staff is recommending approval of the Variance request by the Board of Appeals and Adjustments based on the information contained in this report and provided by the applicant.

CITY OF ROSEMOUNT
DAKOTA COUNTY, MINNESOTA

RESOLUTION BA2024-04

A RESOLUTION APPROVING A VARIANCE FROM THE R-1 PUD - LOW DENSITY TRADITIONAL RESIDENTIAL PLANNED UNIT DEVELOPMENT REAR YARD SETBACK STANDARD FOR PRINCIPAL STRUCTURES FROM TWENTY (20) FEET TO SIXTEEN (16) FEET AT 15035 ARDGILLAN ROAD

WHEREAS, David Weekley Homes (the "Applicant") has submitted an application to the City of Rosemount (the "City") for a variance from the R-1 PUD -Low Density Traditional Residential Planned Unit Development rear yard setback standard for principal structures from twenty (20) feet to sixteen (16) feet for the property at 15035 Ardgillan Road.

WHEREAS, notice has been published, mailed and posted pursuant to the Rosemount Zoning Ordinance, Section 11-9-5; and

WHEREAS, the Rosemount Board of Appeals and Adjustments held a public hearing for a variance from the 20' rear yard setback requirement to 16' on August 27, 2024; and

NOW, THEREFORE, based on the testimony elicited and information received, the Rosemount Board of Appeals and Adjustments makes the following:

FINDINGS

1. That the procedures for obtaining said Variance are found in the Rosemount Zoning Ordinance, Section 11-9-5.

2. That all the submission requirements of said Section 11-9-5 have been met by the Applicant.

3. That the proposed variance will allow for the construction of a single-family detached dwelling at 15035 Ardgillan Road because it encroaches upon the minimum rear yard setback standard required by the Zoning Ordinance.

4. allow the construction of a detached, two-stall garage at 3115 144th Street West that is a legal non-conforming structure because it encroaches upon the rear yard setback required by the Zoning Ordinance.

5. That the Variance will be located on property legally described as follows: Lot 1, Block 3, AMBER FIELDS TENTH ADDITION, according to the recorded plat thereof, Dakota County, Minnesota.

6. *The variance request is in harmony with the purposes and intent of the ordinance.*
   Finding**:** Staff finds that the request is in harmony with the purposes and intent of the ordinance. Single-family detached dwellings are a permitted use within the R-1 PUD zoning district.

7. *The variance is consistent with the comprehensive plan.*
   Finding**:** The site is designated as Low Density Traditional Residential. The variance request is consistent with that designation.

8. *The property owner proposes to use the property in a reasonable manner.*
   Finding**:** The variance permits the property owners to use the property in a reasonable manner. The subject property is proposed to contain a single-family detached dwelling with a patio which is consistent with the majority of the properties within this subdivision.

9. *There are unique circumstances to the property which are not created by the landowner.*
   Finding**:** Staff finds that there are unique circumstances to the property. A portion of the northwest corner of the lot is shaped at an angle due to the shape of the land where this block of homes was platted. There are also larger drainage and utility easement areas that are shown to be across Outlots A and B, which both abut up to this lot. The proposed home would not be able to be moved closer to the front property line as it would not meet the minimum front yard setback requirement of 20 feet and would not be able to be decreased in size due to factors such as functionality of the interior of the home and the minimum garage square footage that is required for single-family detached dwellings.

10. *Granting of the variance does not alter the essential character of the locality.*
    Finding**:** Staff finds the requested variance would not alter the essential character of the locality. The surrounding neighborhood is made up of single-family detached homes with a vast majority of them being similar in size to the proposed home.

CONCLUSIONS AND DECISION

Based on the foregoing, the Applicant's application for a Variance is granted, subject to the applicants receiving any required permits for the principal structure.

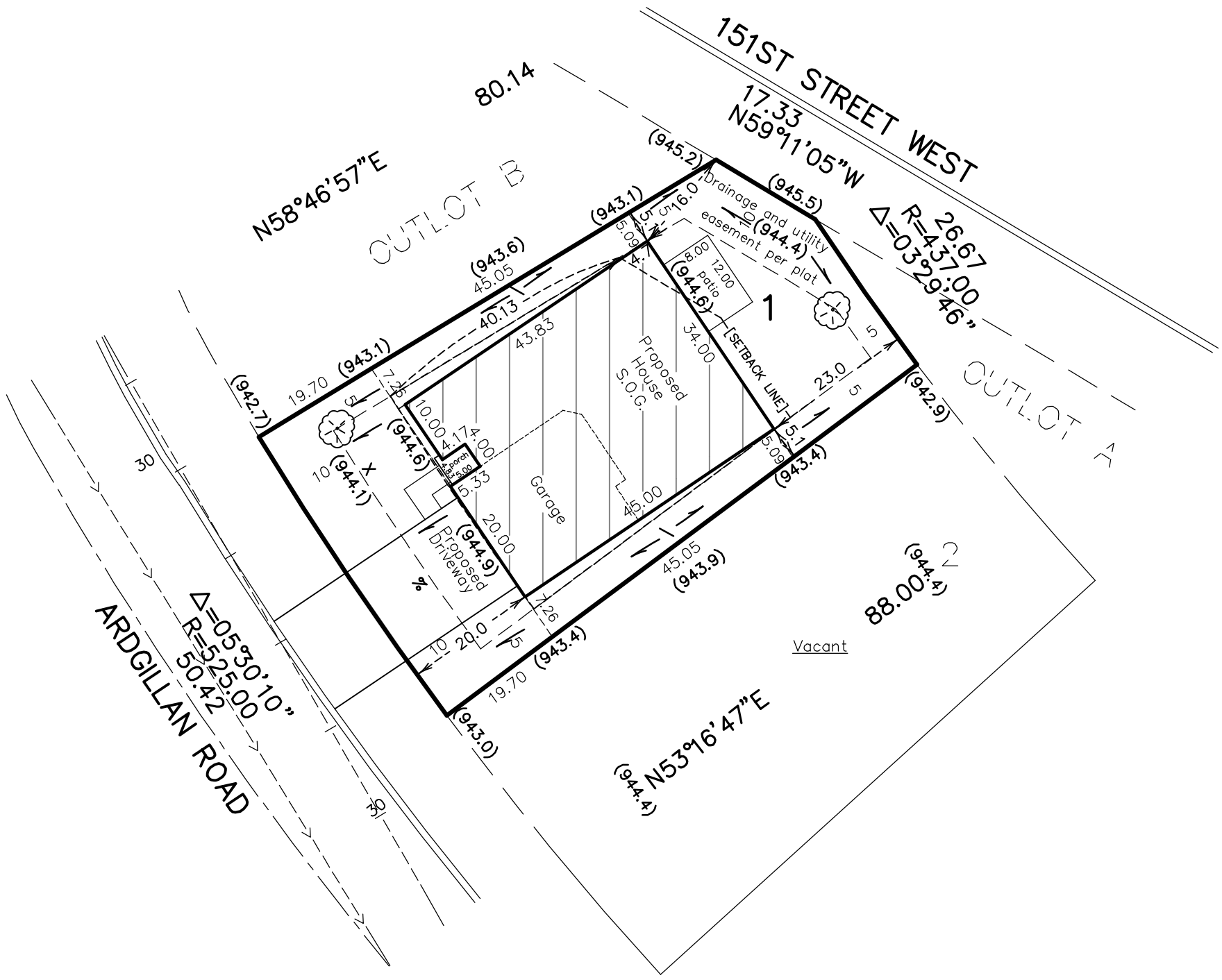
Passed and duly adopted this 27th day of August, 2024, by the Board of Appeals and Adjustments of the City of Rosemount, Minnesota.

_____
Melissa Kenninger, Chair

ATTEST:

_____
Erin Fasbender, City Clerk

149TH ST W
150TH ST W
ARTAINE TRL
ARTAINE TRL
150TH ST W
ABBEY
148TH ST W
149TH ST W
150TH ST W
151ST ST W
ARDGILLAN RD
ARCHDALE LN
ARDEE PL
ADARE WAY
AKRON AVE



Lot area = 4006 SF
House area = 1497 SF
Porch area = 21 SF
Patio area = 96 SF
Sidewalk area = 26 SF
Driveway area = 324 SF
Total Impervious Area = 1964 SF
Impervious Coverage = 49.0%

Denotes iron pipe
Denotes service
Denotes television box
Denotes electric box
Denotes telephone box
X 000.00 Denotes existing elevation
(000.00) Denotes proposed elevation
Denotes drainage flow direction
Denotes spike
Denotes proposed retaining wall designed and built by others.

House elevations	(Proposed) /	As-built
Top Of Foundation Elev.	:(945.3)	/
Garage Slab Elev. @ Door	:(944.9)	/

N

0' 10' 20'

Scale: 1" = 20'

Benchmark:
Top Nut Hydrant
Elevation =

Construction Notes:
1. Install rock construction entrance.
2. Install silt fence as needed for erosion control.
3. Sidewalks shall drain away from house a minimum of 1.0%.
4. Contractor must verify driveway design.
5. Contractor must verify service elevation prior to construction.
6. Add or remove foundation ledge as required.
7. Retaining walls are conditional; Wall installed if the grade exceeds 3:1. Wall will not be installed if the grade is 3:1 or less.

General Notes:
1. Grading plan by Alliant last dated 07-27-2022 was used to determine proposed elevations shown herein.
2. This survey does not purport to show improvements or encroachments, except as shown, as surveyed by me or under my direct supervision.
3. Proposed building dimensions shown are for horizontal location of structures on the lot only. Contact builder prior to construction for approved construction plans.
4. No specific soils investigation has been performed on this lot by the surveyor. The suitability of soils to support the specific house proposed is not the responsibility of the surveyor.
5. This certificate does not purport to show easements other than those shown on the recorded plat.
6. Bearings shown are based on an assumed datum.

DRAW ONLY – LOT VARIANCE

We hereby certify to David Weekley Homes that this survey, plan or report was prepared by me or under my direct supervision, and that I am a duly licensed Land Surveyor under the laws of the State of Minnesota, dated 07/30/24.

Revisions:
1.)

PIONEER engineering, P.A.
CIVIL ENGINEERS LAND PLANNERS LAND SURVEYORS LANDSCAPE ARCHITECTS
2422 Enterprise Drive
Mendota Heights, MN 55120
Ph. : (651) 681-1914
Fax: (651) 681-9488
www.pioneereng.com

Project # :123118031 | Folder #:8869 | Drawn by: JAJ

Lot 1, Block 3,
AMBER FIELDS TENTH ADDITION
according to the recorded plat thereof
Dakota County, Minnesota

Address: 15035 Ardgillan Road, Rosemount, Minnesota
House Model: Pryor Elevation: A170-A
Buyer: Spec

Certificate of Survey for:
David Weekley Homes

12900 Whitewater Drive, Suite 180
Minnetonka, MN 55343
(763) 251-0338

© Pioneer Engineering

AMBER FIELDS
15035 Ardgillan Road, Rosemount, MN
Lot 1, Block 3, Amber Fields 10th Addition

Providing this narrative to supplement our lot variance request to encroach the rear set back on the NW corner of Lot 1, Block 3 in Amber Fields 10th Addition. A future homeowner has selected our most popular A170 – Pryor Floorplan, which is the same as our Model Home, to build their future home on this lot in the lovely Amber Fields Community in the City of Rosemount. This A170 plan footprint is limited to 34' width and 44' depth to allow for density within the community, and we welcomed the challenge of designing a home for young families within such constraints. With our Pryor plan, we were able to provide a Study, Kitchen, Dining, and Family Room space on the first floor. On the second floor, we designed in three standard bedrooms and a retreat area that also accommodates an optional fourth bedroom for growing young families. Due to the limited depth of this lot at the rear setback, the home footprint would need to be significantly reduced by 4.7 feet. With any amount of reduction, the home design would be significantly impacted, as we need to maintain required garage space within the footprint, as well. We would lose significant square footage in the home, resulting in room and space reduction for a growing young family to call home. The dining room and family room space would become too narrow for functionality with reduction in depth. The Owner's Retreat and Owner's Bathroom would be significantly compromised, resulting in reduction of bedroom counts on the second floor. After exploring several alternate designs and options to comply with the allowable setback, we feel it would be best suited for our future homeowner and the future of the Amber Fields community to request a variance for this lot in order to not disrupt the home design and the intent of the community. We greatly appreciate your consideration for this variance, as feel it would be in the best interest of current and future homeowners within the Amber Fields community. Thank you for your consideration!

ROSEMOUNT
MINNESOTA

EXECUTIVE SUMMARY

Planning Commission Regular Meeting: August 27, 2024
Tenative City Council Meeting: September 17, 2024

AGENDA ITEM:	Request by RGA Holdings, LLC to rezone 211 acres of land from AG-Agriculture to B2-Employment.	**AGENDA SECTION:** PUBLIC HEARINGS
PREPARED BY:	Anthony Nemcek , Senior Planner	**AGENDA NO.** 6.d.
ATTACHMENTS:	Site Location, Land Use Map, Rezoning Exhibit	**APPROVED BY:** AK
RECOMMENDED ACTION: Motion to recommend the City Council adopt an ordinance amending the City of Rosemount Zoning Map for the subject property from AG-Agriculture to B2-Employment.		

BACKGROUND

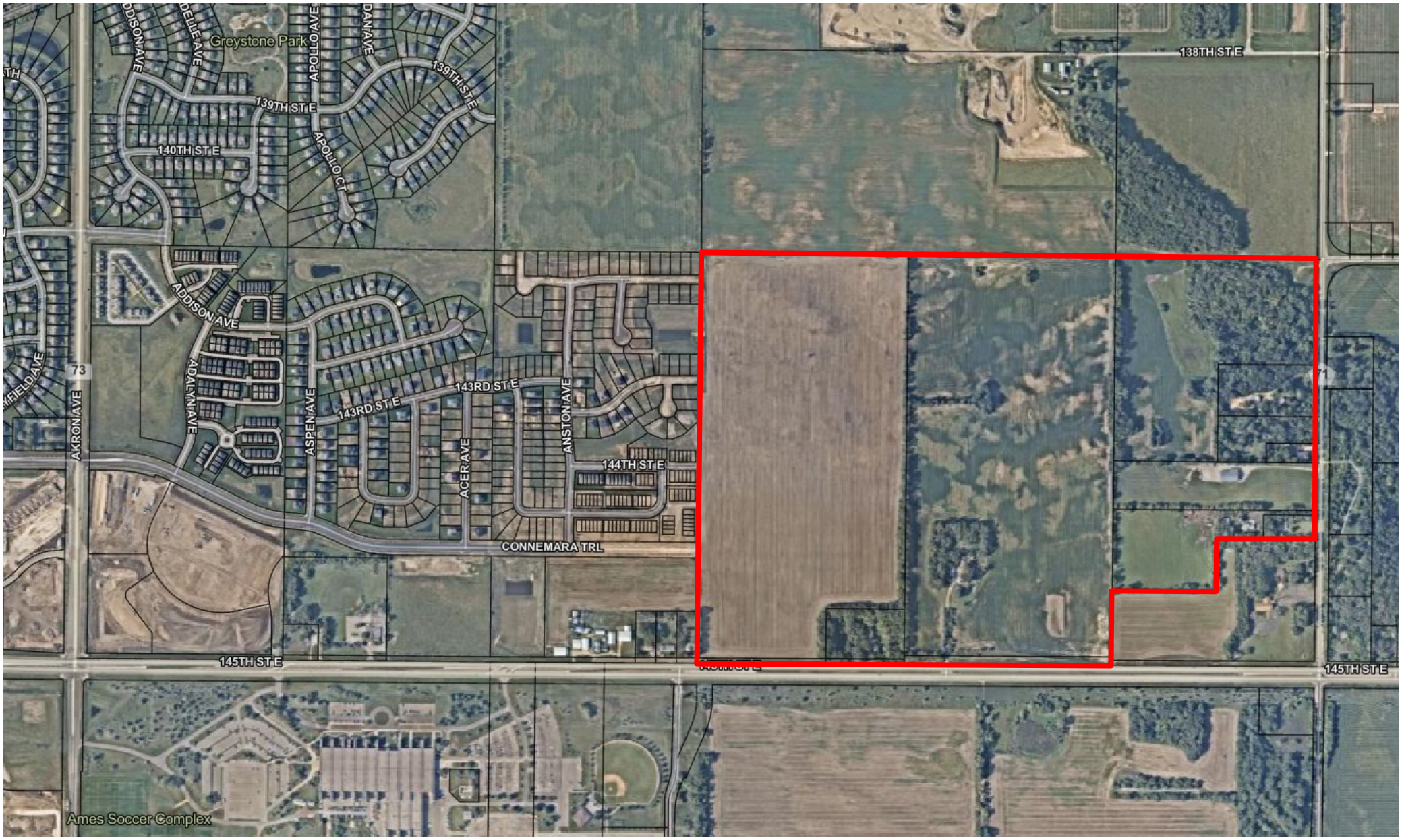
The Planning Commission is being asked to consider a request by RGA Holdings, LLC., to rezone approximately 211 acres of land located west of Blaine Avenue and north of CSAH 42, except for the property owned by St. John's Lutheran Church at the intersection of those two roads. The applicant is requesting that the zoning classification of the site be changed from AG-Agriculture to B2-Employment. The current zoning classification is not in conformance with the City's adopted Comprehensive Land Use Map, which designates the subject property for Business Park development. There is a small piece of land in the southwest portion of the subject parcel that is designated as CC-Community Commercial which will be located within the future right of way of an extension of Audrey Avenue to the north. Because this roadway will also serve traffic generated by future commercial development to the west of the subject parcel, staff finds the rezoning of this land to B2-Employment to be consistent with the Comprehensive Land Use Plan. Also of note, the recent update to the City's zoning ordinance replaced the BP-Business Park zoning district with the B2-Employment district.

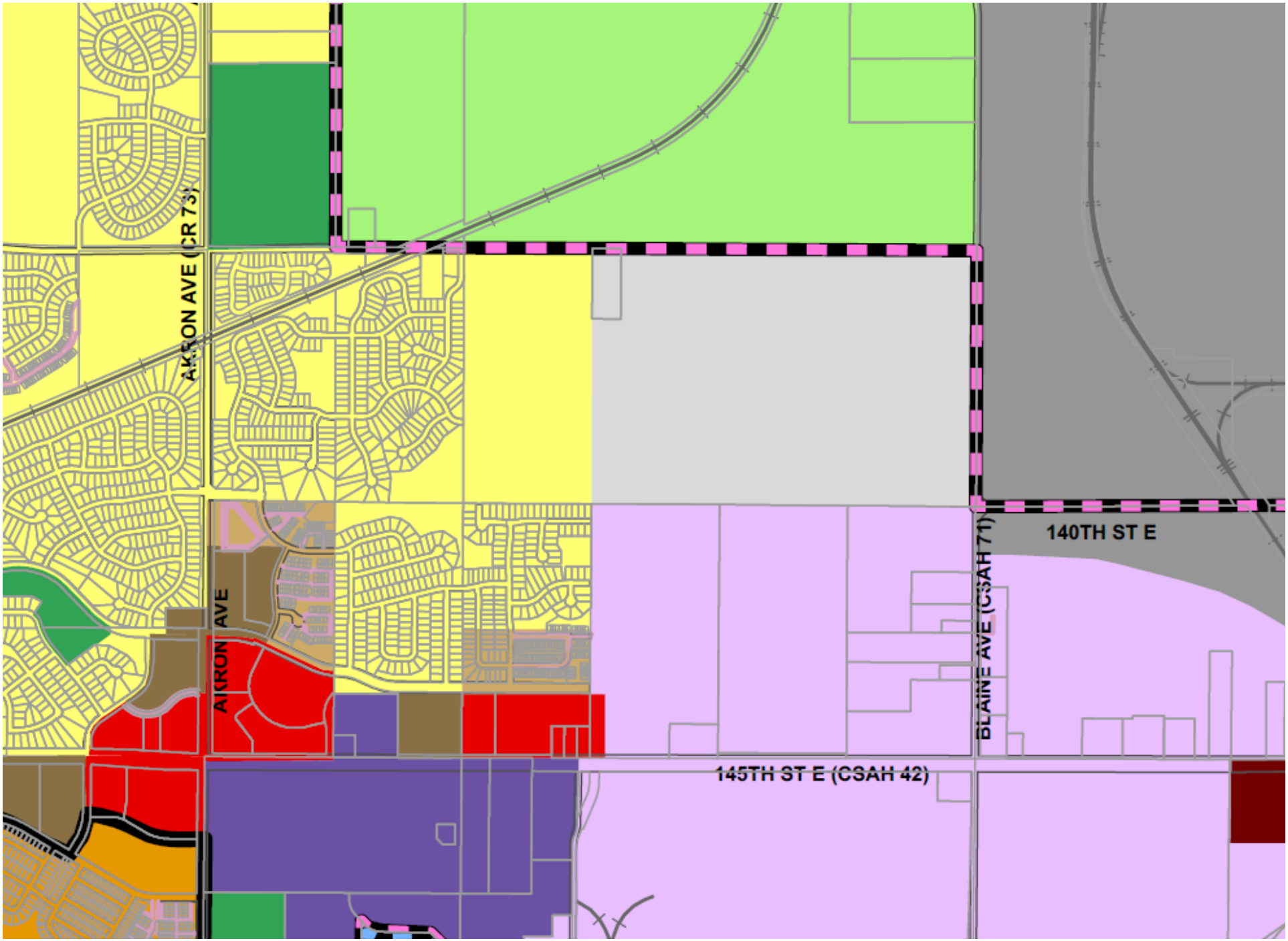
The applicant has been working to assemble the site to market it for development, and bringing the site's zoning into conformance with the City's Comprehensive Plan will provide clarity and eliminate confusion for potential users. Typically, rezoning requests to bring a site into conformance with the Comprehensive Plan are received as part of a larger application. At this time, the City has not received any applications for development proposals on the site. Because of the large size of the site, the applicant has completed an Alternative Urban Areawide Review (AUAR) in anticipation of any required environmental reviews triggered by development beyond the threshold that would require an Environmental Assessment Worksheet (EAW). The AUAR anticipated two potential development scenarios for the site; a distribution center or a data center. Again, no development applications have been received for the site, but any development proposals would require, at minimum, plat and site plan approval.

RECOMMENDATION

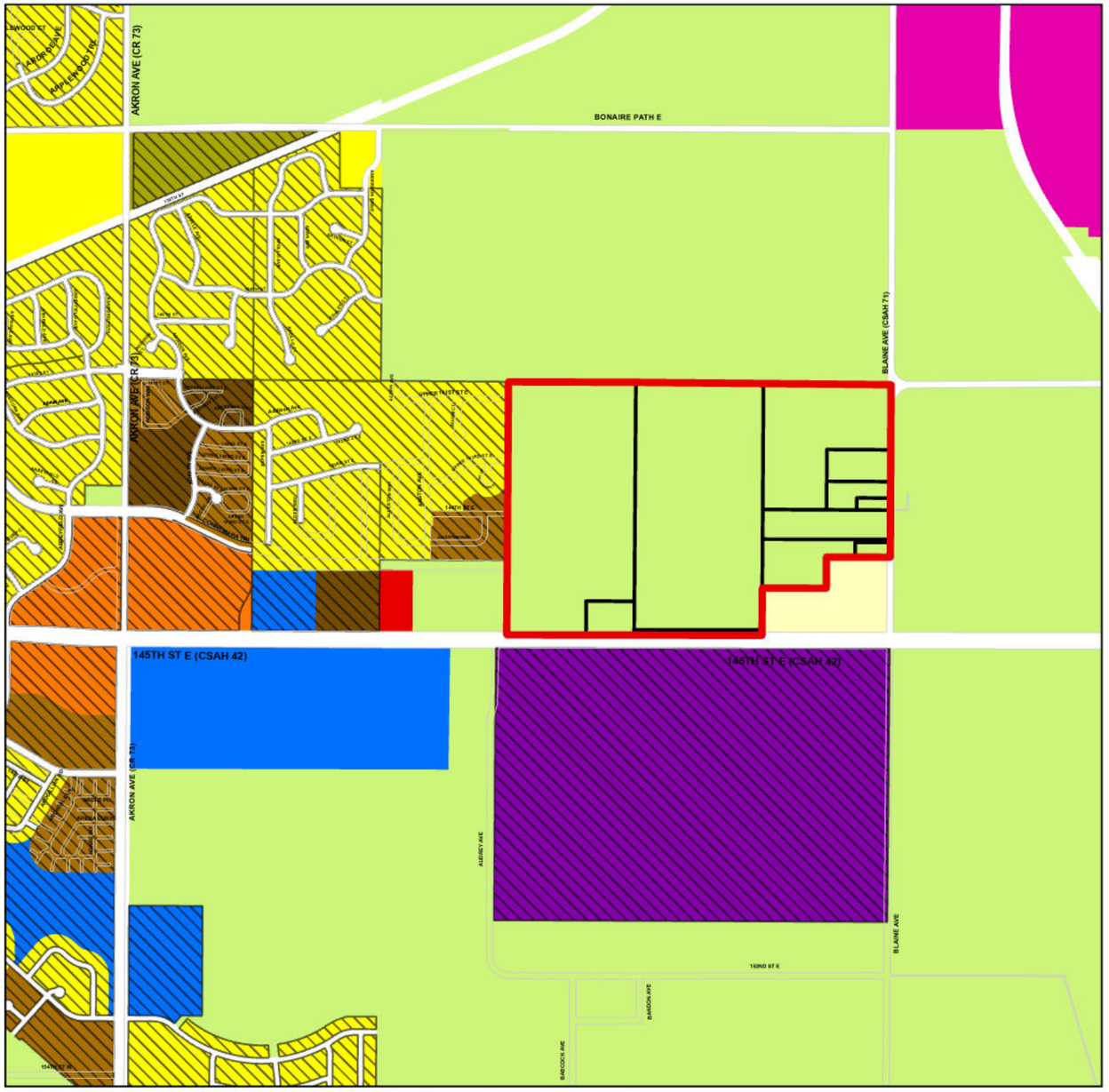
The proposed zoning map amendmendment is consistent with the future land use designated by the City's adopted Comprehensive Plan. Therefore, staff is recommending approval of the proposed

rezoning.

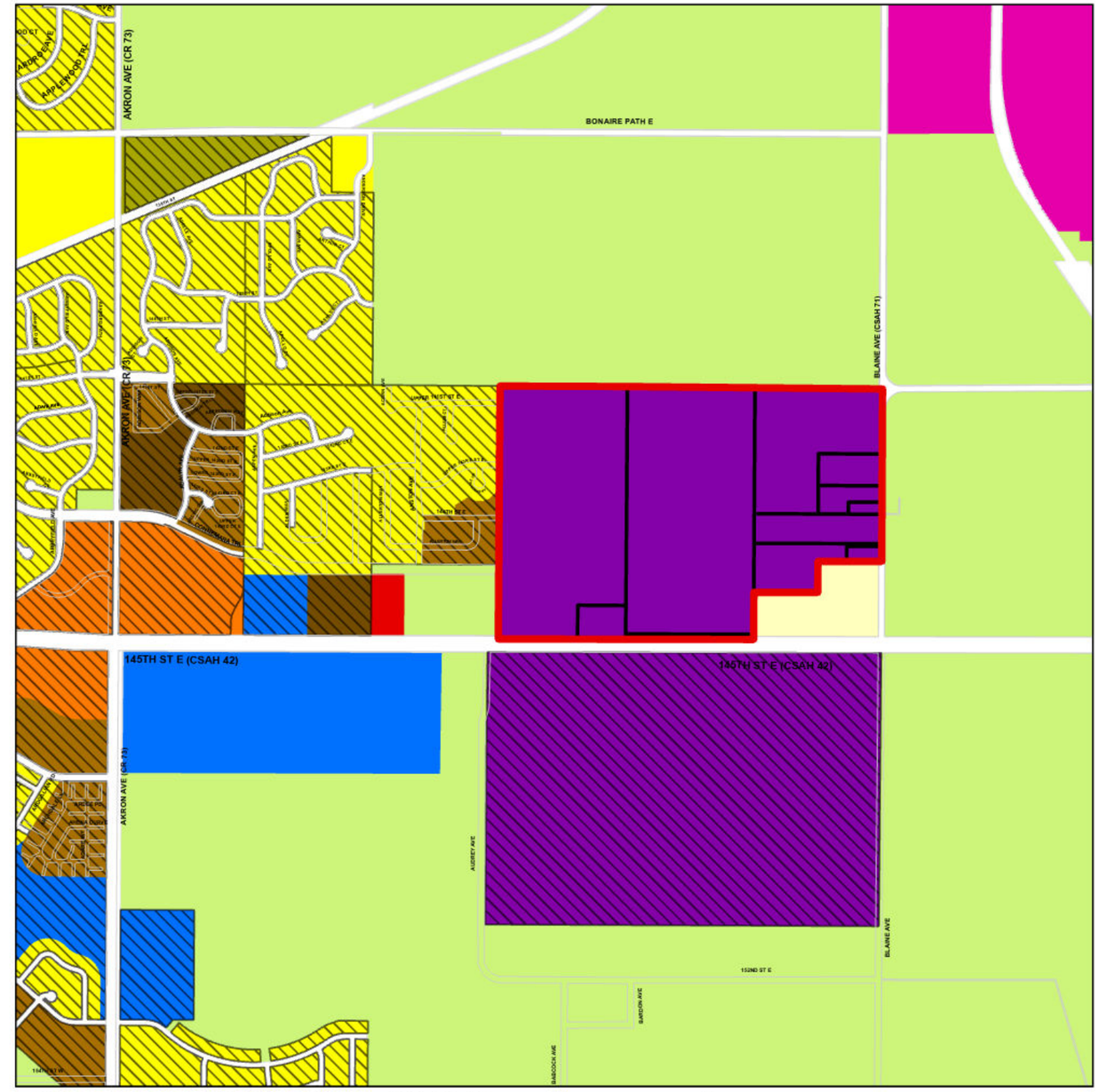

Greystone Park
DDISON AVE
DELLE AVE
APOLLO AVE
DAN AVE
139TH ST E
139TH ST E
140TH ST E
APOLLO CT
138TH ST E
ADDISON AVE
ADALYN AVE
AKRON AVE
73
ASPEN AVE
143RD ST E
143RD ST E
ACER AVE
ANSTON AVE
144TH ST E
CONNEMARA TRL
145TH ST E
145TH ST E
145TH ST E
Ames Soccer Complex



Excerpt from the City of Rosemount Comprehensive Land Use Map



Current Zoning A-2 Agricultural



Proposed Zoning B-2 Employment

ROSEMOUNT
MINNESOTA

Rezoning Exhibit

Zoning in Map Extent

- A-2 - Agricultural District
- B-1 - General Business District
- B-2 - Employment District
- I-2 - Heavy Industrial District
- MX-2 - Highway Mixed Use District
- PI - Public and Institutional District
- Rural Residential District
- R-1 - Low Density Traditional Residential District
- R-2 - Low to Medium Density Residential District
- R-3 - Medium Density Residential District
- R-4 - High Density Residential District
- Right-of-Way
- Parcels of Interest
- Planned Unit Development
- Parcels

N

ROSEMOUNT MINNESOTA

EXECUTIVE SUMMARY

Planning Commission Regular Meeting: August 27, 2024
Tenative City Council Meeting: September 17, 2024

AGENDA ITEM:	Request by Independent School District 196 for approval of a rezoning, Conditional Use Permit, Preliminary and Final Plats, Site Plan and Building Design Review, and a Zoning Ordinance Text Amendment to allow for a school with various sports fields and play areas to be built on site.	**AGENDA SECTION:** PUBLIC HEARINGS
PREPARED BY:	Julia Hogan, Planner	**AGENDA NO.** 6.e.
ATTACHMENTS:	Site Location , Preliminary Plat, Final Plat, Phasing Plan, Geometric Plan, Finishing Plan, Erosion Control Plan, Grading Plan, Utility Plan, Landscape Plan, Irrigation Plan, Photometric Plan, Architectural Elevations , Exterior Renderings, Engineer's Memorandum Dated August 20, 2024, Stormwater Review Memorandum Dated August 20, 2024, Parks and Recreation Memorandum dated August 20, 2024, Traffic Study , Public Comment	**APPROVED BY:** AK

RECOMMENDED ACTION:

1. Motion to recommend the City Council approve a Zoning Map amendment to rezone the site from AG-Agricultural to R3 – Medium Density Residential.

2. Motion to recommend the City Council approve the Preliminary and Final Plats for Rosemount School District Fifth Addition, subject to all conditions approved as part of the City's site and building design review for the project.

3. Motion to recommend the City Council approve the Text Amendment to the Zoning Ordinance Modifying Section 11-10-1: General Definitions to modify the school, elementary definition to include grades Kindergarten through eighth grade.

4. Motion to approve the site plan and building design to allow Independent School District 196 to construct a school on Rosemount School District Fifth Addition, subject to the following conditions:

1. Approval of the Rosemount School District Fifth Addition Preliminary and Final Plats.
2. Independent School District 196 shall continue to work with the City and Dakota County on pedestrian safety and traffic concerns. Solutions which are found to be warranted will need to be in place prior to the school opening.
3. Conformance with all conditions of the City Engineer as outlined in the memo dated August 20,

2024, and associated stormwater review memo dated August 20, 2024.

4. The applicant shall work with City staff to address the Landscaping Plan prior to City Council approval.
5. Conformance with the requirements of the Parks and Recreation Director contained within the memo dated August 20, 2024.
6. Site signage shall require a separate sign permit and meet the requirements of signs in the PI zoning district.
7. Exterior lighting poles shall not exceed 30 feet in height.

5. Motion to recommend the City Council approve a Conditional Use Permit for a school to be located on the Rosemount School District Fifth Addition subject to all conditions approved as part of the City's site and building design review for the project.

BACKGROUND

SUMMARY

Applicant:	Independent School District 196 (Rosemount, Apple Valley, Eagan Public Schools)
Location:	South of 150th Street West (County Road 42) and west of Biscayne Ave
Area in Acres:	Approx 75.6 Acres
Comp. Guide Plan Designation:	LDR – Low Density Residential and MDR – Medium Density Residential
Current Zoning:	A-2 – Agricultural District
Requested Zoning:	R-3 – Medium Density Residential District

The Planning Commission is being asked to consider requests submitted by Independent School District 196 (Rosemount, Apple Valley, Eagan Public Schools) for approval of a rezoning, preliminary and final plats, site plan and building design review, conditional use permit and zoning ordinance text amendment to construct a middle school on the proposed 75.6 acre site located directly south of 150th Street West (County Road 42) and west of Biscayne Avenue. The applicant is requesting the site be rezoned from A-2 – Agricultural to R-3 – Medium Density Residential because, by definition, elementary schools are not allowed within the A-2 zoning district but are an allowed conditional use within the Residential zoning districts, which is the need for the site to be rezoned to R-3. The applicant is also requesting preliminary and final plats to plat the undeveloped agricultural land and a site plan and building design review because they are required for all commercial, industrial, institutional, and multi-family development projects. City staff is also including a zoning ordinance text amendment modifying Section 11-10-1: General Definitions to revise the school, elementary definition to include grades Kindergarten through 8th grade. Staff is recommending approval of the five requested items, subject to the conditions listed in the recommended actions.

BACKGROUND

The City of Rosemount currently has one large school campus area that includes the Rosemount High

School, Rosemount Middle School and Rosemount Elementary school, all of which have been located on the present site west of Robert Trail South since the mid 1960s when the high school was built in that location. Portions of the middle school and elementary schools were on or near their present locations prior to construction of the high school. Over time, each of the buildings on the campus has been modified and expanded to accommodate the needs of a growing district and to add space for a growing student population. Independent School District 196 is now the 4th largest district in Minnesota with the current Rosemount schools serving over 4,500 students.

In recognition of the need for safety and security and space for growth around the school district, ISD 196 brought forward a combined $493 million dollar bond referendum in 2023. The first portion of the referendum was for $374 million dollars, which would include safety and security improvements at all district schools, a new elementary school, a new Rosemount middle school and repurposing the current schools. Additions were also proposed for various other schools within the district and Rosemount High school. The second portion of the referendum was for $119 million dollars, which was to include improvements and an activity center at each of the districts four high schools. The referendum ultimately was approved and was the state's largest successful public school funding request in Minnesota history. ISD 196 has moved forward on both the new elementary school in Rosemount and is working towards starting site improvements at the high school. The City Council approved the rezoning, minor subdivision, and conditional use permit for a new elementary school at a 34.51-acre site west of Akron Avenue and south of Bonaire Path at their March 19, 2024, regular meeting. The school district had owned that land for a number of years with the anticipation of an elementary school being constructed on that site when the need was there. ISD 196 had worked on securing a site for the proposed middle school for several months until they were able to find a site on land that is currently owned by the University of Minnesota. ISD 196 will be obtaining approx. 75.6 acres of land from the University where the new middle school, sports fields, and play areas will be constructed.

ISSUE ANALYSIS

Legal Authority

Preliminary and Final Plats, Conditional Use Permits, and Site Plan applications are quasi-judicial decisions for the Planning Commission, meaning that the Planning Commission is acting as a judge to determine if the regulations within the Comprehensive Plan, Zoning Ordinance and Subdivision Ordinance are being followed. Generally, if these applications meet the City's established requirements, they must be approved.

Rezonings are a legislative decision for the city, but the rezoning must conform with the adopted Comprehensive Plan to be approved. Therefore, while technically legislative in nature, if a rezoning is in line with the Comprehensive Plan, it should be approved. Staff's review of each application is provided below. Text amendments are considered legislative actions as well. In such cases, the City has a lot of discretion in its deliberations and application outcome.

Rezoning

The subject property is currently zoned A-2 – Agricultural and is guided for a mixture of LDR – Low Density Residential and MDR – Medium Density Residential. The applicant is requesting a rezoning of the site from A-2 – Agricultural to R-3 – Medium Density Residential. The need for the rezoning is because elementary schools are not an allowed use within the A-2 zoning district but are an allowed

conditional use within the residential zoning districts. Because the land is guided more for MDR – Medium Density Residential, staff recommended that the applicant request a rezoning of the site to R-3 – Medium Density Residential to reflect that designation. Within the City's 2040 Comprehensive Plan it describes the typical uses within the Medium Density Residential land use designation, such as single-family homes or detached townhomes on smaller lots; duplexes; townhomes with three (3) or more units per building; churches; elementary and secondary schools; private recreation spaces maintained by homeowner associations; and public parks.

Preliminary and Final Plats

Standards for reviewing subdivision requests are detailed in Title 12 of the Rosemount City Code. This section of the code outlines the two-step preliminary and final plat process for land subdivision. The proposed plat shows the total area of the site contains 75.574 acres of land south of 150th Street West (County Road 42) and west of Biscayne Avenue. The plat shows that there are two buildable lots as well as two outlots and dedicated roadway. The proposed lot 1 will consist of 59.7 acres of land and this is where the main school building, sports fields and play areas will be built. Lot 2 will consist of 0.331 acres of land and is planned to contain a future city lift station. Outlot A will be 5.1 acres in size and will contain various easement areas on it and Outlot B will consist of 2.6-acrs of land and is dedicated right-of-way for the future extension of Boulder Trail. Staff finds that the proposed final plat is consistent with the preliminary plat and meets the requirements of the zoning ordinance.

Text Amendment

In June 2024, the updated zoning code and map proposal went before council for their approval for adoption. The key objectives for updating the city's zoning code and map were to implement and align the zoning code with the 2040 Comprehensive Plan, address outdated inconsistencies and modernize the code for new and emerging uses. Many changes were made within the zoning code update, which included changes and additions to the definitions chapter. Within the definitions chapter there are four school definitions that are identified. Those include School, Elementary; School, Secondary; School, Post-Secondary; and Montessori School. In the existing definitions for school, elementary and school, secondary there are no specific grades identified in either one. In the previous zoning code, elementary schools, middle schools, and secondary schools were all identified as uses. In the previous zoning districts of R-1 – Low Density Residential, R-2 – Moderate Density Residential, R-3 – Medium Density Residential and R-4 – High Density Residential, elementary and middle or special needs schools were a conditional use. In the newly updated code, it allows for elementary schools to be a conditional use within the residential zoning districts and a permitted use in the Public and Institutional zoning district. Due to there no longer being a definition for middle schools within the zoning code, and in consultation with the city's consultant team, staff is recommending the elementary school definition be altered to include specific primary education grades.

Below is staff's recommended text amendment that adds grades kindergarten through eighth grade to the definition of elementary schools within the general definitions chapter of the zoning ordinance.

11-10-1: General Definitions

SCHOOL, ELEMENTARY: A building used for the purpose of public or private elementary education, <u>grades kindergarten through eighth grade</u>, including special needs education, which meets all the requirements of compulsory education laws of the State of Minnesota, and not providing residential accommodations.

Site Plan and Design Review
The purpose of a site plan review is to evaluate each project as it relates to the performance and site design standards of the zoning ordinance. Site plan approval is required for all commercial, industrial, institutional and multi-family development projects.

Land Use & Zoning
The subject property is currently zoned A-2-Agricultural and the future land use designation for the site is a mixture of LDR – Low Density Residential and MDR – Medium Density Residential. The applicant is requesting the site be rezoned to R-3 – Medium Density Residential as elementary schools are not an allowed use within the A-2 zoning district. They are an allowed conditional use within the residential zoning districts which includes the R-3 district. The rezoning of the site to R-3 -Medium Density Residential is in accordance with the 2040 Future Land Use Plan and Comprehensive Plan.

Site Layout
The 75.6-acre vacant site is located directly south of 150th Street West (County Road 42) and east of Biscayne Avenue. The site is a combination of portions of two separate parcels that are both currently owned by the University of Minnesota. The surrounding land will continue to be owned by the U of M and the land south and east of the proposed school site will continue to be used as a large-scale mineral extraction by Dakota Aggregates.

The site plan shows that the main school building will be located central west on the site, with the baseball fields, practice fields and soft ball fields being located east and northeast of the school. The tennis courts are shown to be located southwest of the school near the main road into the site. There is one access/road into the site which will be from Boulder Trail. The access road is shown to split off east and west once into the site. The portion of the road that extends east will give access to the bus lot and secondary parking lot. The portion of the road that extends west will give access to both the service parking lot/area and as well as the main lot which is located on the northwest side of the school building. The road loops around the main lot and extends south and east towards the access into the site from Boulder Trail. There are ponding and infiltrations areas on site that are shown to be located directly south and east of the bus parking lot area. These areas will be adjacent to the future extension of Boulder Trail. The proposed building will have the capacity to hold 1,350 students with plans for 47 homeroom classrooms. The applicant has stated that the school is planned for an opening date of Fall 2027.

Lot and Building Standards.
The proposed main school site covers 59.7-acres of land with a significant amount of open space that is dedicated to baseball fields, softball fields, practice fields and tennis courts. The plans submitted for the school building show a combination of classrooms, common space, gymnasium, pool, performance stage, media center, cafeteria, administration area/offices, etc. Since elementary schools are a conditional use within the R-3-Medium Density Residential zoning district and are subject to the minimum lot requirements, setbacks and site and building standards of the PI – Public and Institutional zoning district. The table below shows the required setbacks in comparison with those provided on the site plan.

Building Performance Standards for the PI – Public/Institutional				
Category	**Standard**	**Proposed School**	**Standard**	**Proposed Parking Surfaces**
Front (Boulder Trail)	30 ft.	>30-feet	20 ft.	>20 ft.
Side (Biscayne Avenue)	30 ft.	>30-feet	10 ft.	>10 ft.
Side (University of Minnesota land)	30 ft.	>30-feet	10 ft.	>10 ft.
Rear (150th Street West)	30 ft.	>30 ft.	10 ft.	>10 ft.

Exterior Building Materials

The PI – Public Institutional building materials standards require the building to be at least 50% brick or natural stone. The remaining 50% of the wall surface may be specialty integral colored concrete block, tile, architectural textured concrete cast in place or better. Up to 10% of the building can be used for materials not listed above as accents. Buildings are required to have "360 degree" architecture so that all sides of the building meet the architectural standards. The building elevation plans that were submitted by the applicant show that the exterior of the principal building will be a mixture of brick, precast wall panels, and metal panels. While metal paneling and siding is not normally permitted in the PI – Public Institutional zoning district the metal panel/siding façade is of a quality considered "equal to or better" in the permitted materials within the code. The applicant has provided 3D renderings of the proposed school and is included in the attachments. The proposed building is also shown to be under the 50-foot maximum height requirement for the PI zoning district.

Traffic

Staff received a traffic study for the applicant in July which included existing conditions of the site, traffic forecasts, traffic analysis, and conclusions and recommendations. The city's public works/engineering department, the city's consultants, and Dakota County were able to review the study that was submitted. The study examined the weekday a.m. and p.m. peak hour traffic impacts of the proposed project at multiple intersections that would be impacted by the school site. The study also included a review of pedestrian and bicycle connection impacts related to the proposed project. The school day for students will begin at 8:20 a.m. and end at 3:10 p.m. and 100% of students will reside in the bussing attendance area of the school. The peak hours for traffic were shown to be 7:30-8:30 a.m. And 3:00-4:00 p.m. The a.m. peak is shown to be the same as the peak hour of adjacent traffic, while the p.m. peak hour is earlier than the peak hour of adjacent traffic.

Some of the conclusions from the study include that the school is expected to generate 701 trips during the a.m. peak hour, 352 trips during the p.m. peak hour and 2,195 trips daily. There was also a review of crash data at the study intersection that was completed that is provided in the report. It was also stated that the site plan shows adequate pedestrian connections within the site to connect the school building with the parking lot and surrounding amenities, but that connections to the surrounding sidewalk and trail system will be needed to accommodate students that walk and bike to school. It is recommended that a further detailed review of the pedestrian routes by the city and school district and a pedestrian plan is developed for the area prior to the school opening.

Area improvements were identified which included installing traffic signal controls at County Road 42 and Biscayne Avenue, providing separate left turn, through, and right turn lanes on the westbound

approach for Biscayne Avenue and Boulder Trail, providing dedicated eastbound left turn lane and dedicated westbound right turn lanes on Boulder Trail, and provide two exiting lanes with one left turn and one right turn lane.

The traffic study has been updated to reflect county and city comments that were made in the initial review. That updated study has been added as an attachment. City staff is including a condition in the recommended action for the school district to continue working with the City and Dakota County on pedestrian safety and traffic related concerns and that solutions which are found to be warranted will need to be in place prior to the school opening.

Access & Parking

The site is shown to be accessed by a road off of Boulder Trail. The main access road extends north towards the main building and then splits off with the main section of road extending west and then north towards the service and main parking lot areas and the other section of road extending north and east towards the bus/secondary parking lot. The road section that extends west and north follows along the western side of the site and then loops around the main parking lot where the main entrance of the school building is located. The road loops back south and east towards the main access into the site at Boulder Trail.

There are a total of 205 parking stalls proposed, and 35 bus stalls proposed throughout the site. The main parking lot area will have 153 parking stalls with room for 36 future stalls if the need is there. The secondary parking/bus lot area will contain 35 bus stalls on the north side of the lot adjacent to the school and 44 standard parking stalls on the southern side of the lot. There is also a service lot on the western side of the school that will contain 8 standard parking stalls. The proposed parking stalls provided meet the off-street parking requirement for elementary schools. That breakdown is shown in the table below.

Use	**Required**	**Provided**
School, Elementary	74 stalls (1 space for each classroom plus 1 additional space for each 50-student capacity)	205 parking stalls and 35 bus stalls

Parks and Trails

The proposed middle school site has shown a network of sidewalks and trails providing access internally and around the site. There shows to be a trail along the north side of the site which is adjacent to 150th Street West (County Road 42) which extends south into the site for access to the ball/practice fields, main parking lots area and the main school building. There are additional internal sidewalks that are shown to connect the school with the bus lot to the south and as well as extending east to the other practice and softball fields on site. There are sidewalks shown on the western side of the site as well with one of them following the main road into the site off of Boulder Trail up to the main parking lot and also one that connects to the tennis court on the southwest side of the main building.

The City of Rosemount Parks and Recreation department reviewed the submitted development plans and have provided review comments in the attached memorandum. The Park and Recreation

department are recommending that the school district add a trail along the east side of Biscayne Avenue from the Biscayne Avenue and 150th Street West (County Road 42) intersection to the district's southwest property corner. They are also recommending that park dedication not be collected due to the public recreation spaces being created on site, which consist of public ballfields, practice fields, tennis courts and greenspaces.

Landscaping

A landscape plan was provided by the applicant that contains a total of 449 trees to be planted throughout the site with the breakdown being 277 deciduous overstory trees, 160 coniferous trees and 12 ornamental trees. The newly updated city code now requires mixed-use and non-residential uses to provide a minimum of 1 overstory tree per 3,000 square feet of land area. The main school site is 2,599,223 square feet in size which means that a total of 866 trees are required to be provided on site. Also required is one linear foot of foundation plantings per 10 linear feet of any principal or accessory structure perimeter. The landscape plan does not provide the total count of foundation plantings that are proposed for the site, which will need to be updated on the plan. In the PI district, it is required that a minimum of 10% of parking areas are landscaped. The landscape plan shows a deficit of 417 trees, and staff is recommending as a condition of approval that the applicant works with city staff to address any landscape plan issues prior to city council approval.

The landscape plan shows a majority of the trees to be planted along the perimeter of the property with additional trees shown to be planted along the western portion of the school building. There are trees shown to be used as a buffer between the ponding area and the parking and practice fields area. There is also a large area of trees shown to be buffers to the agricultural land to the west which the practice fields and softball fields is adjacent to. A mixture of different sods and seeds will be planted around the site. There will be sod planted along the eastern side of the school building and native seed mix planted on the western side of the building. There will be a mixture of seed and native seed mixes where the practice fields are located.

The existing berm that is within the extent of the proposed site area will be eliminated, and the soils will be redistributed across the entire site. This is shown more specifically within the grading plans that were submitted to the city.

Signs

No signs are shown on the applicant's plans. Generally, signs are reviewed and approved administratively through the sign permitting process. Staff has included a condition reiterating that a sign permit must be submitted for any site signage.

Site Lighting

The applicant has submitted an overall lighting and photometric plan as part of the request, and the plans demonstrate compliance with the City's light intensity standards. Specifically, the light fixtures to be used are shielded and will direct light towards the ground and not towards adjacent properties. The maximum level of lighting allowed by the code is 0.5 lumen at adjacent residential property lines and 1.0 lumen at non-residential property lines. The plan adheres to the lumen requirements, showing 0.0 lumen at all property lines, which reflects the placement of the lighting fixtures on site. The plan shows that there will be 25 light poles around the site with a majority of them being located around the school and parking lot area. There are also 34 lights that will be mounted on the school itself. The plans

do not show the height of the poles on which the lights will be mounted, but the zoning ordinance maximum is 30 feet except if it is within 100 feet of a residential use, then the maximum height is 20 feet. This standard will be called out as a condition of approval.

Engineering

Detailed grading, erosion control, utility plans, stormwater management plans were provided as part of the applicant's submittal, and have been reviewed by the City Engineer. The engineer's comments and recommendations are included in an August 20, 2024, memorandum (attached), and include specific recommendations concerning planned utility connections, general grading, drainage and erosion control plans, and storm sewer design. A stormwater review for the extension of Boulder Trail was also completed, and a memorandum was completed with that review (attached). There are general comments on grading, drainage, erosion control and stormwater management included in that review.

Conditional Use Permit Review

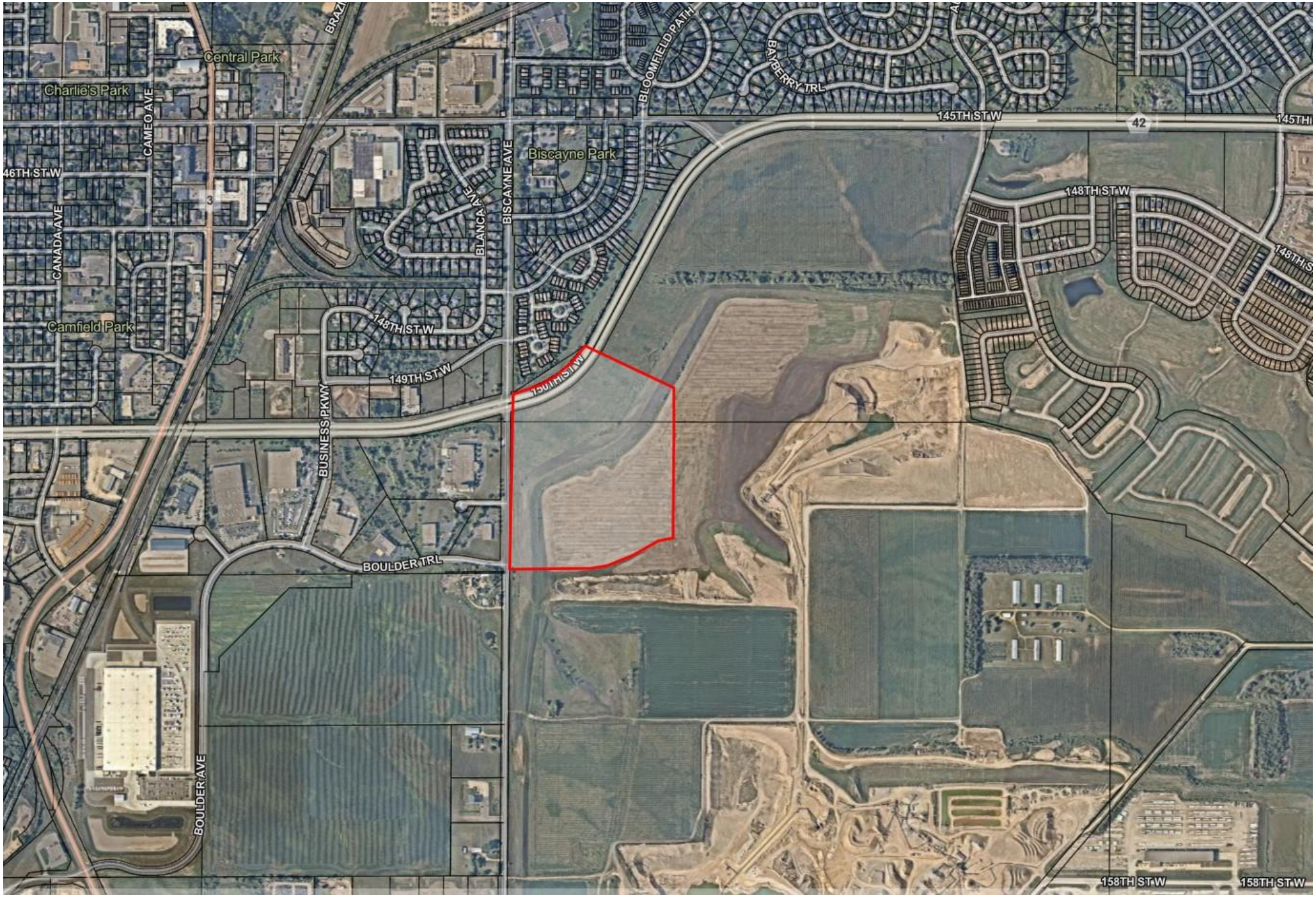
A conditional use permit (CUP) is required for elementary schools within the R3-Low Density Residential zoning district. The City may approve a CUP upon finding that the use at the proposed location:

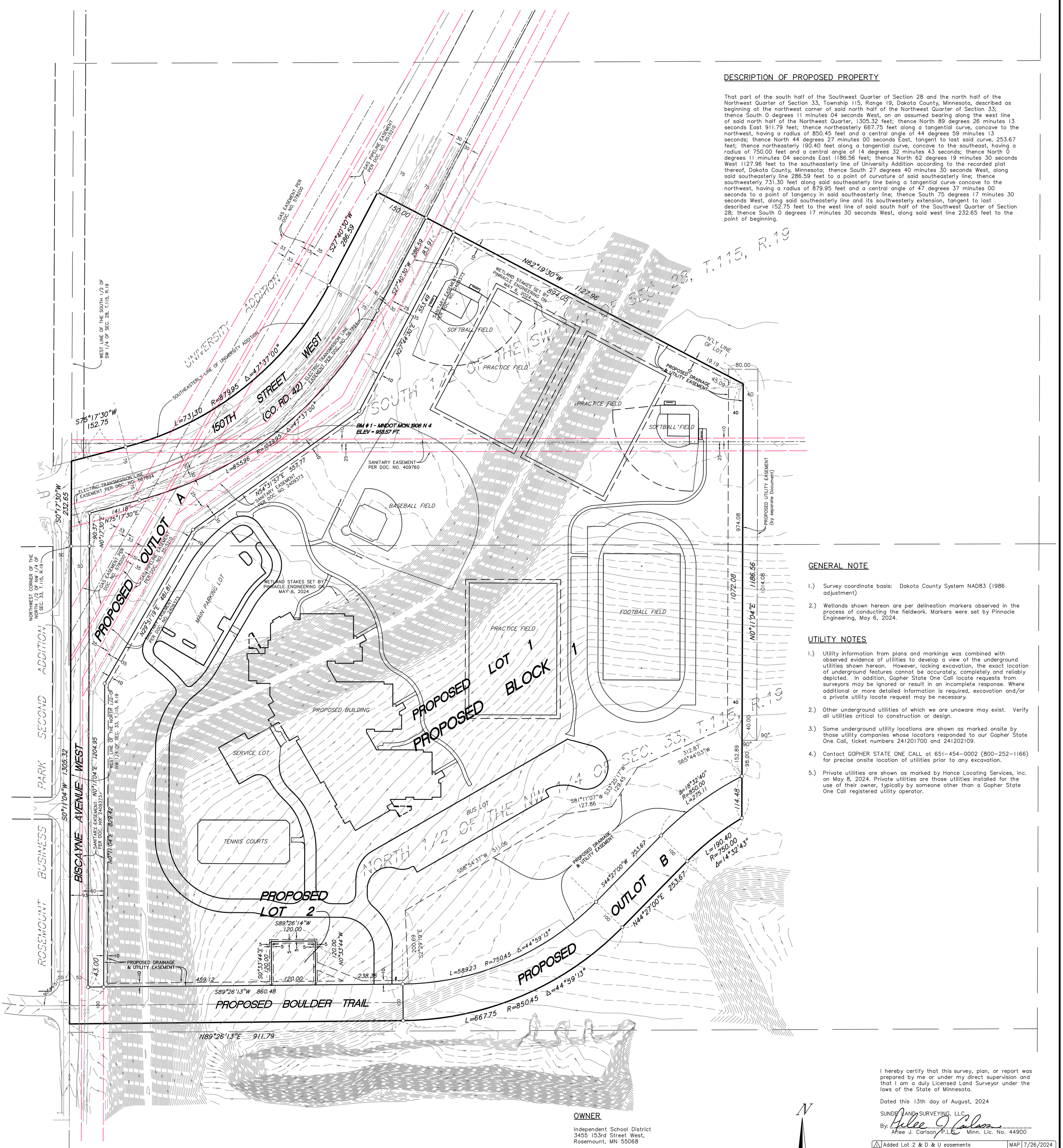
1. Will not be detrimental to or endanger the public health, safety, or general welfare of the neighborhood or the city.
2. Will be harmonious with the objectives of the comprehensive plan and city code provisions.
3. Will be designed, constructed, operated and maintained so as to be compatible or similar in an architectural and landscape appearance with the existing or intended character of the general vicinity and will not change the essential character of that area, nor substantially diminish or impair property values within the neighborhood.
4. Will be served adequately by existing (or those proposed in the project) essential public facilities and services, including streets, police and fire protection, drainage, structures, refuse disposal, water and sewer systems and schools.
5. Will not involve uses, activities, processes, material equipment and conditions of operation that will be hazardous or detrimental to any persons, property, or the general welfare because of excessive production of traffic, noise, smoke, fumes, glare or odors.
6. Will have vehicular ingress and egress to the property which does not create traffic congestion or interfere with traffic on surrounding public streets.
7. Will not result in the destruction, loss or damage of a natural, scenic, or historic feature of major importance and will comply with all local, state, and federal environmental quality standards.
8. These standards apply in addition to specific conditions as may be applied throughout this code.

Based on the staff review and analysis for the above site and building design analysis, staff has determined that the proposed school meets each of these required findings.

RECOMMENDATION

Staff is recommending approval of the rezoning of the site from A-2 – Agricultural to R-3 Medium Density Residential, preliminary and final plats, site plan and building design review, conditional use permit and a zoning ordinance text amendment for a new school to be built on the 75.6-acre site south of 150th Street West (Dakota County Road 42) and west of Biscayne Avenue, subject to conditions of approval outlined in the recommended actions section above.


Central Park
Charlie's Park
CAMEO AVE
46TH ST W
CANADA AVE
Camfield Park
BRAZ
BLOOMFIELD PATH
BARBERRY TRL
145TH ST W
42
145TH
Biscayne Park
BLANCA AVE
BISCAYNE AVE
148TH ST W
148TH S
148TH ST W
149TH ST W
150TH ST W
BUSINESS PKWY
BOULDER TRL
BOULDER AVE
158TH ST W
158TH ST W



DESCRIPTION OF PROPOSED PROPERTY

That part of the south half of the Southwest Quarter of Section 28 and the north half of the Northwest Quarter of Section 33, Township 115, Range 19, Dakota County, Minnesota, described as beginning at the northwest corner of said north half of the Northwest Quarter of Section 33; thence South 0 degrees 11 minutes 04 seconds West, on an assumed bearing along the west line of said north half of the Northwest Quarter, 1305.32 feet; thence North 89 degrees 26 minutes 13 seconds East 911.79 feet; thence northeasterly 667.75 feet along a tangential curve, concave to the northwest, having a radius of 850.45 feet and a central angle of 44 degrees 59 minutes 13 seconds; thence North 44 degrees 27 minutes 00 seconds East, tangent to last said curve, 253.67 feet; thence northeasterly 190.40 feet along a tangential curve, concave to the southeast, having a radius of 750.00 feet and a central angle of 14 degrees 32 minutes 43 seconds; thence North 0 degrees 11 minutes 04 seconds East 1186.56 feet; thence North 62 degrees 19 minutes 30 seconds West 1127.96 feet to the southeasterly line of University Addition according to the recorded plat thereof, Dakota County, Minnesota; thence South 27 degrees 40 minutes 30 seconds West, along said southeasterly line 286.59 feet to a point of curvature of said southeasterly line; thence southwesterly 731.30 feet along said southeasterly line being a tangential curve concave to the northwest, having a radius of 879.95 feet and a central angle of 47 degrees 37 minutes 00 seconds to a point of tangency in said southeasterly line; thence South 75 degrees 17 minutes 30 seconds West, along said southeasterly line and its southwesterly extension, tangent to last described curve 152.75 feet to the west line of said south half of the Southwest Quarter of Section 28; thence South 0 degrees 17 minutes 30 seconds West, along said west line 232.65 feet to the point of beginning.

GENERAL NOTE

1.) Survey coordinate basis: Dakota County System NAD83 (1986 adjustment)

2.) Wetlands shown hereon are per delineation markers observed in the process of conducting the fieldwork. Markers were set by Pinnacle Engineering, May 6, 2024.

UTILITY NOTES

1.) Utility information from plans and markings was combined with observed evidence of utilities to develop a view of the underground utilities shown hereon. However, lacking excavation, the exact location of underground features cannot be accurately, completely and reliably depicted. In addition, Gopher State One Call locate requests from surveyors may be ignored or result in an incomplete response. Where additional or more detailed information is required, excavation and/or a private utility locate request may be necessary.

2.) Other underground utilities of which we are unaware may exist. Verify all utilities critical to construction or design.

3.) Some underground utility locations are shown as marked onsite by those utility companies whose locators responded to our Gopher State One Call, ticket numbers 241201700 and 241202109.

4.) Contact GOPHER STATE ONE CALL at 651-454-0002 (800-252-1166) for precise onsite location of utilities prior to any excavation.

5.) Private utilities are shown as marked by Hance Locating Services, Inc. on May 8, 2024. Private utilities are those utilities installed for the use of their owner, typically by someone other than a Gopher State One Call registered utility operator.

BENCHMARKS (BM)

(NAVD 88)

1.) MnDOT monument 1906 N 4
Elevation = 953.57 feet

2.) MnDOT monument 1906 N 5
Elevation = 933.06 feet

AREA

Proposed Lot 1 = 2,599,223 square feet or 59.670 acres
Proposed Lot 2 = 14,400 square feet or 0.331 acres
Proposed Outlot A = 223,331 square feet or 5.127 acres
Proposed Outlot B = 111,509 square feet or 2.560 acres
Proposed Dedicated roads = 343,523 square feet or 7.886 acres
Gross = 3,291,986 square feet or 75.574 acres

OWNER

Independent School District
3455 153rd Street West,
Rosemount, MN 55068

Attn: Stephanie Rudie
Stephanie.Rudie@district196.org

APPLICANT

Bolton & Menk
3300 Fernbrook Lane North Suite 300,
Plymouth, MN 55447

Attn: David Rey
(763) 544-7129

CURRENT ZONING

AG – Agricultural

N

100 0 100 200
SCALE IN FEET

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

Dated this 13th day of August, 2024

SUNDE LAND SURVEYING, LLC

By: Arlee J. Carlson

Arlee J. Carlson P.L.S. Minn. Lic. No. 44900

Revision	By	Date
1 Added Lot 2 & D & U easements	MAP	7/26/2024
	MAP	

Drawing Title:
PRELIMINARY PLAT
OF:
ROSEMOUNT SCHOOL DISTRICT
FIFTH ADDITION

SUNDE LAND SURVEYING
www.sunde.com

Main Office:
9001 East Bloomington Freeway (35W) • Suite 118
Bloomington, Minnesota 55420-3435
952-881-2455 (Fax: 952-888-9526)

Project: 2024-066 Bk/Pg: 1178/14
Township: 115 Range: 19 Section: 33
File: 2024066001-pplat-R2.dwg
Date: 8/13/2024
Sheet: 1 of 1

ROSEMOUNT SCHOOL DISTRICT FIFTH ADDITION

PRELIMINARY
SUBJECT TO REVISION

KNOW ALL PERSONS BY THESE PRESENTS: That Regents of the University of Minnesota, a Minnesota constitutional corporation, owner of the following described property:

That part of the south half of the Southwest Quarter of Section 28 and the north half of the Northwest Quarter of Section 33, Township 115, Range 19, Dakota County, Minnesota, described as beginning at the northwest corner of said north half of the Northwest Quarter of Section 33; thence South 0 degrees 11 minutes 04 seconds West, on an assumed bearing along the west line of said north half of the Northwest Quarter, 1305.32 feet; thence North 89 degrees 26 minutes 13 seconds East 911.79 feet; thence northeasterly 667.75 feet along a tangential curve, concave to the northwest, having a radius of 850.45 feet and a central angle of 44 degrees 59 minutes 13 seconds; thence North 44 degrees 27 minutes 00 seconds East, tangent to last said curve, 253.67 feet; thence northeasterly 190.40 feet along a tangential curve, concave to the southeast, having a radius of 750.00 feet and a central angle of 14 degrees 32 minutes 43 seconds; thence North 0 degrees 11 minutes 04 seconds East 1186.56 feet; thence North 62 degrees 19 minutes 30 seconds West 1127.96 feet to the southeasterly line of University Addition according to the recorded plat thereof, Dakota County, Minnesota; thence South 27 degrees 40 minutes 30 seconds West, along said southeasterly line 286.59 feet to a point of curvature of said southeasterly line; thence southwesterly 731.30 feet along said southeasterly line being a tangential curve concave to the northwest, having a radius of 879.95 feet and a central angle of 47 degrees 37 minutes 00 seconds to a point of tangency in said southeasterly line; thence South 75 degrees 17 minutes 30 seconds West, along said southeasterly line and its southwesterly extension, tangent to last described curve 152.75 feet to the west line of said south half of the Southwest Quarter of Section 28; thence South 0 degrees 17 minutes 30 seconds West, along said west line 232.65 feet to the point of beginning.

Has caused the same to be surveyed and platted as ROSEMOUNT SCHOOL DISTRICT FIFTH ADDITION and does hereby dedicate to the public for public use the public way and the drainage and utility easements as created by this plat.

In witness whereof said Regents of the University of Minnesota, a Minnesota constitutional corporation, has caused these presents to be signed by its proper officers this _____ day of _____, 20___.

REGENTS OF THE UNIVERSITY OF MINNESOTA

Signed: _____, its President Signed: _____, its Secretary

STATE OF _____

COUNTY OF _____

The instrument was acknowledged before me this _____ day of _____, 20___, by _____, President and _____, Secretary of Regents of the University of Minnesota, on behalf of the corporation.

_____
(Signature)

_____
(Printed)

Notary Public, _____ County, _____

My Commission Expires: _____

I, Arlee J. Carlson, do hereby certify that this plat was prepared by me or under my direct supervision; that I am a duly Licensed Land Surveyor in the State of Minnesota; that this plat is a correct representation of the boundary survey; that all mathematical data and labels are correctly designated on the plat; that all monuments depicted on this plat have been, or will be correctly set within one year; that all water boundaries and wet lands as defined in Minnesota Statutes, Section 505.01, Subd. 3, as of the date of this certificate are shown and labeled on this plat; and all public ways are shown and labeled on this plat.

Dated this _____ day of _____, 20___.

_____
Arlee J. Carlson, Licensed Land Surveyor
Minnesota License No. 44900

STATE OF MINNESOTA
COUNTY OF HENNEPIN

This instrument was acknowledged before me on this _____ day of _____, 20___, by Arlee J. Carlson.

_____
(Signature)

_____
(Printed)

Notary Public, _____ County, _____

My Commission Expires: _____

City Council, City of Rosemount, State of Minnesota

This plat of ROSEMOUNT SCHOOL DISTRICT FIFTH ADDITION was approved and accepted by the City Council of the City of Rosemount, Minnesota at a regular meeting thereof held this _____ day of _____, 20__, and said plat is in compliance with the provisions of Minnesota Statutes, Section 505.03, Subd. 2.

By: _____
Mayor

By: _____
Clerk

County Surveyor, County of Dakota, State of Minnesota

I hereby certify that in accordance with Minnesota Statutes, Section 505.021, Subd. 11, this plat has been reviewed and approved this _____ day of _____, 20___.

_____
Todd B. Tollefson
Dakota County Surveyor

County Board, County of Dakota, State of Minnesota

We do hereby certify that on the _____ day of _____, 2024, the Board of Commissioners of Dakota County, Minnesota, approved this plat of ROSEMOUNT SCHOOL DISTRICT FIFTH ADDITION, and said plat is in compliance with the provisions of Minnesota Statues, Section 505.03, Subd. 2, and pursuent to the Dakota County Contiguous Plat Ordinance.

_____
Chair County Board

Attest: _____
Dakota County Treasurer–Auditor

Department of Property Taxation and Records, County of Dakota, State of Minnesota

Pursuant to Minnesota Statutes, Section 505.021, Subd. 9, taxes payable in the year 20___ on the land hereinbefore described have been paid. Also, pursuant to Minnesota Statutes, Section 272.12, there are no delinquent taxes and transfer entered this _____ day of _____, 20___.

_____
Amy A. Koethe, Director
Department of Property Taxation and Records

County Recorder, County of Dakota, State of Minnesota

I hereby certify that this plat of ROSEMOUNT SCHOOL DISTRICT FIFTH ADDITION was filed in the office of the County Recorder for public record on this _____ day of _____, 20___, at _____ o'clock __.M., and was duly filed in Book _____ of Plats, Page _____, as Document Number _____.

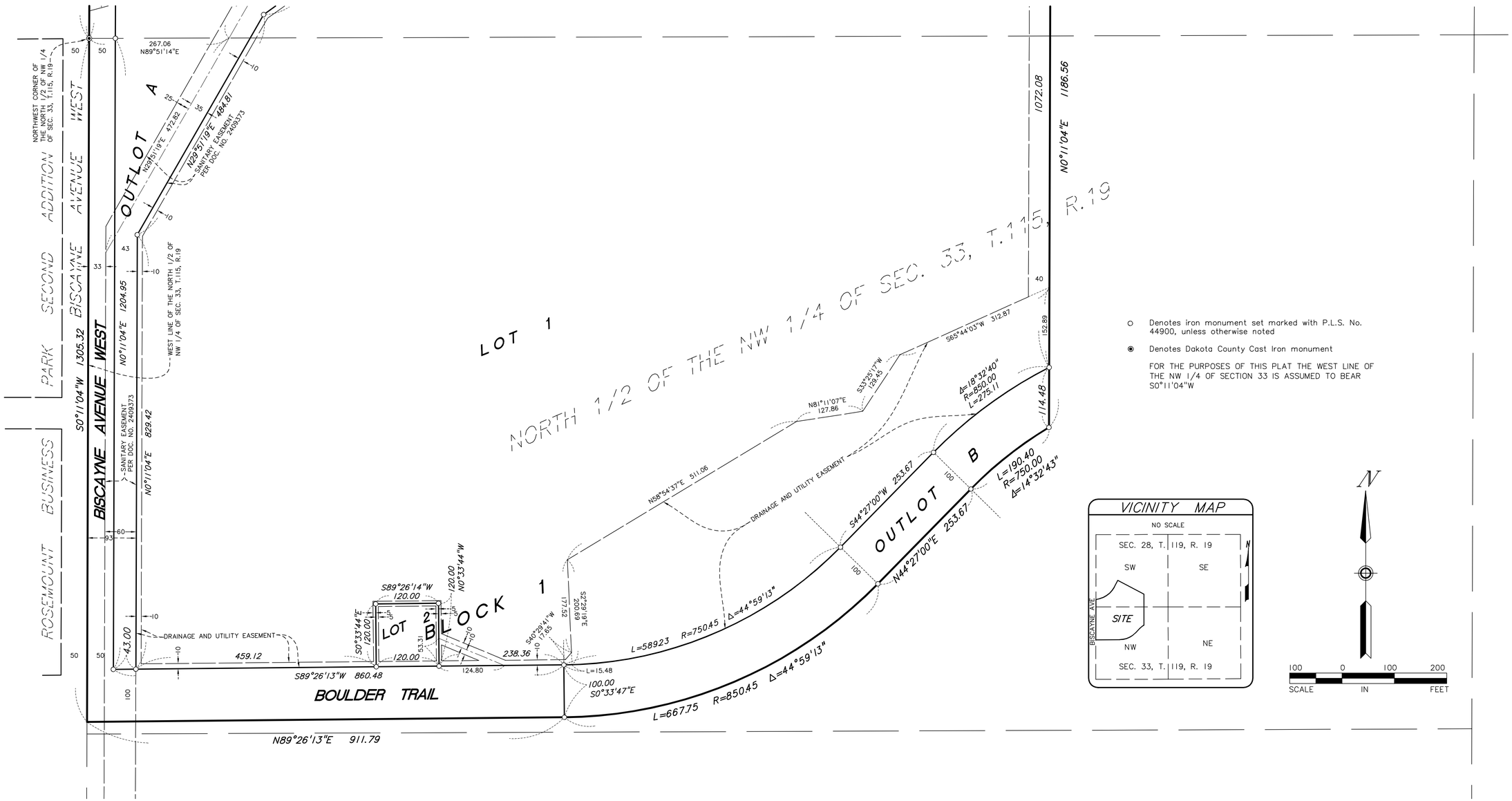
_____
Amy A. Koethe, County Recorder
Dakota County, Minnesota

SUNDE LAND SURVEYING

ROSEMOUNT SCHOOL DISTRICT FIFTH ADDITION

PRELIMINARY
SUBJECT TO REVISION

SEE SHEET 3 OF 3 SHEETS



Denotes iron monument set marked with P.L.S. No. 44900, unless otherwise noted

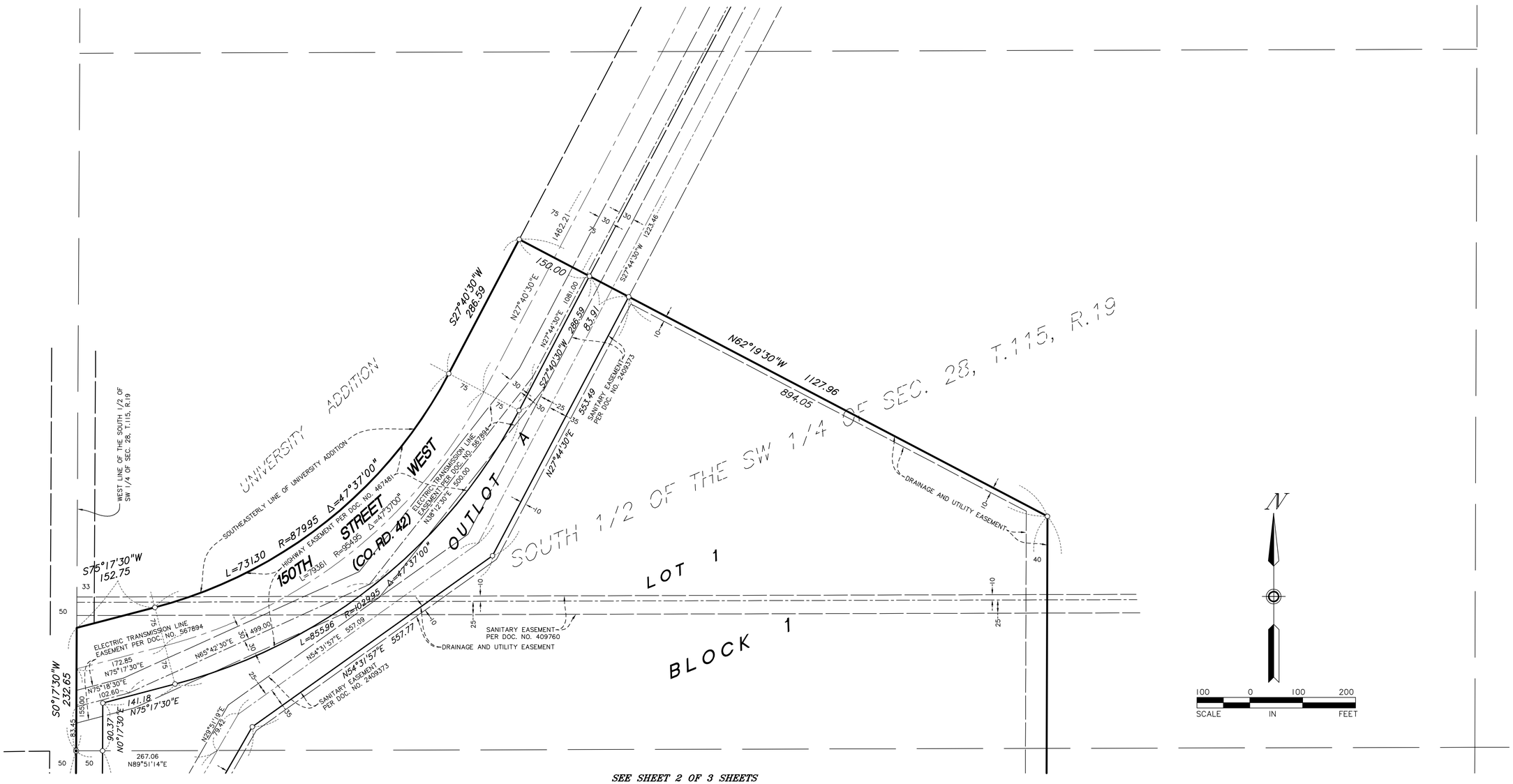
Denotes Dakota County Cast Iron monument

FOR THE PURPOSES OF THIS PLAT THE WEST LINE OF THE NW 1/4 OF SECTION 33 IS ASSUMED TO BEAR S0°11'04"W

SUNDE LAND SURVEYING

ROSEMOUNT SCHOOL DISTRICT FIFTH ADDITION

PRELIMINARY
SUBJECT TO REVISION

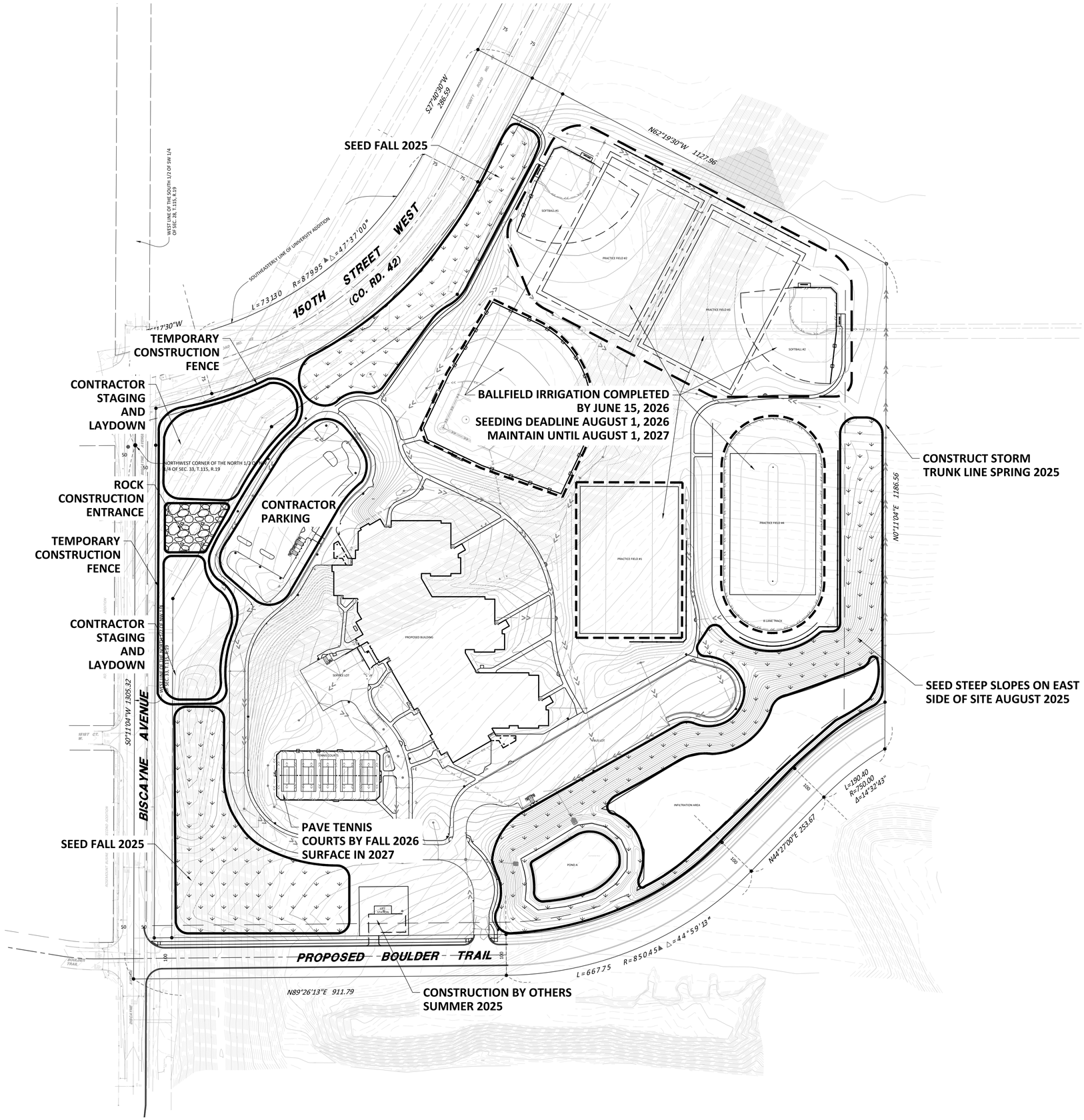


SEE SHEET 2 OF 3 SHEETS

SUNDE LAND SURVEYING

MN

C



New Rosemount Middle School

Rosemount, Minnesota 55088

Independent School District #196
3455 153RD STREET WEST
ROSEMOUNT, MINNESOTA 55068

Wold

WOLD ARCHITECTS AND ENGINEERS
332 Minnesota Street, Suite W2000
Saint Paul, MN 55101

woldae.com | 651 227 7773

BOLTON & MENK
3300 FERNBROOK LANE NORTH, SUITE 300
PLYMOUTH, MN 55447
Phone: (763) 544-7129
Email: plymouth@bolton-menk.com
www.bolton-menk.com

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.

DAVID A. REY
LIC. NO. 40180 DATE 07/31/2024

Revisions		
Description	Date	Num

Comm: 232086
Date: 07/31/2024
Drawn: JDO
Check: DAR

North

STAGING AND PHASING PLAN

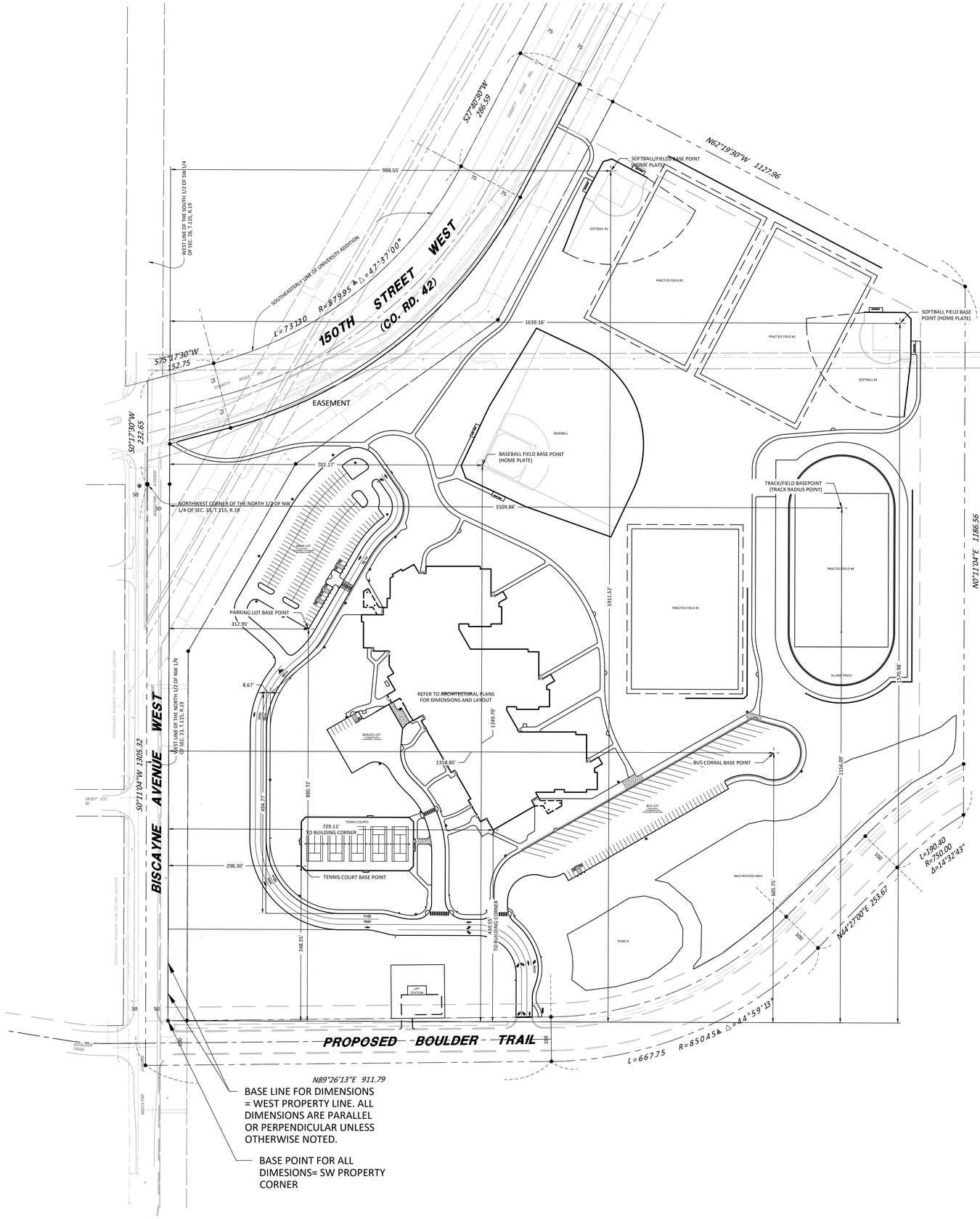
Scale: 1" = 100'

C0.01

CITY SUBMITTAL - NOT FOR CONSTRUCTION

MN

C



LEGEND

	BASELINE FOR DIMENSIONS
PI	POINT OF INTERSECTION
PC	POINT OF CURVATURE
PT	POINT OF TANGENCY
PCC	POINT OF COMPOUND CURVATURE
	PROPOSED BUILDING STOOP - REFER TO ARCHITECTURAL PLANS
	PROPERTY LINE

NOTES

1. REFER TO SHEET C3.01, GRADING AND DRAINAGE PLAN OVERALL, FOR GENERAL NOTES.
2. ALL APPLICABLE DIMENSIONS ARE TO FACE OF CURB, EDGE OF PAVEMENT, CENTERLINE OF FENCE, OR PROPERTY LINE UNLESS OTHERWISE NOTED.
3. CHECK ALL PLAN AND DETAIL DIMENSIONS AND VERIFY SAME BEFORE FIELD LAYOUT.
4. TRAFFIC SIGNS SHALL BE INSTALLED 18" BEHIND THE BACK OF CURB OR EDGE OF PAVEMENT.

SITE STATISTICS

PROPOSED PARKING COUNTS (196 TOTAL CAR STALLS):
STAFF PARKING = 49 STALLS
VISITOR PARKING = 147 STALLS
BUS PARKING = 35 BUS STALLS

ACCESSIBLE PARKING STALL REQUIREMENTS = 8 STALLS
ACCESSIBLE PARKING STALLS PROVIDED = 9 STALLS

HORZ. SCALE 0 100 200 FEET

CITY SUBMITTAL - NOT FOR CONSTRUCTION

New Rosemount Middle School

Rosemount, Minnesota 55088

Independent School District #196
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DAVID A. REY
LIC. NO. 40180 DATE 07/31/2024

Revisions		
Description	Date	Num

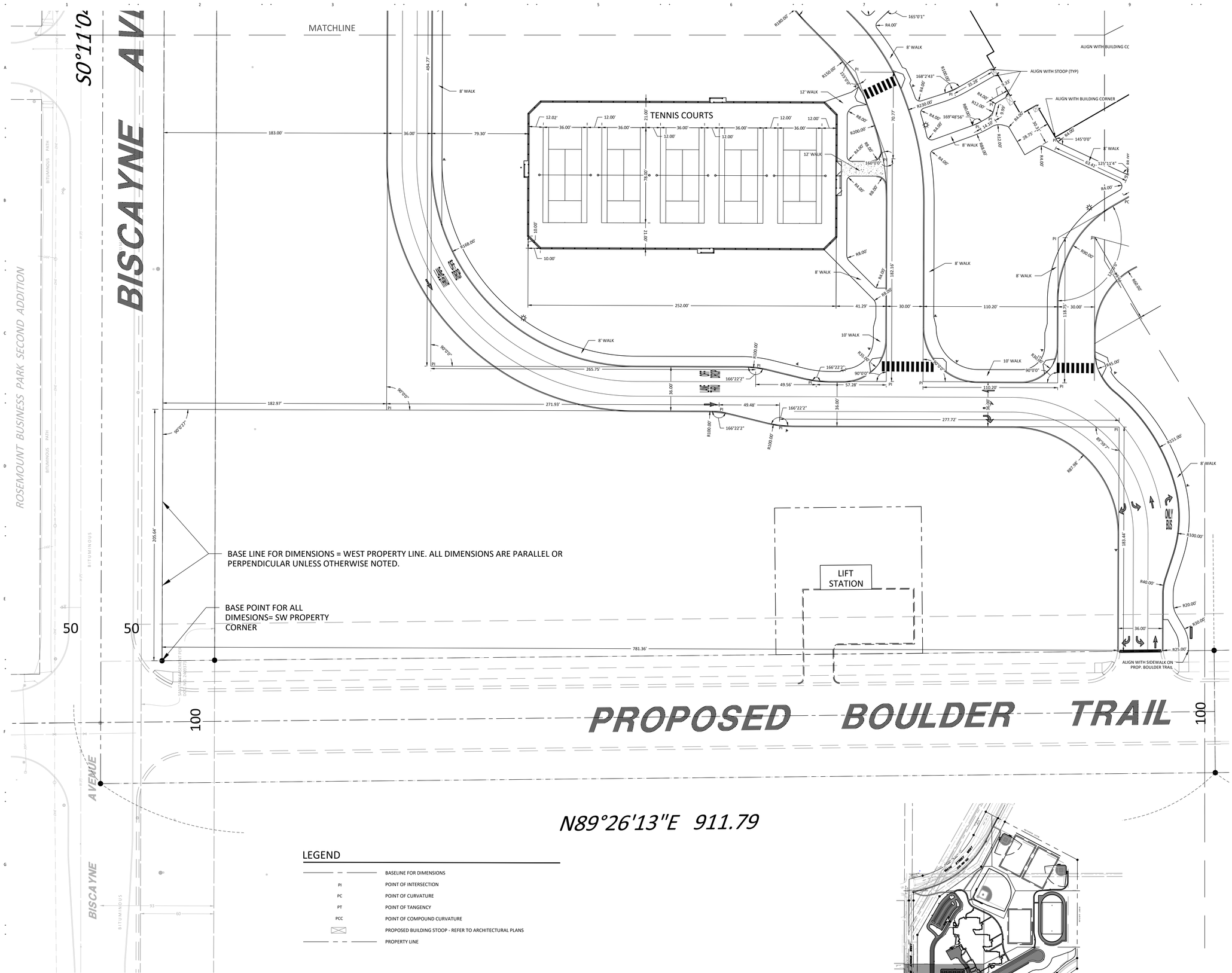
Comm: 232086
Date: 07/31/2024
Drawn: JDO
Check: DAR

North

GEOMETRIC PLAN OVERALL

Scale: 1" = 300'

C1.01



MN

C

LEGEND

— — —	BASELINE FOR DIMENSIONS
PI	POINT OF INTERSECTION
PC	POINT OF CURVATURE
PT	POINT OF TANGENCY
PCC	POINT OF COMPOUND CURVATURE
⊠	PROPOSED BUILDING STOOP - REFER TO ARCHITECTURAL PLANS
— — —	PROPERTY LINE

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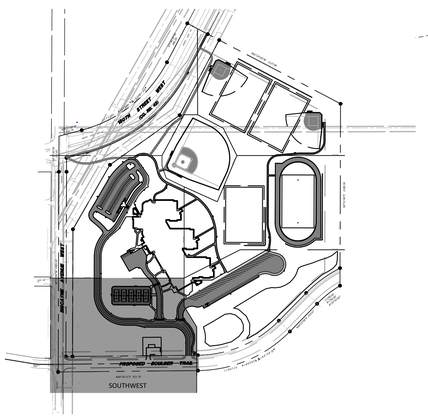

KEYMAP
1"=400'

HORZ. 0 30 60
SCALE FEET

CITY SUBMITTAL - NOT FOR CONSTRUCTION

New Rosemount Middle School

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DAVID A. REY
LIC. NO. 40180 DATE 07/31/2024

Revisions		
Description	Date	Num

Comm: 232086
Date: 07/31/2024
Drawn: JDO
Check: DAR

North

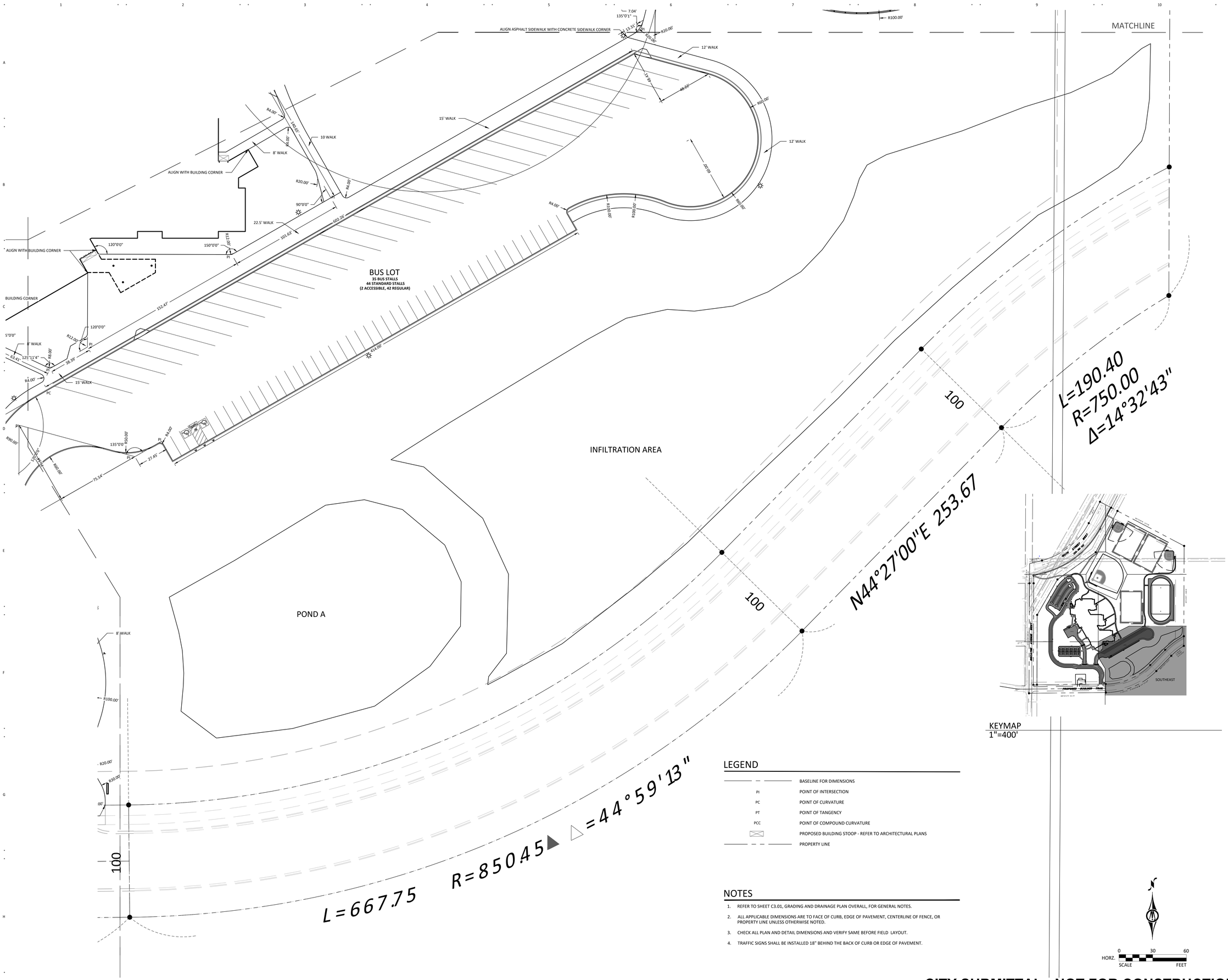
GEOMETRIC PLAN
SOUTHWEST

Scale: 1" = 30'

C1.02

MN

C



KEYMAP
1"=400'

LEGEND

	BASELINE FOR DIMENSIONS
PI	POINT OF INTERSECTION
PC	POINT OF CURVATURE
PT	POINT OF TANGENCY
PCC	POINT OF COMPOUND CURVATURE
	PROPOSED BUILDING STOOP - REFER TO ARCHITECTURAL PLANS
	PROPERTY LINE

NOTES

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HORZ. SCALE 0 30 60 FEET

CITY SUBMITTAL - NOT FOR CONSTRUCTION

New Rosemount Middle School

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DAVID A. REY
LIC. NO. 40180 DATE 07/31/2024

Revisions		
Description	Date	Num

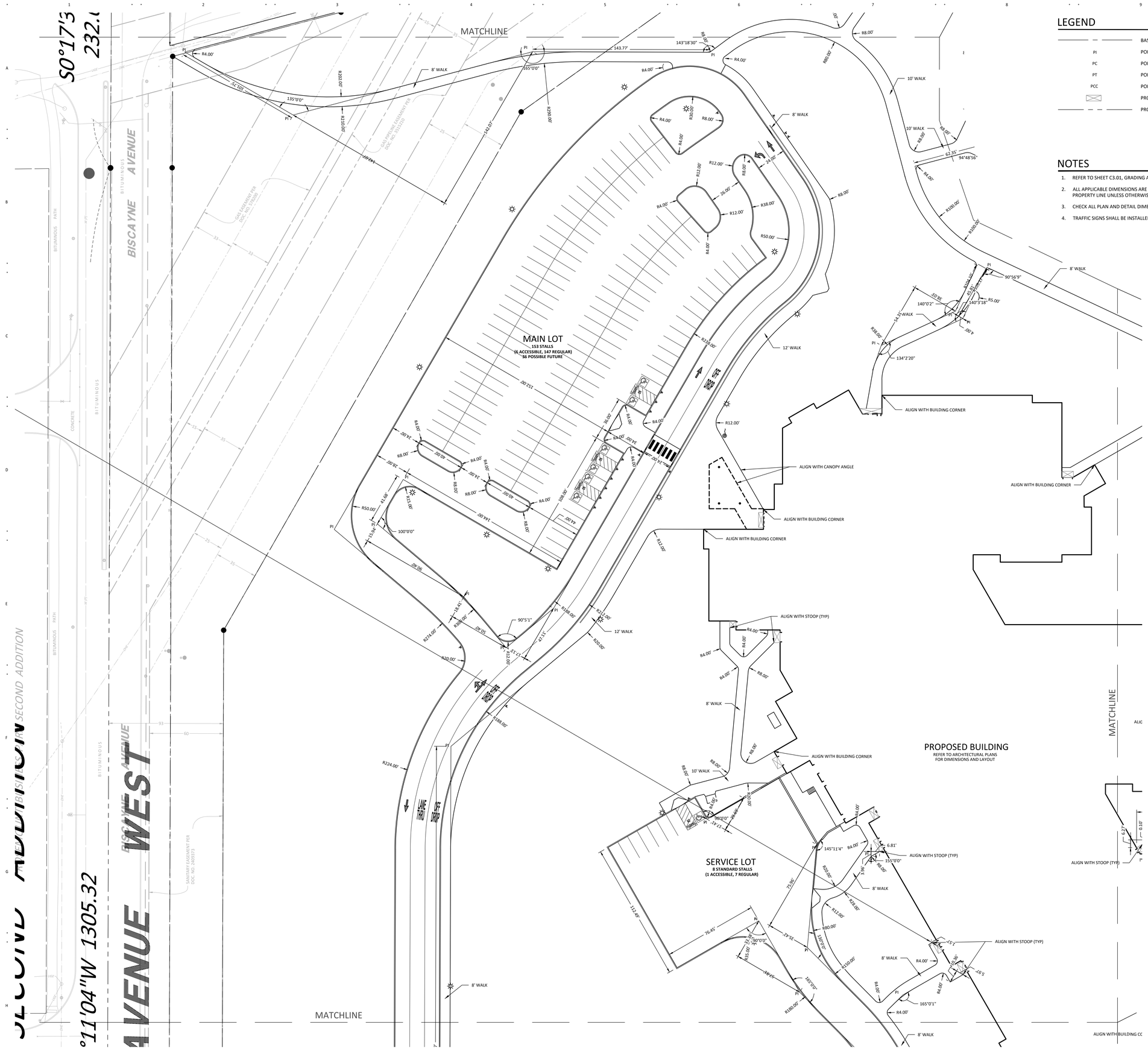
Comm: 232086
Date: 07/31/2024
Drawn: JDO
Check: DAR

North

GEOMETRIC PLAN
SOUTHEAST

Scale: 1" = 30'

C1.03



LEGEND

— — —	BASELINE FOR DIMENSIONS
PI	POINT OF INTERSECTION
PC	POINT OF CURVATURE
PT	POINT OF TANGENCY
PCC	POINT OF COMPOUND CURVATURE
⊠	PROPOSED BUILDING STOOP - REFER TO ARCHITECTURAL PLANS
— — —	PROPERTY LINE

NOTES

1. REFER TO SHEET C3.01, GRADING AND DRAINAGE PLAN OVERALL, FOR GENERAL NOTES.
2. ALL APPLICABLE DIMENSIONS ARE TO FACE OF CURB, EDGE OF PAVEMENT, CENTERLINE OF FENCE, OR PROPERTY LINE UNLESS OTHERWISE NOTED.
3. CHECK ALL PLAN AND DETAIL DIMENSIONS AND VERIFY SAME BEFORE FIELD LAYOUT.
4. TRAFFIC SIGNS SHALL BE INSTALLED 18" BEHIND THE BACK OF CURB OR EDGE OF PAVEMENT.

New Rosemount Middle School

Rosemount, Minnesota 55088

Independent School District #196
3455 153RD STREET WEST
ROSEMOUNT, MINNESOTA 55068

WOLD ARCHITECTS AND ENGINEERS
332 Minnesota Street, Suite W2000
Saint Paul, MN 55101
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Email: plymouth@bolton-menk.com
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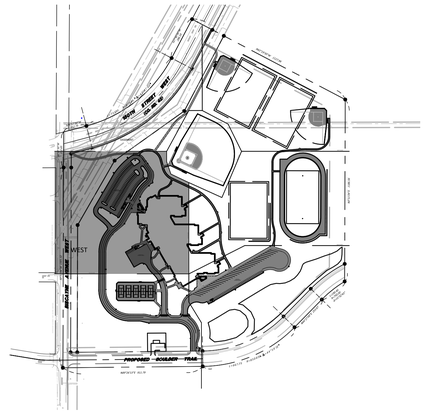


KEYMAP
1"=400'

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.

DAVID A. REY
LIC. NO. 40180 DATE 07/31/2024

Revisions		
Description	Date	Num

Comm: 232086
Date: 07/31/2024
Drawn: JDO
Check: DAR

North

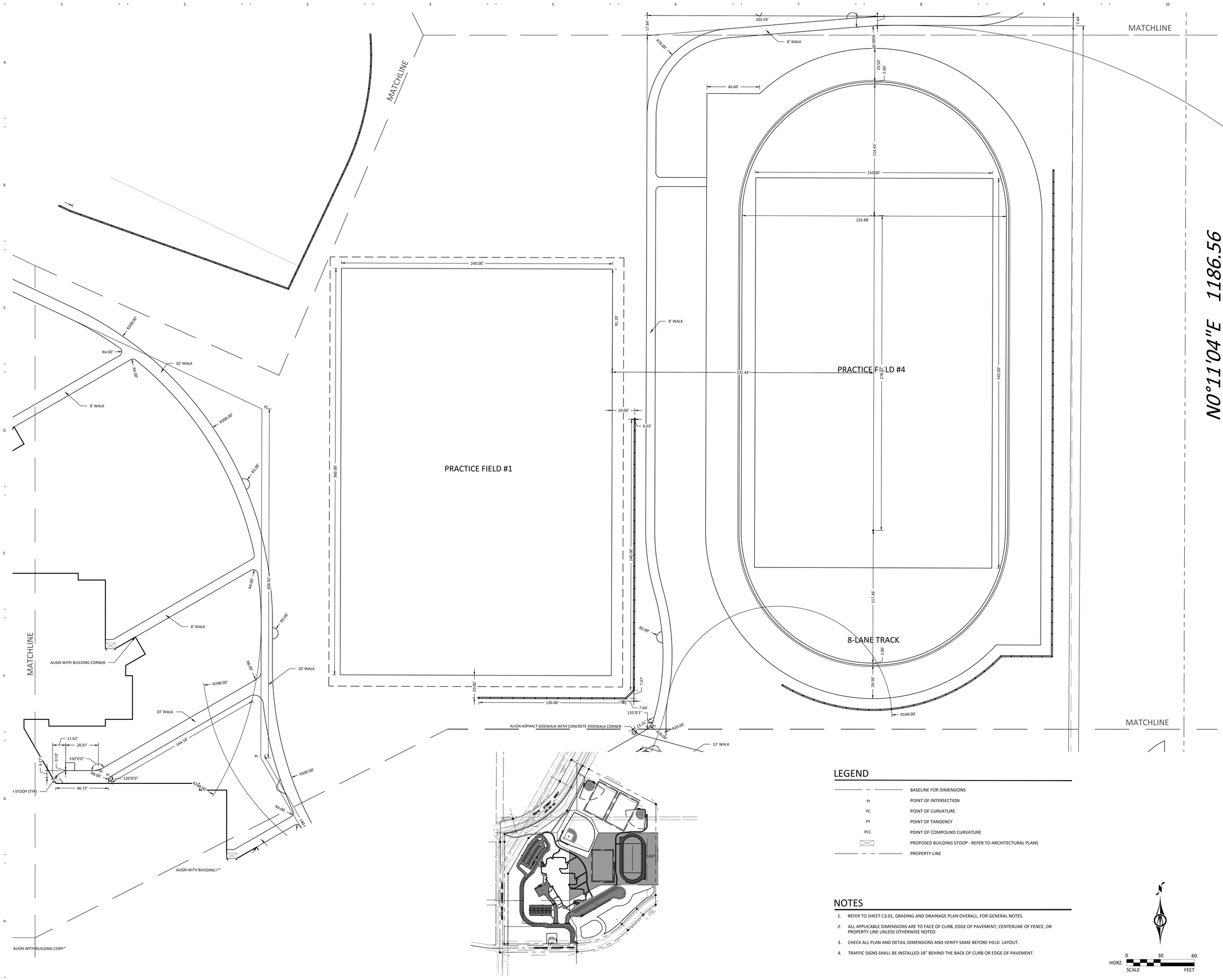
GEOMETRIC PLAN
WEST

Scale: 1" = 30'

C1.04

HORZ. 0 30 60
SCALE FEET

CITY SUBMITTAL - NOT FOR CONSTRUCTION



MN

C

KEYMAP
1"=400'

LEGEND

	BASELINE FOR DIMENSIONS
PI	POINT OF INTERSECTION
PC	POINT OF CURVATURE
PT	POINT OF TANGENCY
PCC	POINT OF COMPOUND CURVATURE
	PROPOSED BUILDING STOOP - REFER TO ARCHITECTURAL PLANS
	PROPERTY LINE

NOTES

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HORZ. 0 30 60
SCALE FEET

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Description	Date	Num

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North

GEOMETRIC PLAN EAST

Scale: 1" = 30'

C1.05

LEGEND

——— — ———	BASELINE FOR DIMENSIONS
PI	POINT OF INTERSECTION
PC	POINT OF CURVATURE
PT	POINT OF TANGENCY
PCC	POINT OF COMPOUND CURVATURE
⊠	PROPOSED BUILDING STOOP - REFER TO ARCHITECTURAL PLANS
——— — ———	PROPERTY LINE

NOTES

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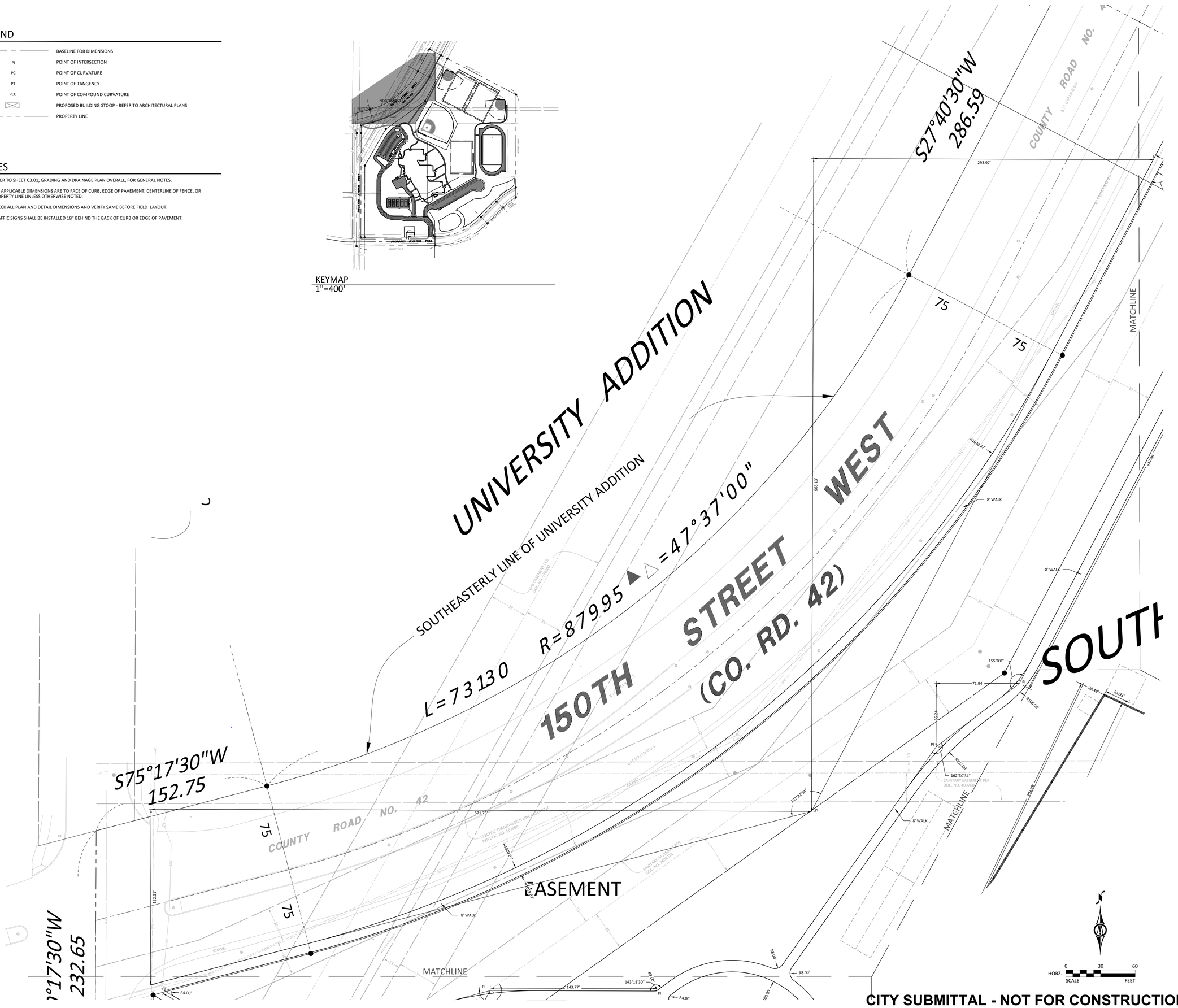
KEYMAP
1"=400'



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New Rosemount Middle School

Rosemount, Minnesota 55088

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DAVID A. REY
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Revisions		
Description	Date	Num

Comm: 232086
Date: 07/31/2024
Drawn: JDO
Check: DAR
North

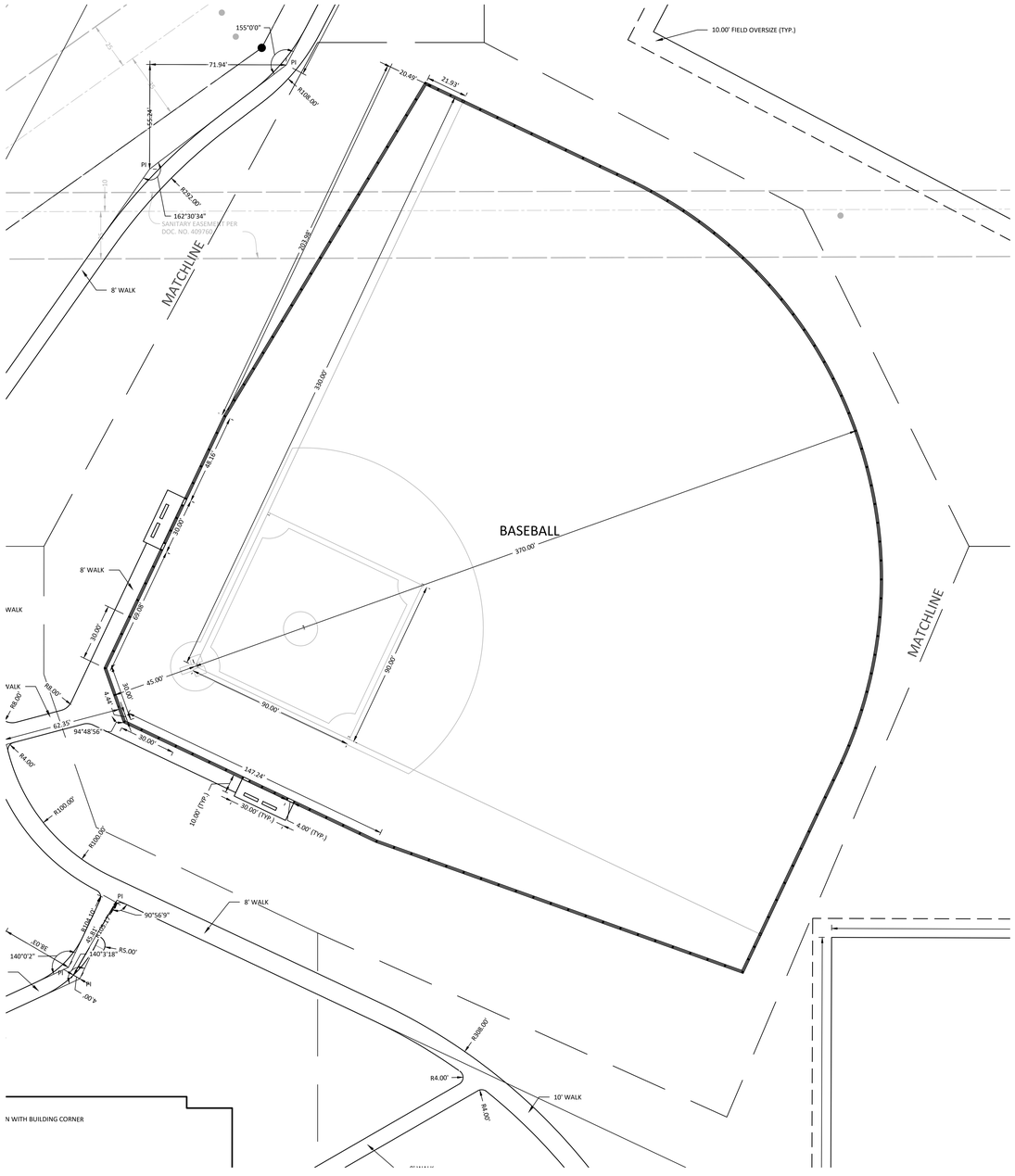
GEOMETRIC PLAN
NORTHWEST

Scale: 1" = 30'

C1.06

MN

C



LEGEND

	BASELINE FOR DIMENSIONS
PI	POINT OF INTERSECTION
PC	POINT OF CURVATURE
PT	POINT OF TANGENCY
PCC	POINT OF COMPOUND CURVATURE
	PROPOSED BUILDING STOOP - REFER TO ARCHITECTURAL PLANS
	PROPERTY LINE

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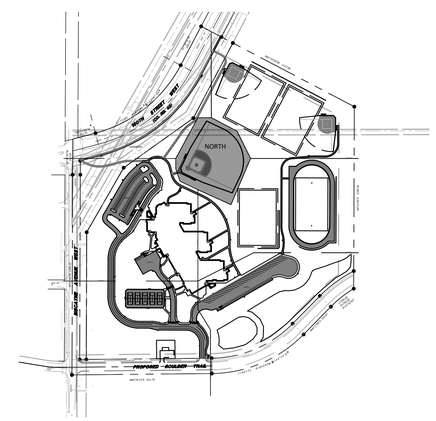

KEYMAP
1"=400'

HORZ. 0 30 60
SCALE FEET

New Rosemount Middle School

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Independent School District #196

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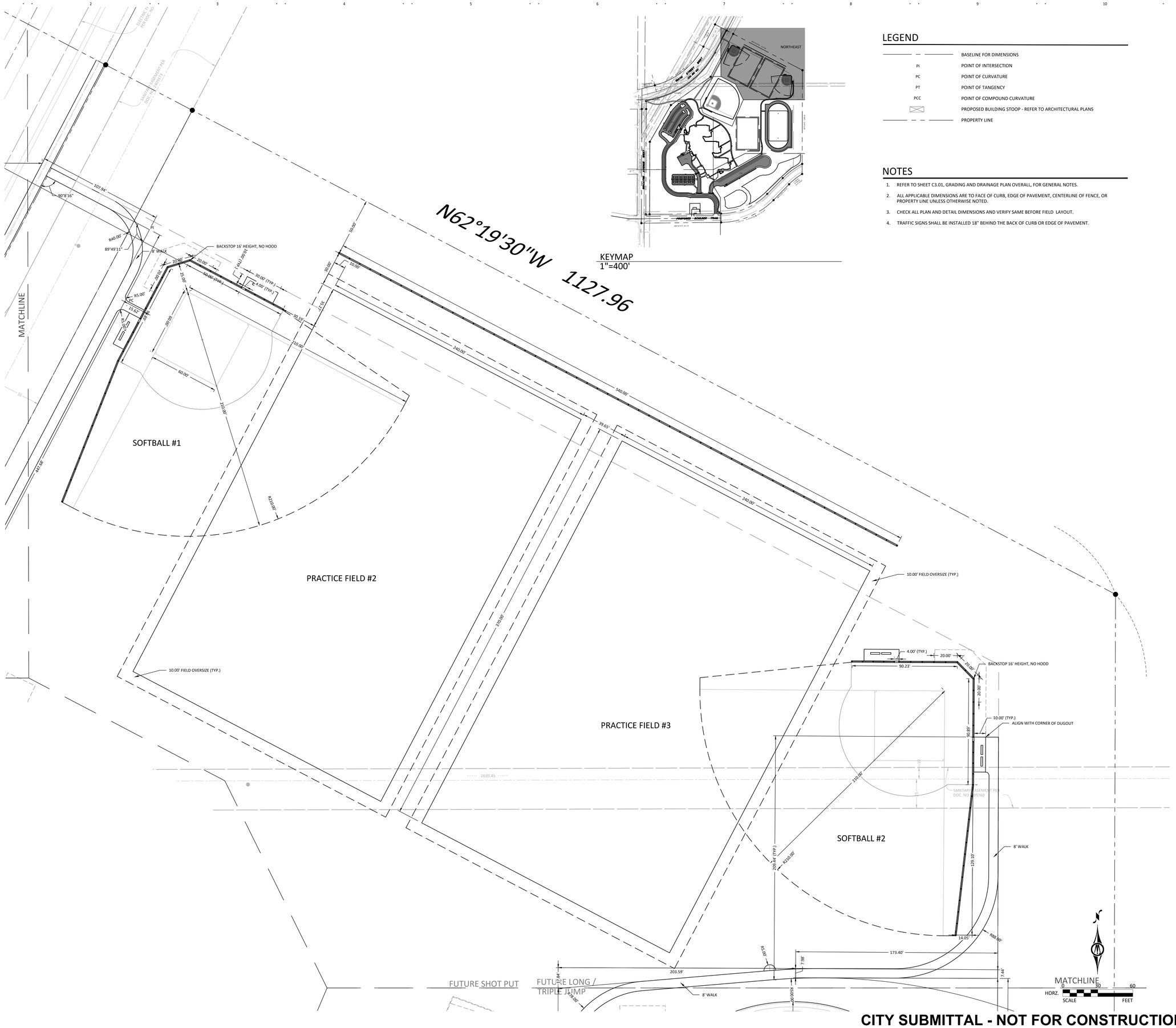
North

GEOMETRIC PLAN
NORTH

Scale: 1" = 30'

C1.07

CITY SUBMITTAL - NOT FOR CONSTRUCTION



KEYMAP
1"=400'

LEGEND

	BASELINE FOR DIMENSIONS
PI	POINT OF INTERSECTION
PC	POINT OF CURVATURE
PT	POINT OF TANGENCY
PCC	POINT OF COMPOUND CURVATURE
	PROPOSED BUILDING STOOP - REFER TO ARCHITECTURAL PLANS
	PROPERTY LINE

NOTES

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CITY SUBMITTAL - NOT FOR CONSTRUCTION

New Rosemount Middle School

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DAVID A. REY
LIC. NO. 40180 DATE 07/31/2024

Revisions		
Description	Date	Num

Comm: 232086
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Check: DAR

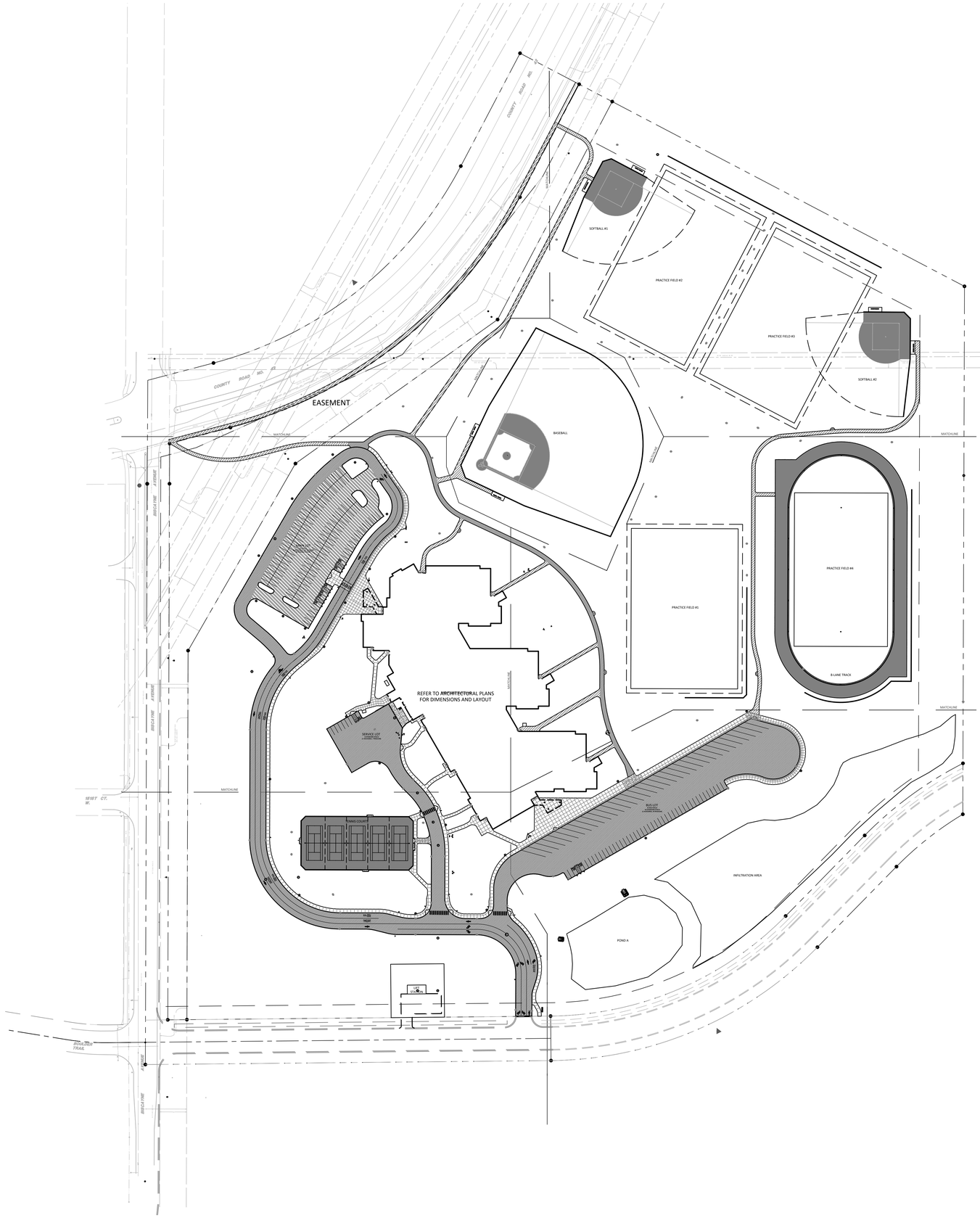
North

GEOMETRIC PLAN
NORTHEAST

Scale: 1" = 30'

C1.08

MN



C

LEGEND

1 / C5.01	REFERENCE KEY TO SITE DETAILS DETAIL I.D. NUMBER (TOP) DETAIL SHEET NUMBER (BOTTOM)
17 / C5.02	PROPOSED CONCRETE WALK
16 / C5.02	PROPOSED CONCRETE SLAB
10 / C5.03	PROPOSED LIGHT DUTY ASPHALT PAVEMENT
11 / C5.03	PROPOSED MEDIUM DUTY ASPHALT PAVEMENT
12 / C5.03	PROPOSED HEAVY DUTY ASPHALT PAVEMENT
8 / C5.04, 15 / C5.03	PROPOSED AGLIME
13 / C5.03	PROPOSED ATHLETIC ASPHALT PAVEMENT WITH RESILIENT SURFACING
11 / C5.04	PROPOSED CHAIN LINK FENCING WITH MAINTENANCE STRIP
	FENCING KEY NOTE
13 / C5.04, 14 / C5.04, 15 / C5.04, 16 / C5.04	PROPOSED TRAFFIC SIGN
A	SIGNAGE KEY NOTE
9 / C5.04	PROPOSED BOLLARD
	PROPOSED ACCESSIBLE SYMBOL
2 / C5.02, 7 / C5.02	PROPOSED MANHOLE (MH)
3 / C5.02	PROPOSED CATCH BASIN (CB)
5 / C5.02	PROPOSED RISER INLET (RI)
15 / C5.01	PROPOSED FLARED END SECTION (FES)
10 / C5.02	PROPOSED HYDRANT (HYD)
11 / C5.02	PROPOSED GATE VALVE (GV)
13 / C5.02	PROPOSED POST INDICATOR VALVE (PIV)
	PROPOSED FLAGPOLE - REFER TO ARCHITECTURAL PLANS
	PROPOSED BUILDING STOOP - REFER TO ARCHITECTURAL PLANS
	PROPOSED LIGHT POLE - REFER TO ELECTRICAL PLANS
	PROPERTY LINE

NOTES

1. REFER TO SHEET C3.01, GRADING AND DRAINAGE PLAN OVERALL, FOR GENERAL NOTES.
2. REFER TO BOULDER TRAIL SHEETS C6.01 - C6.03, STREET PLANS AND PROFILES, FOR BOULDER TRAIL.
3. CHECK ALL PLAN AND DETAIL DIMENSIONS AND VERIFY SAME BEFORE FIELD LAYOUT.
4. TRAFFIC SIGNS SHALL BE INSTALLED 18" BEHIND THE BACK OF CURB OR EDGE OF PAVEMENT.

HORZ. 0 100 200
SCALE FEET

CITY SUBMITTAL - NOT FOR CONSTRUCTION

New Rosemount Middle School

Rosemount, Minnesota 55088

Independent School District #196
3455 153RD STREET WEST
ROSEMOUNT, MINNESOTA 55068

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LAURA J. DETZLER
LIC. NO. 53753 DATE 07/31/2024

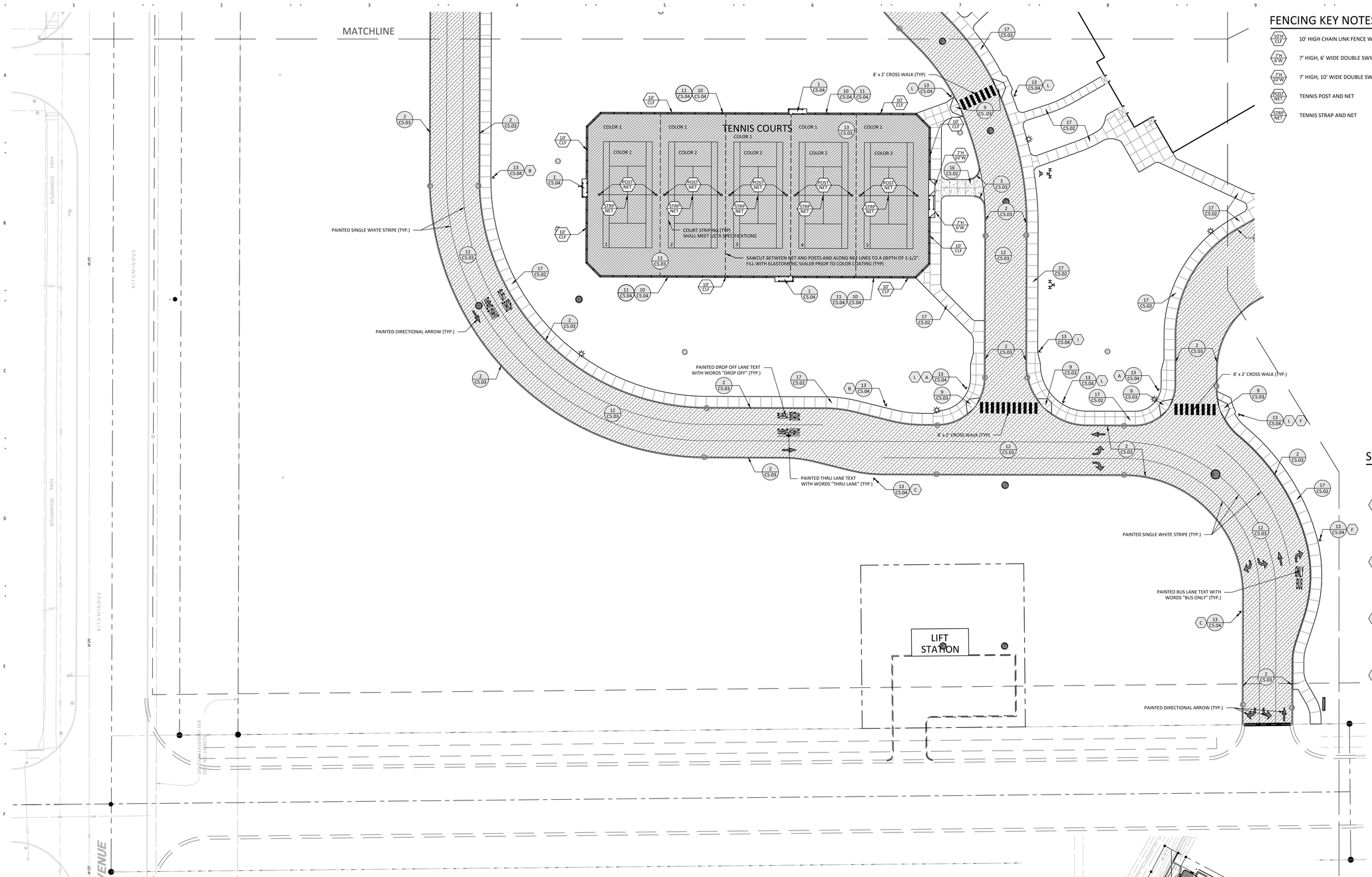
Revisions		
Description	Date	Num

Comm: 232086
Date: 07/31/2024
Drawn: LJD
Check: LJD
North

FINISHING PLAN OVERALL

Scale: 1" = 100'

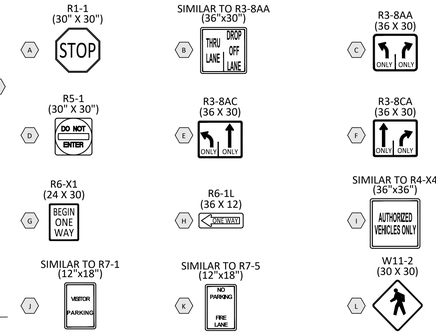
C1.10



FENCING KEY NOTES

- 10'H CLF — 10' HIGH CHAIN LINK FENCE WITH TOP AND BOTTOM RAIL
- 7'H 6'W — 7' HIGH, 6' WIDE DOUBLE SWING GATE WITH LOCKING DEVICE
- 7'H 10'W — 7' HIGH, 10' WIDE DOUBLE SWING GATE WITH LOCKING DEVICE
- POST NET — TENNIS POST AND NET
- STRP NET — TENNIS STRAP AND NET

SIGNAGE KEY NOTES



LEGEND

- 1 / C5.01 — REFERENCE KEY TO SITE DETAILS (DETAIL I.D. NUMBER (TOP) / DETAIL SHEET NUMBER (BOTTOM))
- PROPOSED CONCRETE WALK (17 / C5.02)
- PROPOSED CONCRETE SLAB (16 / C5.02)
- PROPOSED LIGHT DUTY ASPHALT PAVEMENT (10 / C5.03)
- PROPOSED MEDIUM DUTY ASPHALT PAVEMENT (11 / C5.03)
- PROPOSED HEAVY DUTY ASPHALT PAVEMENT (12 / C5.03)
- PROPOSED AGLIME (8 / C5.04, 15 / C5.03)
- PROPOSED ATHLETIC ASPHALT PAVEMENT WITH RESILIENT SURFACING (13 / C5.03)
- PROPOSED CHAIN LINK FENCING WITH MAINTENANCE STRIP (11 / C5.04)
- FENCING KEY NOTE
- PROPOSED TRAFFIC SIGN (13 / C5.04, 14 / C5.04, 15 / C5.04, 16 / C5.04)
- SIGNAGE KEY NOTE
- PROPOSED BOLLARD (9 / C5.04)
- PROPOSED ACCESSIBLE SYMBOL
- PROPOSED MANHOLE (MH) (2 / C5.02, 7 / C5.02)
- PROPOSED CATCH BASIN (CB) (5 / C5.02)
- PROPOSED RISER INLET (RI) (5 / C5.02)
- PROPOSED FLARED END SECTION (FES) (15 / C5.01)
- PROPOSED HYDRANT (HYD) (10 / C5.02)
- PROPOSED GATE VALVE (GV) (11 / C5.02)
- PROPOSED POST INDICATOR VALVE (PIV) (13 / C5.02)
- PROPOSED FLAGPOLE - REFER TO ARCHITECTURAL PLANS
- PROPOSED BUILDING STOOP - REFER TO ARCHITECTURAL PLANS
- PROPOSED LIGHT POLE - REFER TO ELECTRICAL PLANS
- PROPERTY LINE

NOTES

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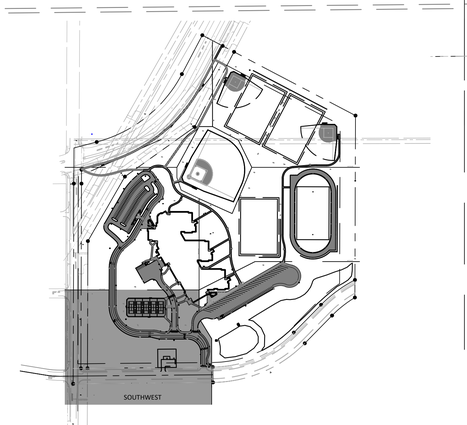
2. REFER TO SHEET C1.10, FINISHING PLAN OVERALL, FOR FINISHING NOTES.



KEYMAP
1"=400'

HORZ. 0 30 60 SCALE FEET

New Rosemount Middle School

Rosemount, Minnesota 55088

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LAURA J. DETZLER
LIC. NO. 53753 DATE 07/31/2024

Revisions		
Description	Date	Num

Comm: 232086
Date: 07/31/2024
Drawn: LJD
Check: LJD
North

FINISHING PLAN SOUTHWEST

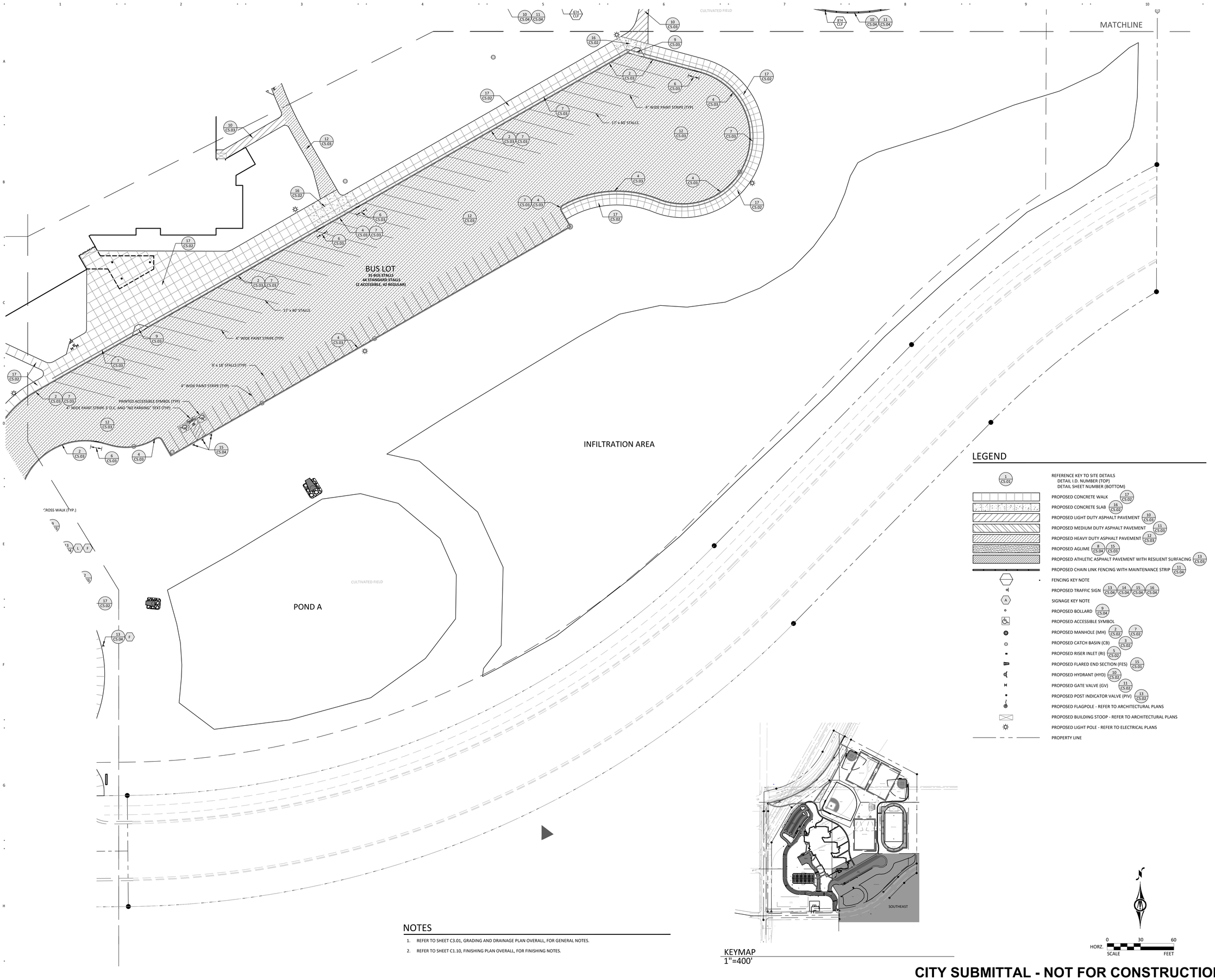
Scale: 1" = 30'

C1.11

CITY SUBMITTAL - NOT FOR CONSTRUCTION

MN

C



NOTES

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2. REFER TO SHEET C1.10, FINISHING PLAN OVERALL, FOR FINISHING NOTES.

KEYMAP
1"=400'

LEGEND

- REFERENCE KEY TO SITE DETAILS (1 / C5.01) — DETAIL I.D. NUMBER (TOP), DETAIL SHEET NUMBER (BOTTOM)
- PROPOSED CONCRETE WALK (17 / C5.02)
- PROPOSED CONCRETE SLAB (16 / C5.02)
- PROPOSED LIGHT DUTY ASPHALT PAVEMENT (10 / C5.03)
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- FENCING KEY NOTE
- PROPOSED TRAFFIC SIGN (13 / C5.04) (14 / C5.04) (15 / C5.04) (16 / C5.04)
- SIGNAGE KEY NOTE (A)
- PROPOSED BOLLARD (9 / C5.04)
- PROPOSED ACCESSIBLE SYMBOL
- PROPOSED MANHOLE (MH) (2 / C5.02) (7 / C5.02)
- PROPOSED CATCH BASIN (CB) (3 / C5.02)
- PROPOSED RISER INLET (RI) (5 / C5.02)
- PROPOSED FLARED END SECTION (FES) (15 / C5.01)
- PROPOSED HYDRANT (HYD) (10 / C5.02)
- PROPOSED GATE VALVE (GV) (11 / C5.02)
- PROPOSED POST INDICATOR VALVE (PIV) (13 / C5.02)
- PROPOSED FLAGPOLE - REFER TO ARCHITECTURAL PLANS
- PROPOSED BUILDING STOOP - REFER TO ARCHITECTURAL PLANS
- PROPOSED LIGHT POLE - REFER TO ELECTRICAL PLANS
- PROPERTY LINE

HORZ. 0 30 60
SCALE FEET

New Rosemount Middle School

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LAURA J. DETZLER
LIC. NO. 53753 DATE 07/31/2024

Revisions		
Description	Date	Num

Comm: 232086
Date: 07/31/2024
Drawn: LJD
Check: LJD
North

FINISHING PLAN
SOUTHEAST

Scale: 1" = 30'

C1.12

CITY SUBMITTAL - NOT FOR CONSTRUCTION

MN

C

MATCHLINE

BISCAYNE AVENUE

BITUMINOUS PATH

BITUMINOUS

CONCRETE

GAS EASEMENT PER DOC. NO. 3125210

GAS EASEMENT PER DOC. NO. 3125000

CABLTAV EASEMENT PER DOC. NO. 3125210

MAIN LOT
153 STALLS
(6 ACCESSIBLE, 147 REGULAR)
30 POSSIBLE FUTURE

4" WIDE PAINT STRIPE (TYP)

9' x 20' STALLS (TYP)

4" WIDE PAINT STRIPE 3' O.C. AND "NO PARKING" TEXT (TYP)

PAINTED ACCESSIBLE SYMBOL (TYP)

PAINTED DIRECTIONAL ARROW (TYP.)

PAINTED SINGLE WHITE STRIPE (TYP.)

2' x 8' CROSSWALK (TYP.)

PAINTED SINGLE WHITE STRIP (TYP.)

PAINTED THRU LANE TEXT WITH WORDS "THRU LANE" (TYP.)

PAINTED DIRECTIONAL ARROW (TYP.)

PAINTED DROP OFF LANE TEXT WITH WORDS "DROP OFF" (TYP.)

PAINTED SINGLE WHITE STRIPES

SERVICE LOT
8 STANDARD STALLS
(1 ACCESSIBLE, 7 REGULAR)

4" WIDE PAINT STRIPE (TYP)

9' x 18' STALLS (TYP)

PAINTED ACCESSIBLE SYMBOL (TYP)

4" WIDE PAINT STRIPE 3' O.C. AND "NO PARKING" TEXT (TYP)

PROPOSED BUILDING
REFER TO ARCHITECTURAL PLANS
FOR DIMENSIONS AND LAYOUT

MATCHLINE

MATCHLINE

KEYMAP
1"=400'

LEGEND

1 / C5.01	REFERENCE KEY TO SITE DETAILS DETAIL I.D. NUMBER (TOP) DETAIL SHEET NUMBER (BOTTOM)
	PROPOSED CONCRETE WALK (17 / C5.02)
	PROPOSED CONCRETE SLAB (16 / C5.02)
	PROPOSED LIGHT DUTY ASPHALT PAVEMENT (10 / C5.03)
	PROPOSED MEDIUM DUTY ASPHALT PAVEMENT (11 / C5.03)
	PROPOSED HEAVY DUTY ASPHALT PAVEMENT (12 / C5.03)
	PROPOSED AGLIME (8 / C5.04) (15 / C5.03)
	PROPOSED ATHLETIC ASPHALT PAVEMENT WITH RESILIENT SURFACING (13 / C5.03)
	PROPOSED CHAIN LINK FENCING WITH MAINTENANCE STRIP (11 / C5.04)
	FENCING KEY NOTE
	PROPOSED TRAFFIC SIGN (13 / C5.04) (14 / C5.04) (15 / C5.04) (16 / C5.04)
A	SIGNAGE KEY NOTE
	PROPOSED BOLLARD (9 / C5.04)
	PROPOSED ACCESSIBLE SYMBOL
	PROPOSED MANHOLE (MH) (2 / C5.02) (7 / C5.02)
	PROPOSED CATCH BASIN (CB) (3 / C5.02)
	PROPOSED RISER INLET (RI) (5 / C5.02)
	PROPOSED FLARED END SECTION (FES) (15 / C5.01)
	PROPOSED HYDRANT (HYD) (10 / C5.02)
	PROPOSED GATE VALVE (GV) (11 / C5.02)
	PROPOSED POST INDICATOR VALVE (PIV) (13 / C5.02)
	PROPOSED FLAGPOLE - REFER TO ARCHITECTURAL PLANS
	PROPOSED BUILDING STOOP - REFER TO ARCHITECTURAL PLANS
	PROPOSED LIGHT POLE - REFER TO ELECTRICAL PLANS
	PROPERTY LINE
	SAWCUT

NOTES

1. REFER TO SHEET C3.01, GRADING AND DRAINAGE PLAN OVERALL, FOR GENERAL NOTES.
2. REFER TO SHEET C1.10, FINISHING PLAN OVERALL, FOR FINISHING NOTES.
3. REFER TO SHEET C1.11 FOR SIGNAGE KEY NOTES.

FENCING KEY NOTES

10' / CLF	10' HIGH CHAIN LINK FENCE WITH TOP AND BOTTOM RAIL
7' H / 6' W	7' HIGH 6' WIDE SINGLE SWING GATE WITH LOCKING DEVICE (12 / C5.04)
7' H / 10' W	7' HIGH 10' WIDE DOUBLE SWING GATE WITH LOCKING DEVICE (12 / C5.04)

HORZ. SCALE 0 30 60 FEET

New Rosemount Middle School

Rosemount, Minnesota 55088

Independent School District #196

3455 153RD STREET WEST
ROSEMOUNT, MINNESOTA 55068

WOLD ARCHITECTS AND ENGINEERS
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LAURA J. DETZLER
LIC. NO. 53753 DATE 07/31/2024

Revisions		
Description	Date	Num

Comm: 232086
Date: 07/31/2024
Drawn: LJD
Check: LJD

North

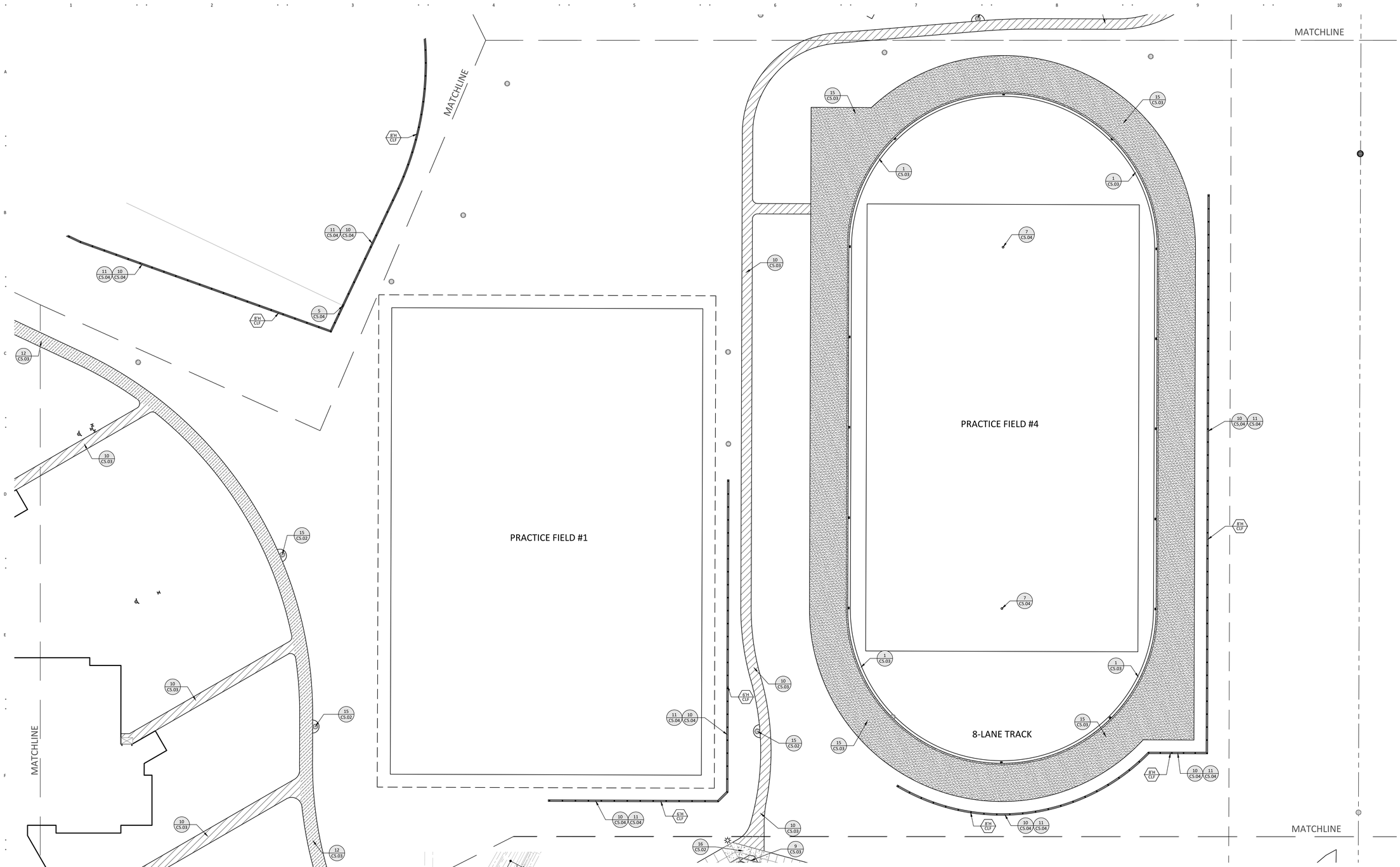
FINISHING PLAN WEST

Scale: 1" = 30'

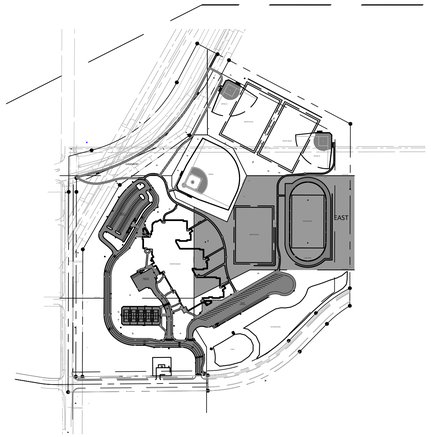
C1.13

CITY SUBMITTAL - NOT FOR CONSTRUCTION

MN



C



KEYMAP
1"=400'

LEGEND

- 1 C5.01 — REFERENCE KEY TO SITE DETAILS (DETAIL I.D. NUMBER (TOP), DETAIL SHEET NUMBER (BOTTOM))
- PROPOSED CONCRETE WALK (17 C5.02)
- PROPOSED CONCRETE SLAB (16 C5.02)
- PROPOSED LIGHT DUTY ASPHALT PAVEMENT (10 C5.03)
- PROPOSED MEDIUM DUTY ASPHALT PAVEMENT (11 C5.03)
- PROPOSED HEAVY DUTY ASPHALT PAVEMENT (12 C5.03)
- PROPOSED AGLIME (8 C5.04, 15 C5.03)
- PROPOSED ATHLETIC ASPHALT PAVEMENT WITH RESILIENT SURFACING (13 C5.03)
- PROPOSED CHAIN LINK FENCING WITH MAINTENANCE STRIP (11 C5.04)
- FENCING KEY NOTE
- PROPOSED TRAFFIC SIGN (13 C5.04, 14 C5.04, 15 C5.04, 16 C5.04)
- SIGNAGE KEY NOTE
- PROPOSED BOLLARD (9 C5.04)
- PROPOSED ACCESSIBLE SYMBOL
- PROPOSED MANHOLE (MH) (2 C5.02, 7 C5.02)
- PROPOSED CATCH BASIN (CB) (3 C5.02)
- PROPOSED RISER INLET (RI) (5 C5.02)
- PROPOSED FLARED END SECTION (FES) (15 C5.01)
- PROPOSED HYDRANT (HYD) (10 C5.02)
- PROPOSED GATE VALVE (GV) (11 C5.02)
- PROPOSED POST INDICATOR VALVE (PIV) (13 C5.02)
- PROPOSED FLAGPOLE - REFER TO ARCHITECTURAL PLANS
- PROPOSED BUILDING STOOP - REFER TO ARCHITECTURAL PLANS
- PROPOSED LIGHT POLE - REFER TO ELECTRICAL PLANS
- PROPERTY LINE

NOTES

1. REFER TO SHEET C3.01, GRADING AND DRAINAGE PLAN OVERALL, FOR GENERAL NOTES.
2. REFER TO SHEET C1.10, FINISHING PLAN OVERALL, FOR FINISHING NOTES.

FENCING KEY NOTES

- 6'H CLF — 6' HIGH CHAIN LINK FENCE WITH TOP AND BOTTOM RAIL
- 8'H CLF — 8' HIGH CHAIN LINK FENCE WITH TOP AND BOTTOM RAIL

HORZ. SCALE 0 30 60 FEET

CITY SUBMITTAL - NOT FOR CONSTRUCTION

New Rosemount Middle School

Rosemount, Minnesota 55088

Independent School District #196
3455 153RD STREET WEST
ROSEMOUNT, MINNESOTA 55068

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LAURA J. DETZLER
LIC. NO. 53753 DATE 07/31/2024

Revisions		
Description	Date	Num

Comm: 232086
Date: 07/31/2024
Drawn: LJD
Check: LJD
North

FINISHING PLAN EAST

Scale: 1" = 30'

C1.14

LEGEND

- 1 / C5.01 — REFERENCE KEY TO SITE DETAILS (DETAIL I.D. NUMBER (TOP), DETAIL SHEET NUMBER (BOTTOM))
- PROPOSED CONCRETE WALK — 17 / C5.02
- PROPOSED CONCRETE SLAB — 16 / C5.02
- PROPOSED LIGHT DUTY ASPHALT PAVEMENT — 10 / C5.03
- PROPOSED MEDIUM DUTY ASPHALT PAVEMENT — 11 / C5.03
- PROPOSED HEAVY DUTY ASPHALT PAVEMENT — 12 / C5.03
- PROPOSED AGLIME — 8 / C5.04, 15 / C5.03
- PROPOSED ATHLETIC ASPHALT PAVEMENT WITH RESILIENT SURFACING — 13 / C5.03
- PROPOSED CHAIN LINK FENCING WITH MAINTENANCE STRIP — 11 / C5.04
- FENCING KEY NOTE
- PROPOSED TRAFFIC SIGN — 13 / C5.04, 14 / C5.04, 15 / C5.04, 16 / C5.04
- SIGNAGE KEY NOTE
- PROPOSED BOLLARD — 9 / C5.04
- PROPOSED ACCESSIBLE SYMBOL
- PROPOSED MANHOLE (MH) — 2 / C5.02, 7 / C5.02
- PROPOSED CATCH BASIN (CB) — 3 / C5.02
- PROPOSED RISER INLET (RI) — 5 / C5.02
- PROPOSED FLARED END SECTION (FES) — 16 / C5.01
- PROPOSED HYDRANT (HYD) — 10 / C5.02
- PROPOSED GATE VALVE (GV) — 11 / C5.02
- PROPOSED POST INDICATOR VALVE (PIV) — 13 / C5.02
- PROPOSED FLAGPOLE - REFER TO ARCHITECTURAL PLANS
- PROPOSED BUILDING STOOP - REFER TO ARCHITECTURAL PLANS
- PROPOSED LIGHT POLE - REFER TO ELECTRICAL PLANS
- PROPERTY LINE

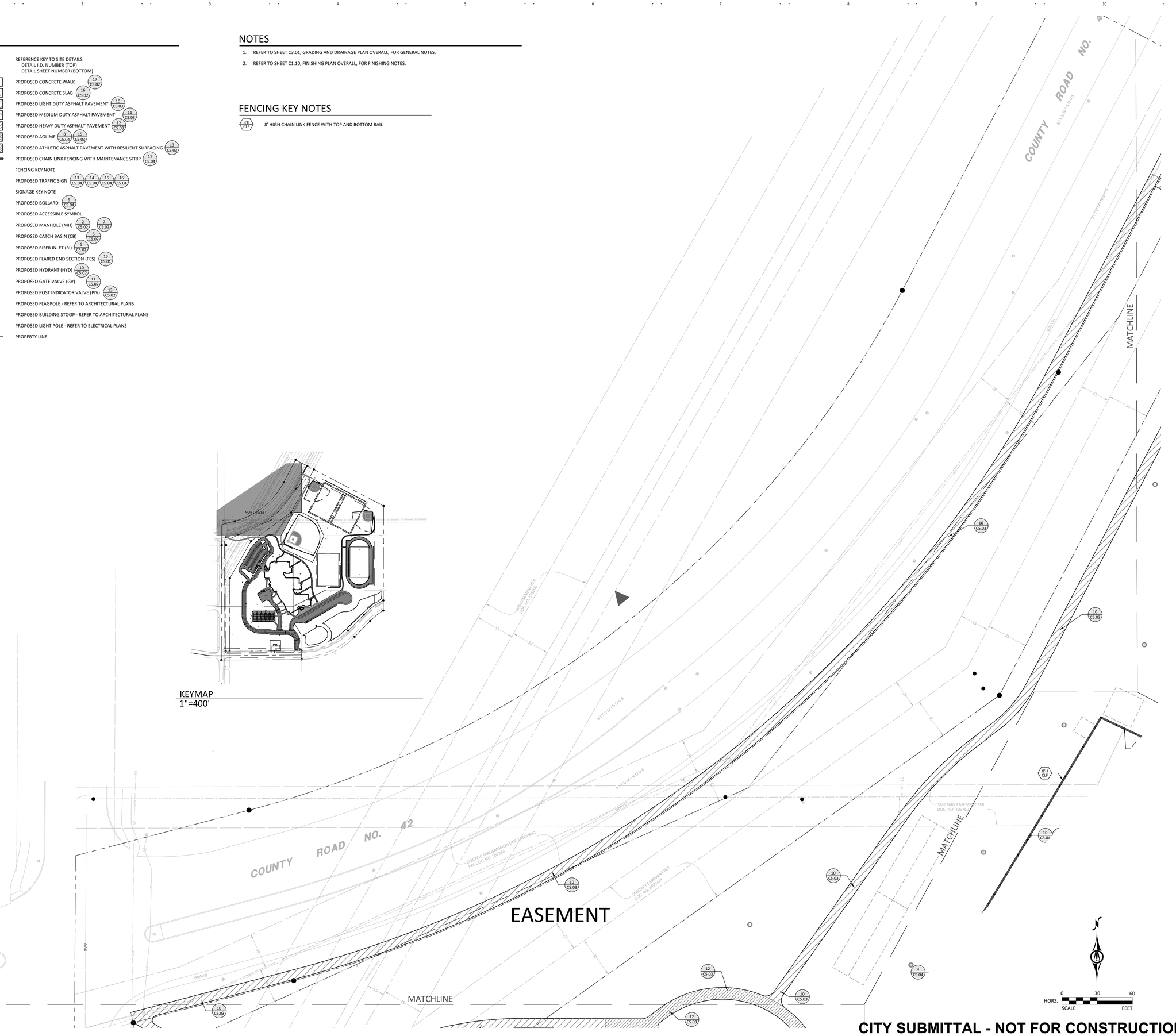
NOTES

1. REFER TO SHEET C3.01, GRADING AND DRAINAGE PLAN OVERALL, FOR GENERAL NOTES.
2. REFER TO SHEET C1.10, FINISHING PLAN OVERALL, FOR FINISHING NOTES.

FENCING KEY NOTES

- 8'H / CLF — 8' HIGH CHAIN LINK FENCE WITH TOP AND BOTTOM RAIL

KEYMAP
1"=400'



CITY SUBMITTAL - NOT FOR CONSTRUCTION

New Rosemount Middle School

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LAURA J. DETZLER
LIC. NO. 53753 DATE 07/31/2024

Revisions		
Description	Date	Num

Comm: 232086
Date: 07/31/2024
Drawn: LJD
Check: LJD
North

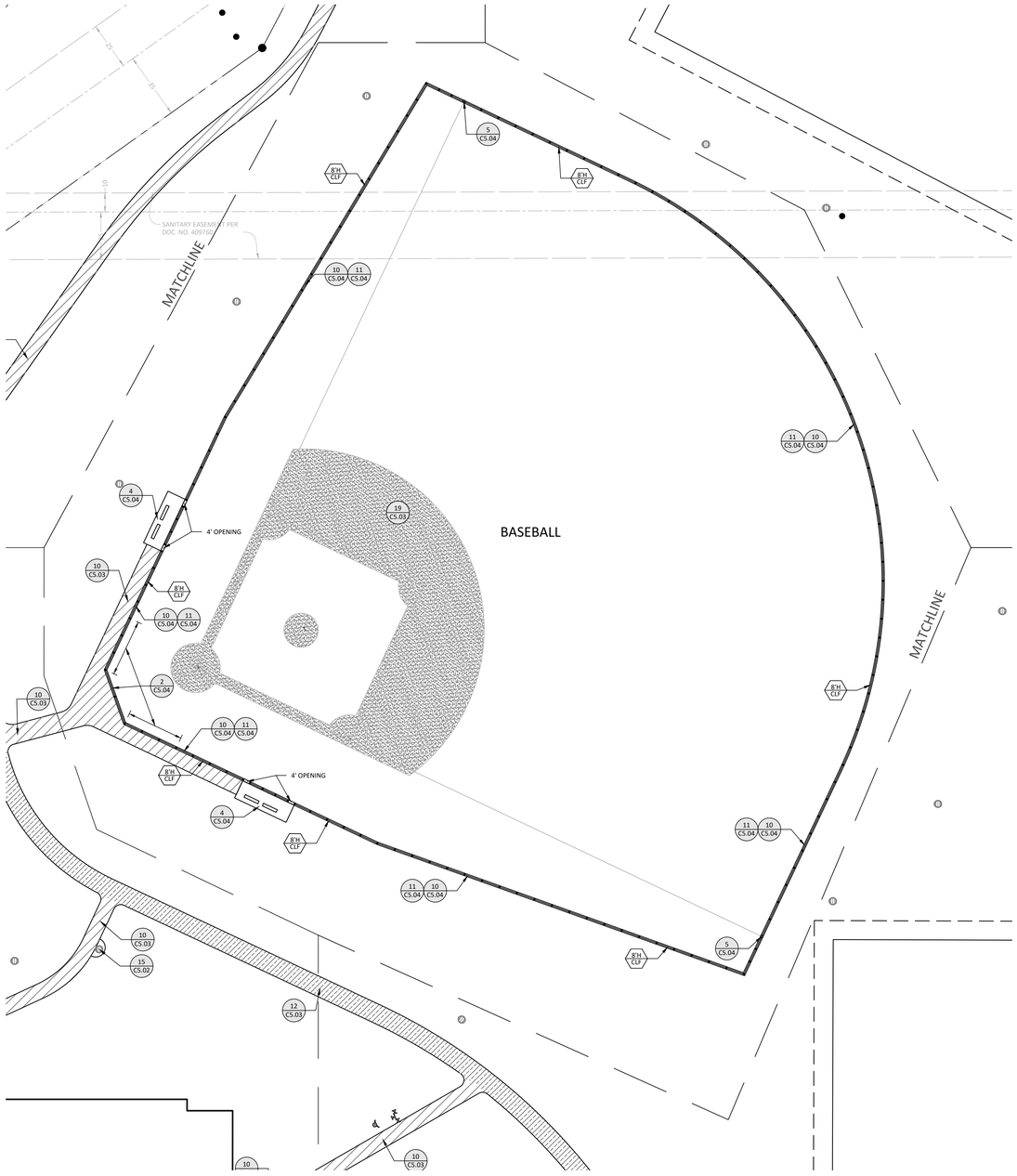
FINISHING PLAN
NORTHWEST

Scale: 1" = 30'

C1.15

MN

C



LEGEND

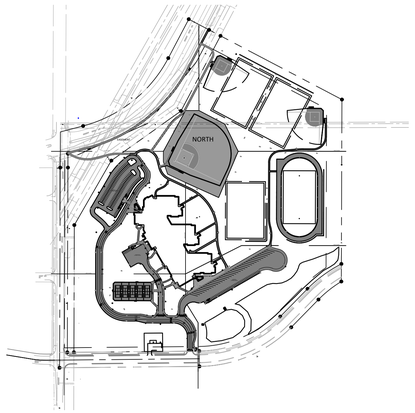
1 C5.01	REFERENCE KEY TO SITE DETAILS DETAIL I.D. NUMBER (TOP) DETAIL SHEET NUMBER (BOTTOM)
	PROPOSED CONCRETE WALK 17 C5.02
	PROPOSED CONCRETE SLAB 16 C5.02
	PROPOSED LIGHT DUTY ASPHALT PAVEMENT 10 C5.03
	PROPOSED MEDIUM DUTY ASPHALT PAVEMENT 11 C5.03
	PROPOSED HEAVY DUTY ASPHALT PAVEMENT 12 C5.03
	PROPOSED AGLIME 8 C5.04 15 C5.03
	PROPOSED ATHLETIC ASPHALT PAVEMENT WITH RESILIENT SURFACING 13 C5.03
	PROPOSED CHAIN LINK FENCING WITH MAINTENANCE STRIP 11 C5.04
	FENCING KEY NOTE
	PROPOSED TRAFFIC SIGN 13 C5.04 14 C5.04 15 C5.04 16 C5.04
A	SIGNAGE KEY NOTE
	PROPOSED BOLLARD 9 C5.04
	PROPOSED ACCESSIBLE SYMBOL
	PROPOSED MANHOLE (MH) 2 C5.02 7 C5.02
	PROPOSED CATCH BASIN (CB) 3 C5.02
	PROPOSED RISER INLET (RI) 5 C5.02
	PROPOSED FLARED END SECTION (FES) 15 C5.01
	PROPOSED HYDRANT (HYD) 10 C5.02
	PROPOSED GATE VALVE (GV) 11 C5.02
	PROPOSED POST INDICATOR VALVE (PIV) 13 C5.02
	PROPOSED FLAGPOLE - REFER TO ARCHITECTURAL PLANS
	PROPOSED BUILDING STOOP - REFER TO ARCHITECTURAL PLANS
	PROPOSED LIGHT POLE - REFER TO ELECTRICAL PLANS
	PROPERTY LINE

NOTES

1. REFER TO SHEET C3.01, GRADING AND DRAINAGE PLAN OVERALL, FOR GENERAL NOTES.
2. REFER TO SHEET C1.10, FINISHING PLAN OVERALL, FOR FINISHING NOTES.

FENCING KEY NOTES

8'H CLF — 8' HIGH CHAIN LINK FENCE WITH TOP AND BOTTOM RAIL



KEYMAP
1"=400'

HORZ. 0 30 60
SCALE FEET

CITY SUBMITTAL - NOT FOR CONSTRUCTION

New Rosemount Middle School

Rosemount, Minnesota 55088

Independent School District #196
3455 153RD STREET WEST
ROSEMOUNT, MINNESOTA 55068

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LAURA J. DETZLER
LIC. NO. 53753 DATE 07/31/2024

Revisions		
Description	Date	Num

Comm: 232086
Date: 07/31/2024
Drawn: LJD
Check: LJD

North

FINISHING PLAN NORTH

Scale: 1" = 30'

C1.16

MN

NOTES

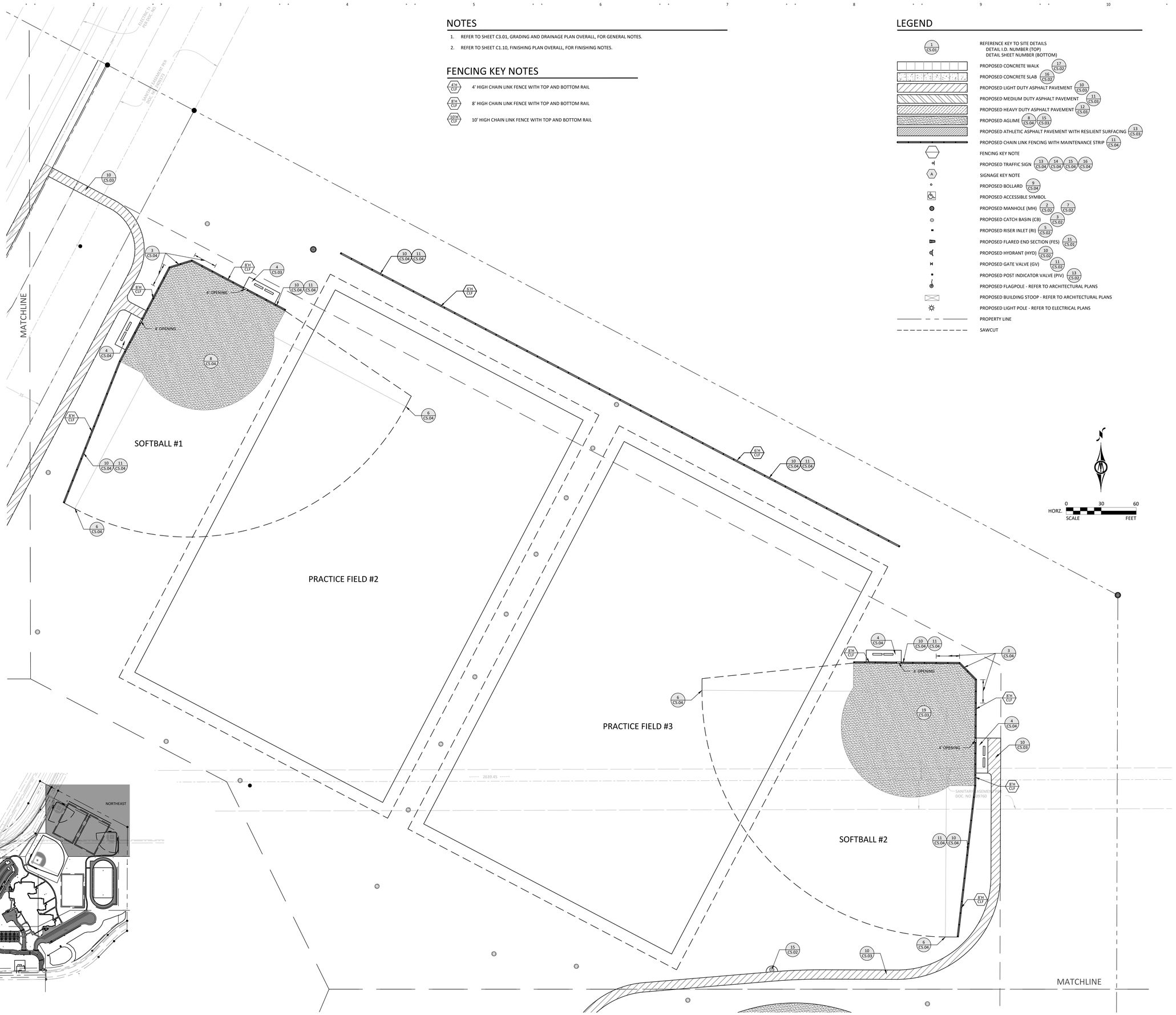
1. REFER TO SHEET C3.01, GRADING AND DRAINAGE PLAN OVERALL, FOR GENERAL NOTES.
2. REFER TO SHEET C1.10, FINISHING PLAN OVERALL, FOR FINISHING NOTES.

FENCING KEY NOTES

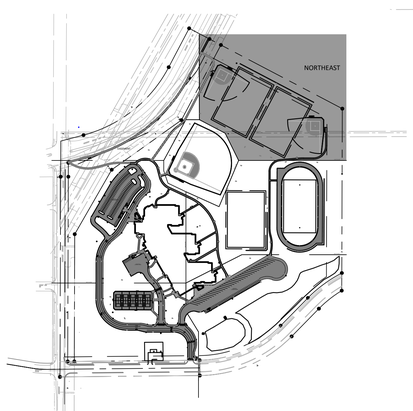
- 4'H CLF — 4' HIGH CHAIN LINK FENCE WITH TOP AND BOTTOM RAIL
- 8'H CLF — 8' HIGH CHAIN LINK FENCE WITH TOP AND BOTTOM RAIL
- 10'H CLF — 10' HIGH CHAIN LINK FENCE WITH TOP AND BOTTOM RAIL

LEGEND

- 1 / C5.01 — REFERENCE KEY TO SITE DETAILS (DETAIL I.D. NUMBER (TOP), DETAIL SHEET NUMBER (BOTTOM))
- PROPOSED CONCRETE WALK (12 / C5.02)
- PROPOSED CONCRETE SLAB (16 / C5.02)
- PROPOSED LIGHT DUTY ASPHALT PAVEMENT (10 / C5.03)
- PROPOSED MEDIUM DUTY ASPHALT PAVEMENT (11 / C5.03)
- PROPOSED HEAVY DUTY ASPHALT PAVEMENT (12 / C5.03)
- PROPOSED AGLIME (8 / C5.04) (15 / C5.03)
- PROPOSED ATHLETIC ASPHALT PAVEMENT WITH RESILIENT SURFACING (13 / C5.03)
- PROPOSED CHAIN LINK FENCING WITH MAINTENANCE STRIP (11 / C5.04)
- FENCING KEY NOTE
- PROPOSED TRAFFIC SIGN (13 / C5.04) (14 / C5.04) (15 / C5.04) (16 / C5.04)
- SIGNAGE KEY NOTE
- PROPOSED BOLLARD (9 / C5.04)
- PROPOSED ACCESSIBLE SYMBOL
- PROPOSED MANHOLE (MH) (2 / C5.02) (7 / C5.02)
- PROPOSED CATCH BASIN (CB) (3 / C5.02)
- PROPOSED RISER INLET (RI) (5 / C5.02)
- PROPOSED FLARED END SECTION (FES) (15 / C5.01)
- PROPOSED HYDRANT (HYD) (10 / C5.02)
- PROPOSED GATE VALVE (GV) (11 / C5.02)
- PROPOSED POST INDICATOR VALVE (PIV) (13 / C5.02)
- PROPOSED FLAGPOLE - REFER TO ARCHITECTURAL PLANS
- PROPOSED BUILDING STOOP - REFER TO ARCHITECTURAL PLANS
- PROPOSED LIGHT POLE - REFER TO ELECTRICAL PLANS
- PROPERTY LINE
- SAWCUT



C



KEYMAP
1"=400'

New Rosemount Middle School

Rosemount, Minnesota 55088

Independent School District #196

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LAURA J. DETZLER
LIC. NO. 53753 DATE 07/31/2024

Revisions		
Description	Date	Num

Comm: 232086
Date: 07/31/2024
Drawn: LJD
Check: LJD
North

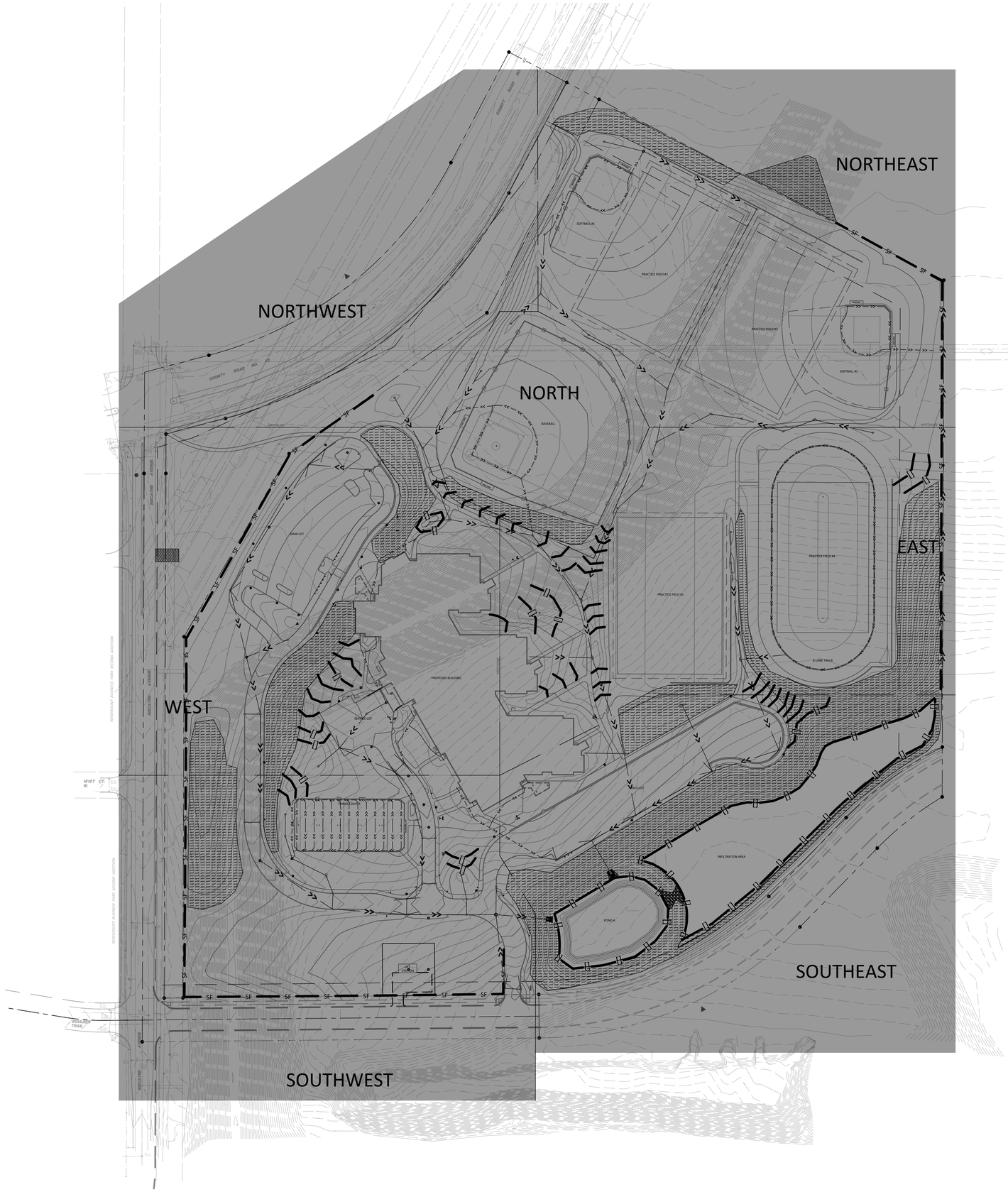
FINISHING PLAN
NORTHEAST

Scale: 1" = 30'

C1.17

CITY SUBMITTAL - NOT FOR CONSTRUCTION

MN



C

LEGEND

1 / C5.01	REFERENCE KEY TO SITE DETAILS DETAIL I.D. NUMBER (TOP) DETAIL SHEET NUMBER (BOTTOM)
955	EXISTING CONTOUR
955	PROPOSED CONTOUR
54.6	PROPOSED SPOT ELEVATION ME = MATCH EXISTING EOF = EMERGENCY OVERFLOW TC = TOP OF CURB TW = FINISH GRADE AT HIGH SIDE OF WALL BW = FINISH GRADE AT LOW SIDE OF WALL
	PROPOSED GRADING LIMITS
>> >>	PROPOSED STORM SEWER
>> >> >> >>	PROPOSED DRAIN TILE / SUBSURFACE DRAINS (SD)
	PROPOSED MANHOLE (MH) 2 / C5.02, 7 / C5.02
	PROPOSED CATCH BASIN (CB) 6 / C5.02
	PROPOSED RISER INLET (RI) 5 / C5.02
	PROPOSED FLARED END SECTION (FES) 15 / C5.01
IP	INLET PROTECTION DEVICE AT STORM SEWER INLET
SF SF	PROPOSED SILT FENCE 1 / C5.01
	PROPOSED SEDIMENT CONTROL LOG 2 / C5.01
	PROPOSED ROCK CONSTRUCTION ENTRANCE 3 / C5.01
	PROPOSED EROSION CONTROL BLANKET 4 / C5.01
	PROPOSED RIPRAP EXTENTS 8 / C5.01, 16 / C5.01
	PROPOSED BUILDING STOOP - REFER TO ARCHITECTURAL PLANS
	PROPERTY LINE

NOTES

1. REFER TO SHEET C3.01, GRADING AND DRAINAGE PLAN OVERALL, FOR GENERAL NOTES.
2. REFER TO SHEET C2.01, EROSION CONTROL PLAN - BOULDER TRAIL, FOR BOULDER TRAIL EROSION CONTROL PLAN.
3. REFER TO SWPPP NARRATIVE, SHEET C2.12, FOR CONSTRUCTION SEQUENCING AND EROSION CONTROL REQUIREMENTS.
4. MAINTAIN ADJACENT PROPERTY AND PUBLIC STREETS CLEAN FROM CONSTRUCTION CAUSED DIRT AND DEBRIS ON A DAILY BASIS. PROTECT DRAINAGE SYSTEMS FROM SEDIMENTATION AS A RESULT OF CONSTRUCTION RELATED DIRT AND DEBRIS.
5. MAINTAIN DUST CONTROL DURING GRADING OPERATIONS.
6. ALL EROSION CONTROL METHODS SHALL COMPLY WITH MPCA AND OTHER LOCAL REGULATIONS.
7. IF EROSION AND SEDIMENT CONTROL MEASURES TAKEN ARE NOT ADEQUATE AND RESULT IN DOWNSTREAM SEDIMENTATION, CLEAN OUT DOWNSTREAM STORM SEWERS AND OTHER CONVEYANCE DEVICES AS NECESSARY, INCLUDING ASSOCIATED RESTORATION.
8. INLET PROTECTION DEVICE AT STORM SEWER INLETS. AT THE INLETS TO ALL STORM SEWER STRUCTURES, PROVIDE A PRODUCT FROM THE FOLLOWING LIST OF APPROVED PRODUCTS:
   a. ROAD DRAIN "TOP SLAB", MANUFACTURED BY WIMCO
   b. ROAD DRAIN "CURB & GUTTER", MANUFACTURED BY WIMCO
   c. INFRASAFE "SEDIMENT CONTROL BARRIER", MANUFACTURED BY ROYAL ENVIRONMENTAL SYSTEMS, INC.
   d. INFRASAFE "DEBRIS COLLECTION DEVICE", MANUFACTURED BY ROYAL ENVIRONMENTAL SYSTEMS, INC.
   e. DANDY SACK, MANUFACTURED BY DANDY PRODUCTS, INC.
   f. DANDY CURB SACK, MANUFACTURED BY DANDY PRODUCTS, INC.
   g. OR APPROVED EQUAL.
9. PRIOR TO CONSTRUCTION, DELINEATE TURF AND VEGETATED AREAS NOT TO BE DISTURBED WITH ORANGE SNOW FENCE. DO NOT ALLOW CONSTRUCTION TRAFFIC, EQUIPMENT, OR MATERIALS TO UTILIZE, ACCESS, OR OTHERWISE ENTER THE DELINEATED AREAS. MINIMIZE SOIL COMPACTION AND DISRUPTION OF TOPSOIL IN AREAS OUTSIDE THE CONSTRUCTION LIMITS TO COMPLY WITH THE MN CONSTRUCTION STORMWATER PERMIT.

HORZ. 0 100 200
SCALE FEET

CITY SUBMITTAL - NOT FOR CONSTRUCTION

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DAVID A. REY
LIC. NO. 40180 DATE 07/31/2024

Revisions		
Description	Date	Num

Comm: 232086
Date: 07/31/2024
Drawn: JDO
Check: DAR

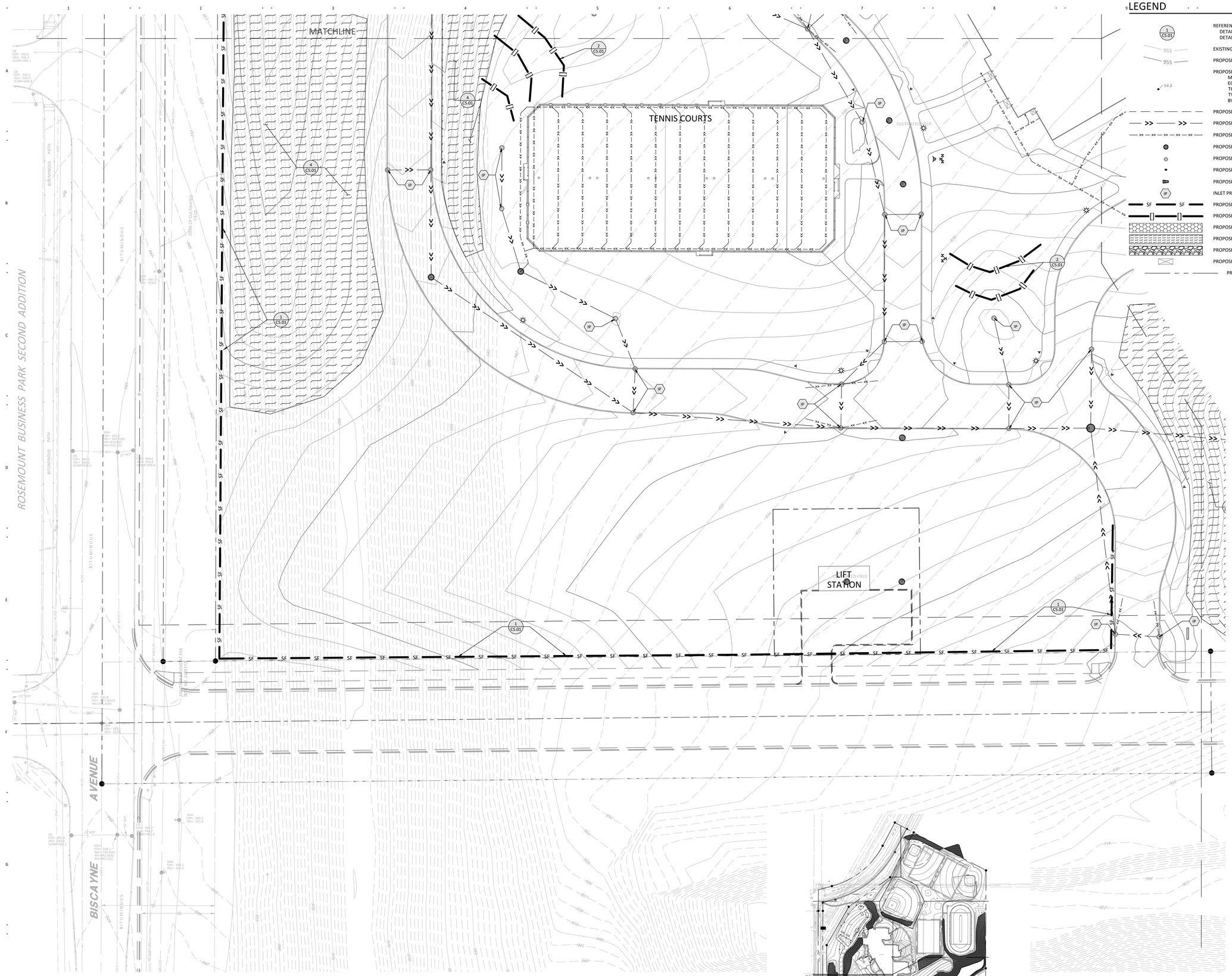
North

EROSION CONTROL PLAN OVERALL

Scale: 1" = 100'

C2.01

MN



LEGEND

- REFERENCE KEY TO SITE DETAILS (1 / C5.01): DETAIL I.D. NUMBER (TOP), DETAIL SHEET NUMBER (BOTTOM)
- EXISTING CONTOUR (955)
- PROPOSED CONTOUR (955)
- PROPOSED SPOT ELEVATION (54.6)
  - ME = MATCH EXISTING
  - EOF = EMERGENCY OVERFLOW
  - TC = TOP OF CURB
  - TW = FINISH GRADE AT HIGH SIDE OF WALL
  - BW = FINISH GRADE AT LOW SIDE OF WALL
- PROPOSED GRADING LIMITS
- PROPOSED STORM SEWER
- PROPOSED DRAIN TILE / SUBSURFACE DRAINS (SD)
- PROPOSED MANHOLE (MH) (2 / C5.02) (7 / C5.02)
- PROPOSED CATCH BASIN (CB) (3 / C5.02)
- PROPOSED RISER INLET (RI) (5 / C5.02)
- PROPOSED FLARED END SECTION (FES) (15 / C5.01)
- INLET PROTECTION DEVICE AT STORM SEWER INLET (IP)
- PROPOSED SILT FENCE (1 / C5.01)
- PROPOSED SEDIMENT CONTROL LOG (7 / C5.01)
- PROPOSED ROCK CONSTRUCTION ENTRANCE (3 / C5.01)
- PROPOSED EROSION CONTROL BLANKET (6 / C5.01)
- PROPOSED APPROXIMATE RIPRAP EXTENTS (8 / C5.01) (16 / C5.01)
- PROPOSED BUILDING STOOP - REFER TO ARCH. PLANS
- PROPERTY LINE

New Rosemount Middle School

Rosemount, Minnesota 55088

Independent School District #196

3455 153RD STREET WEST
ROSEMOUNT, MINNESOTA 55068

WOLD ARCHITECTS AND ENGINEERS
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PLYMOUTH, MN 55447
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www.bolton-menk.com

NOTES

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2. REFER TO SHEET C2.01, EROSION CONTROL PLAN OVERALL, FOR EROSION CONTROL NOTES.

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DAVID A. REY
LIC. NO. 40180 DATE 07/31/2024

Revisions		
Description	Date	Num

Comm: 232086
Date: 07/31/2024
Drawn: JDO
Check: DAR

North

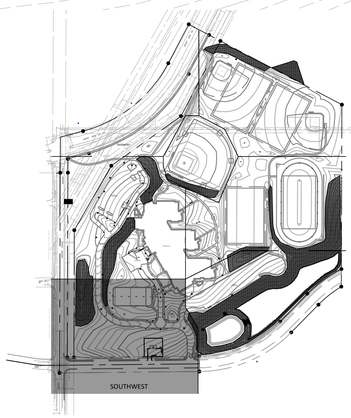
EROSION CONTROL PLAN SOUTHWEST

Scale: 1" = 30'

C2.02

C

KEYMAP
1"=400'



HORZ. SCALE 0 30 60 FEET

CITY SUBMITTAL - NOT FOR CONSTRUCTION

MN

C

KEYMAP
1"=400'

LEGEND

1 C5.01	REFERENCE KEY TO SITE DETAILS DETAIL I.D. NUMBER (TOP) DETAIL SHEET NUMBER (BOTTOM)
955	EXISTING CONTOUR
955	PROPOSED CONTOUR
54.6	PROPOSED SPOT ELEVATION ME = MATCH EXISTING EOF = EMERGENCY OVERFLOW TC = TOP OF CURB TW = FINISH GRADE AT HIGH SIDE OF WALL BW = FINISH GRADE AT LOW SIDE OF WALL
	PROPOSED GRADING LIMITS
>> >>	PROPOSED STORM SEWER
>> >> >>	PROPOSED DRAIN TILE / SUBSURFACE DRAINS (SD)
	PROPOSED MANHOLE (MH) 2 C5.02 2 C5.02
	PROPOSED CATCH BASIN (CB) 3 C5.02
	PROPOSED RISER INLET (RI) 5 C5.02
	PROPOSED FLARED END SECTION (FES) 15 C5.01
IP	INLET PROTECTION DEVICE AT STORM SEWER INLET
SF SF	PROPOSED SILT FENCE 1 C5.01
[] []	PROPOSED SEDIMENT CONTROL LOG 2 C5.01
	PROPOSED ROCK CONSTRUCTION ENTRANCE 3 C5.01
	PROPOSED EROSION CONTROL BLANKET 4 C5.01
	PROPOSED APPROXIMATE RIPRAP EXTENTS 8 C5.01 16 C5.01
	PROPOSED BUILDING STOOP - REFER TO ARCHITECTURAL PLANS
	PROPERTY LINE

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HORZ. 0 30 60
SCALE FEET

CITY SUBMITTAL - NOT FOR CONSTRUCTION

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North

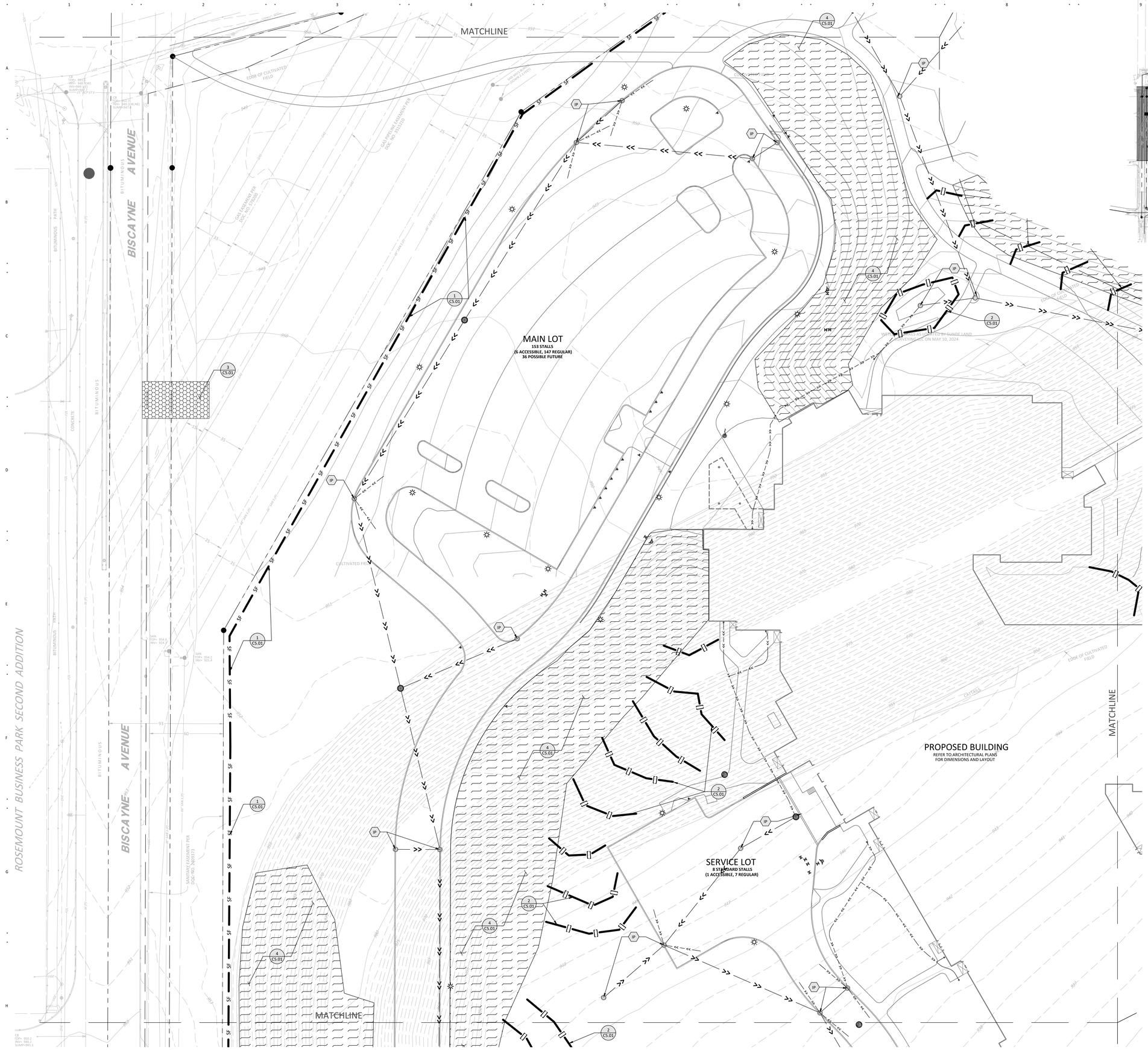
EROSION CONTROL PLAN SOUTHEAST

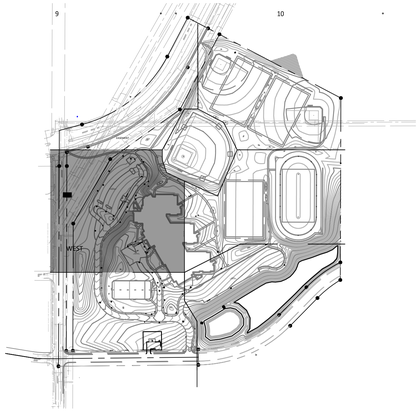
Scale: 1" = 30'

C2.03

MN

C





KEYMAP
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LEGEND

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- PROPOSED SPOT ELEVATION
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- PROPOSED APPROXIMATE RIPRAP EXTENTS
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- PROPERTY LINE

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HORZ. SCALE 0 30 60 FEET

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North

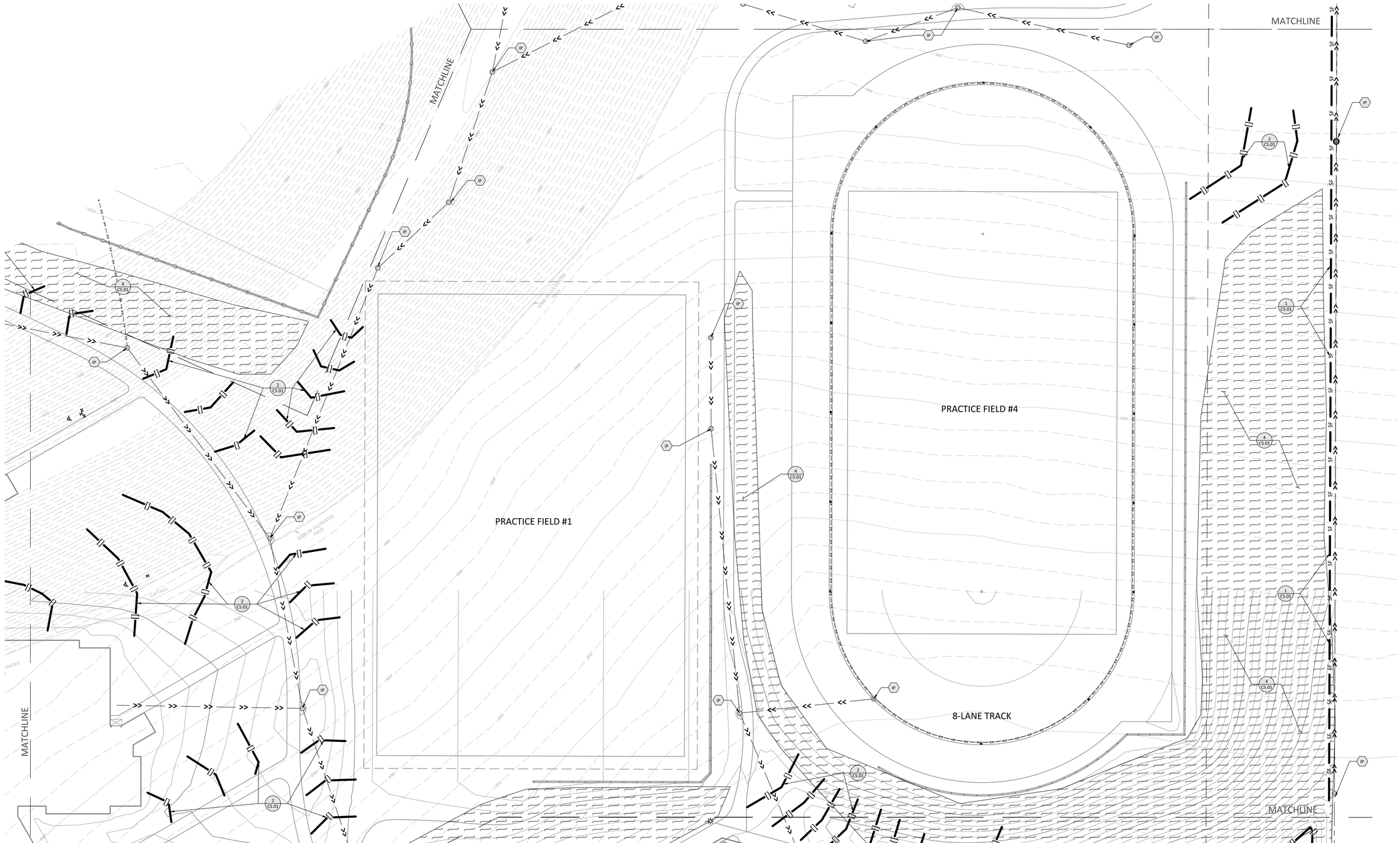
EROSION CONTROL PLAN WEST

Scale: 1" = 30'

C2.04

CITY SUBMITTAL - NOT FOR CONSTRUCTION

MN



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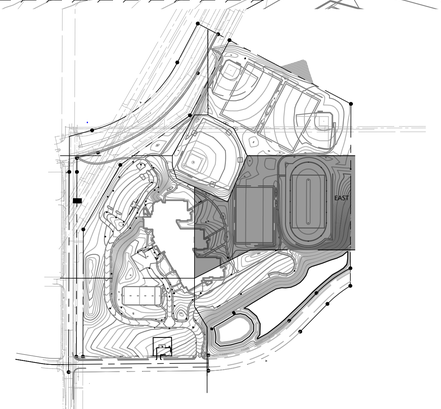

KEYMAP
1"=400'

LEGEND

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HORZ. 0 30 60 SCALE FEET

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North

EROSION CONTROL PLAN EAST

Scale: 1" = 30'

C2.05

MN

LEGEND

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  - DETAIL I.D. NUMBER (TOP)
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- EXISTING CONTOUR (955)
- PROPOSED CONTOUR (955)
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KEYMAP
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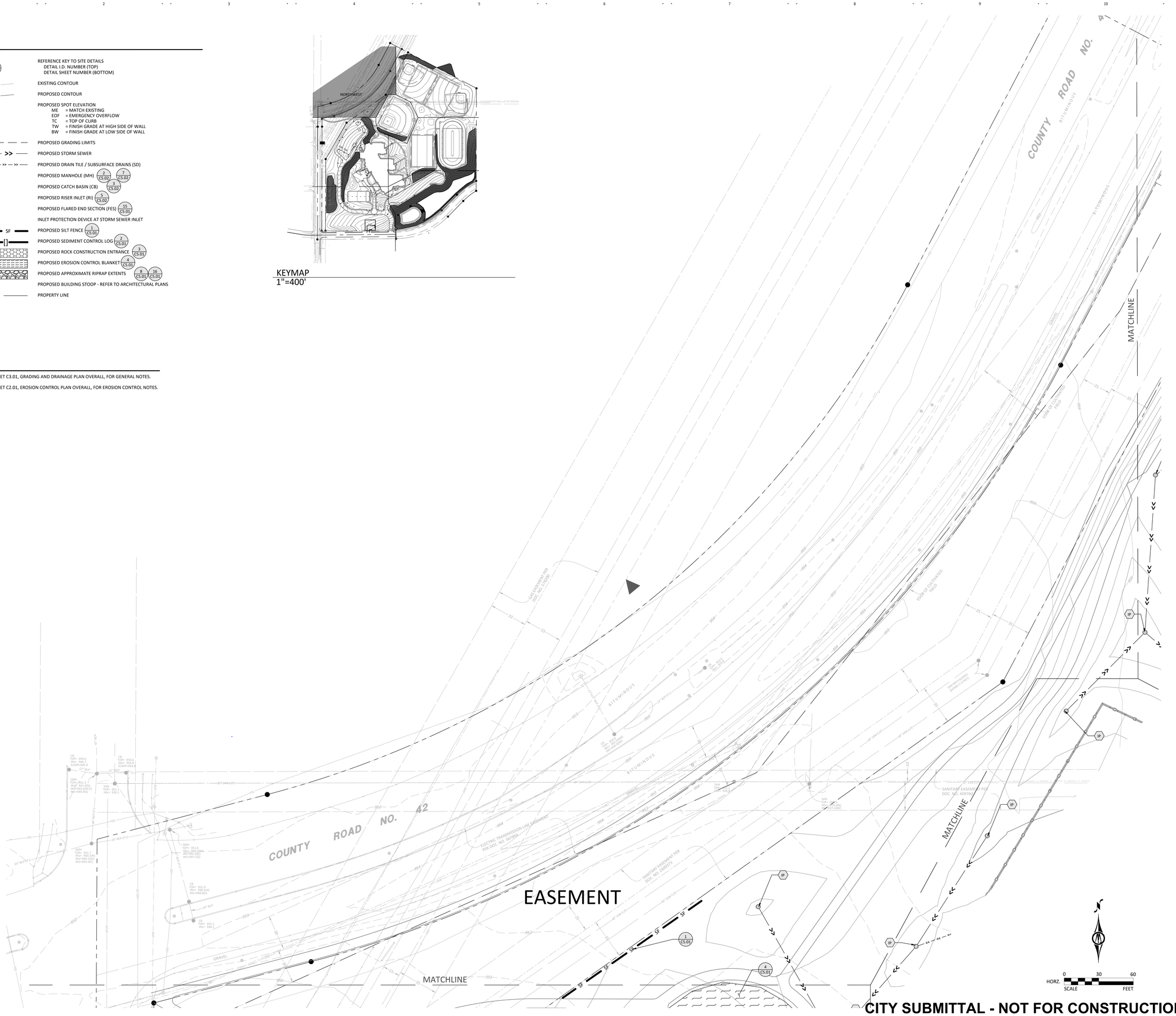

C

CITY SUBMITTAL - NOT FOR CONSTRUCTION

New Rosemount Middle School

Rosemount, Minnesota 55088

Independent School District #196
3455 153RD STREET WEST
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Wold

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DAVID A. REY
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North

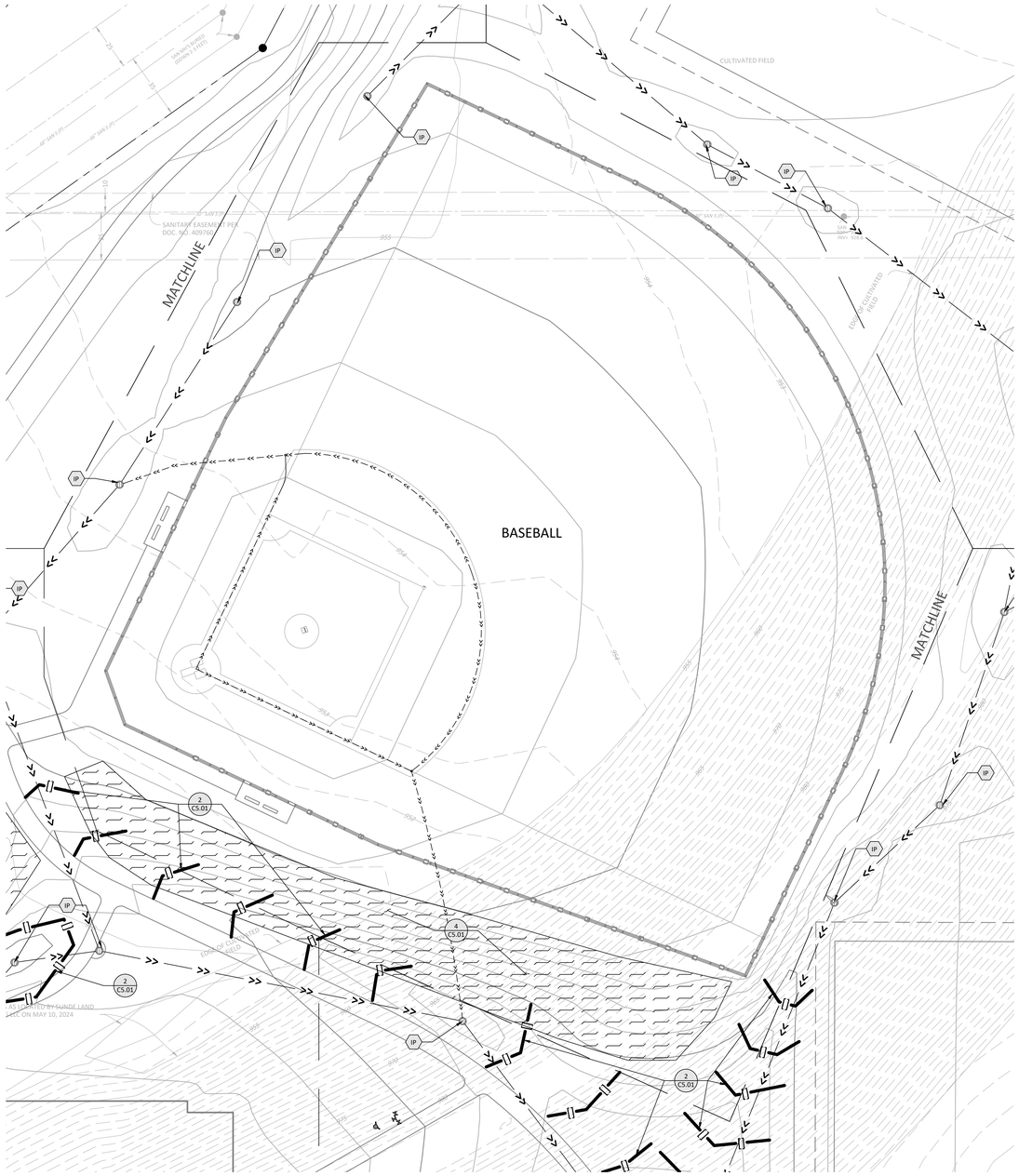
EROSION CONTROL PLAN NORTHWEST

Scale: 1" = 30'

C2.06

MN

C



LEGEND

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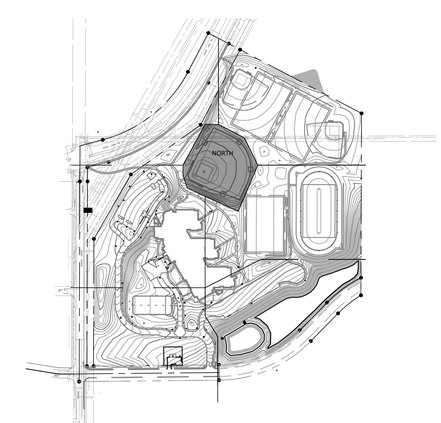

KEYMAP
1"=400'

N

HORZ. 0 30 60
SCALE FEET

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North

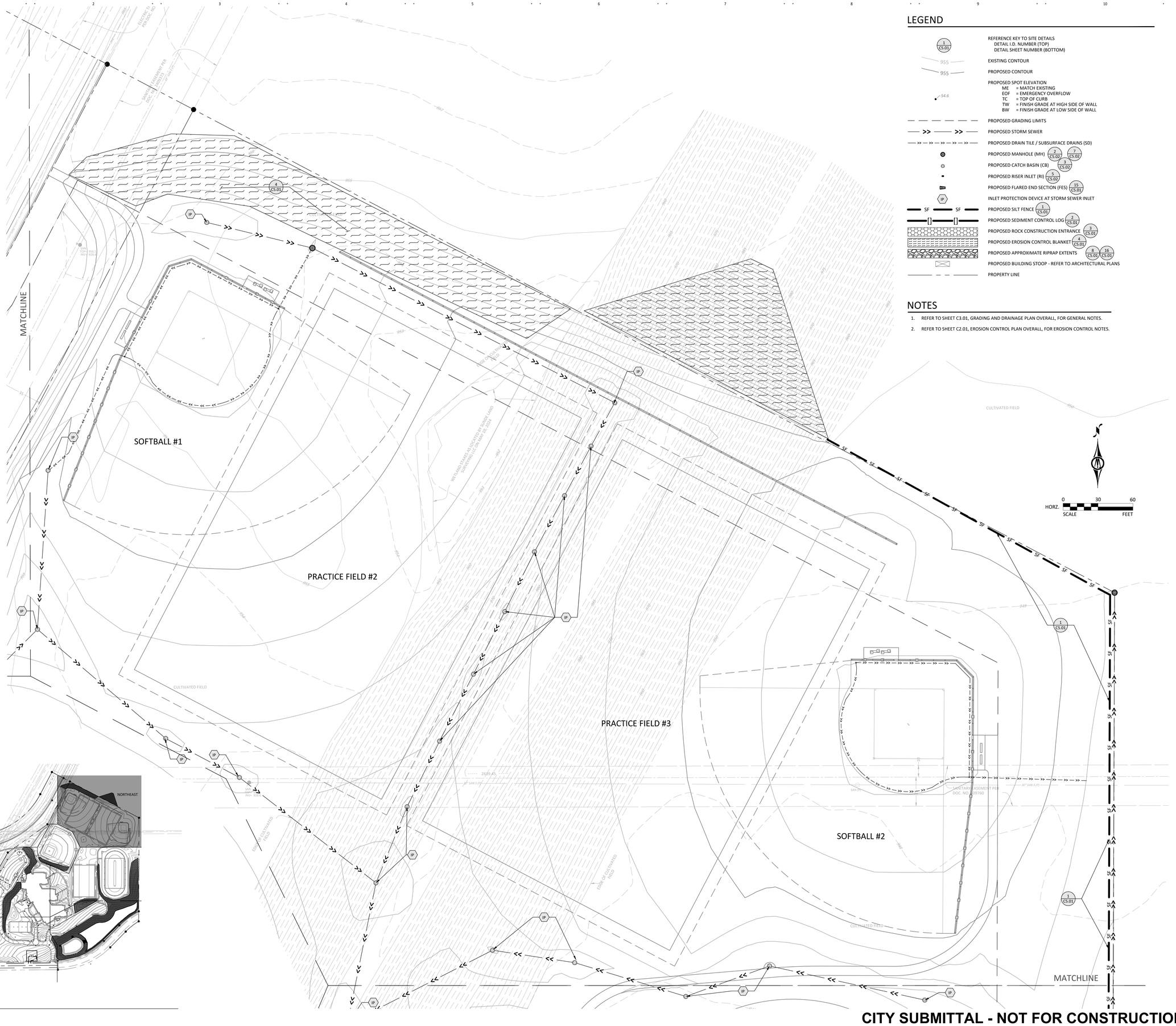
EROSION CONTROL PLAN NORTH

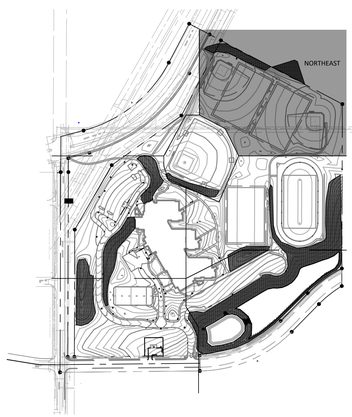
Scale: 1" = 30'

C2.07

MN

C





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HORZ SCALE 0 30 60 FEET

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North

EROSION CONTROL PLAN NORTHEAST

Scale: 1" = 30'

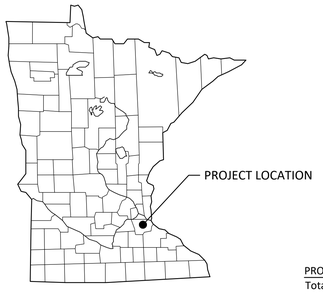
C2.08

CITY SUBMITTAL - NOT FOR CONSTRUCTION

STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

ISD #196 NEW MIDDLE SCHOOL

CITY OF ROSEMOUNT
DAKOTA COUNTY, MINNESOTA



LEGEND

- 1-MILE BOUNDARY
- PROJECT BOUNDARY
- OR IMPAIRED, SPECIAL OR PROTECTED WATERS
- NATIONAL WETLANDS INVENTORY
- CALCAREOUS FEN
- RECEIVING WATERS

RESPONSIBLE PARTIES:
The Contractor and Owner will be joint applicants under the MPCA's General Stormwater Permit for Construction Activity as required by the National Pollutant Discharge Elimination System (NPDES) Phase II program.

The Contractor shall provide one or more trained Construction SWPPP Manager(s) knowledgeable and experienced in the application of erosion prevention and sediment control BMPs that will oversee the implementation of the SWPPP, and the installation, inspection and maintenance of the erosion prevention and sediment control BMPs.

A Construction SWPPP Manager must be available for an on-site inspection within 72 hours upon request by the MPCA.

	COMPANY	CONTACT PERSON	PHONE
OWNER:	City of Rosemount	Sean Kelly	651-227-7773
SWPPP DESIGNER:	Bolton & Menk, Inc.	Lani Leichty	952-890-0509
CONTRACTOR:	TBD	TBD	TBD
CONSTRUCTION SWPPP MANAGER:	TBD	TBD	TBD
PARTY RESPONSIBLE FOR LONG TERM O&M:	City of Rosemount	Sean Kelly	651-227-7773

The SWPPP Designer, Construction SWPPP Manager, and BMP Installer must have appropriate training. Documentation showing training commensurate with the job duties and responsibilities is required to be included in the SWPPP prior to any work beginning on the site. Training documentation for the SWPPP Designer is included on the Narrative sheet. The Contractor shall attach training documentation to this SWPPP for the Construction SWPPP Manager and BMP Installer prior to the start of construction. This information shall be kept up to date until the project NOT is filed.

ADDITIONAL COMPENSATION
Payment for all work associated with Erosion and Sediment Control shall be as described in the Project Manual. Unless otherwise authorized by the Owner no additional payment shall be made for any work required to administer and maintain the site erosion and sediment control in compliance with the Minnesota Pollution Control Agency (MPCA) - General Stormwater Permit for Construction Activity (MN R100001) including but not limited to inspection, maintenance, and removal of BMPs or addition of BMPs to accommodate Contractor phasing.

DOCUMENT RETENTION
Permittees must make the SWPPP, including all inspection reports, maintenance records, training records and other information required by this permit, available to federal, state, and local officials within three (3) days upon request for the duration of the permit and for three (3) years following the NOT.

GENERAL STORMWATER DISCHARGE REQUIREMENTS
All requirements listed in Section 5.1 of the Permit for the design of the permanent stormwater management system and discharge have been included in the preparation of this SWPPP. These include but are not limited to:

1. The expected amount, frequency, intensity, and duration of precipitation.
2. The nature of stormwater runoff and run-on at the site
3. Peak flow rates and stormwater volumes to minimize erosion at outlets and downstream channel and stream bank erosion.
4. The range of soil particle sizes expected to be present on the site.

Permanent stormwater treatment systems for this project have been designed in accordance with the guidance in the MN Stormwater Manual in place at the time of bidding. Copies of the design information and calculations are part of this SWPPP and will be provided in digital format upon written request to the Engineer.

PROJECT AREAS:

Total Project Size (disturbed area) =	66.5	ACRES
Existing area of impervious surface =	0	ACRES
Post construction area of impervious surface =	17.60	ACRES
Total new impervious surface area created =	17.60	ACRES
Planned Construction Start Date:	09/01/2024	
Estimated Construction Completion Date:	08/10/2026	

PERMANENT STORMWATER MANAGEMENT SYSTEM:
Type of storm water management used if more than 1 acre of new impervious surface is created:

X	Wet Sedimentation Basin
X	Infiltration/Filtration
	Regional Pond
	Permanent Stormwater Management Not Required

PROJECT LOCATION:

COUNTY	TOWNSHIP	RANGE	SECTION	LATITUDE	LONGITUDE
DAKOTA	115	19	28, 33, 34	44.7323°	-93.1120°

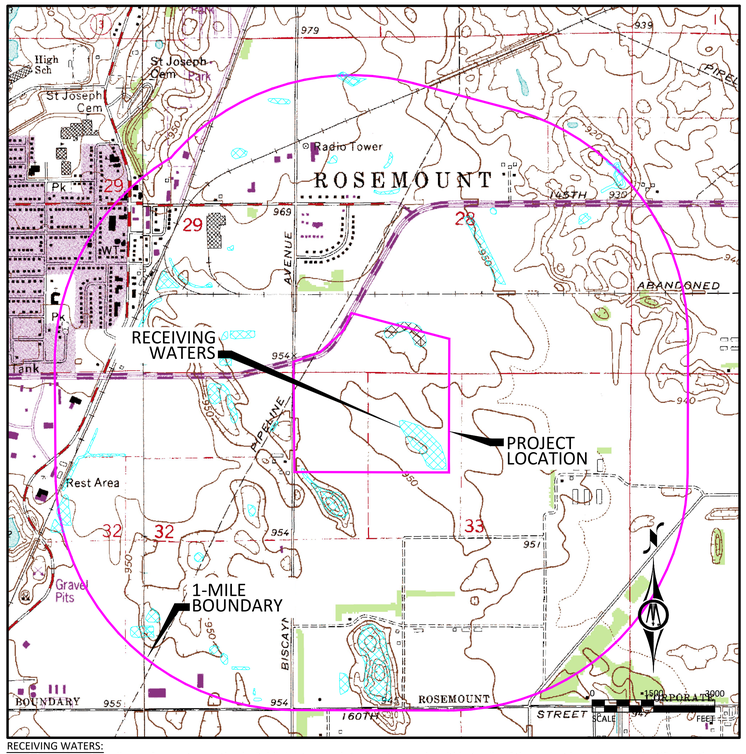
BMP SUMMARY	QUANTITY	UNIT
ROCK CONSTRUCTION EXIT	1	EACH
SILT FENCE, TYPE MS	3,574	LIN FT
SEDIMENT CONTROL, LOG TYPE WOOD FIBER	5,706	LIN FT
ROLLED EROSION PREVENTION BLANET	42,654	SY

DESCRIPTION OF CONSTRUCTION ACTIVITIES AND STORMWATER MANAGEMENT:
Construction activities include: Site grading, storm sewer, sanitary sewer, and water main extensions, temporary erosion and sediment control, and permanent stabilization.

Stormwater currently drains to a tributary to the unnamed wetland.

After construction is complete stormwater will drain to inlets and flow through the stormwater system

This project includes the following stormwater management BMPs: construction exit, silt fence, sediment control logs, and erosion control blankets.



RECEIVING WATERS:
Receiving waters, including surface water, wetlands, Public Waters, and stormwater ponds, within 1-mile of the project boundary are identified on the USGS 7.5 min quad map above. Receiving waters that are impaired, the impairment, and WLA are listed as follows. All specific BMPs relative to construction activities listed in the permit for special, prohibited, restricted, or impaired have been incorporated into this plan. All specific BMPs listed in approved TMDLs and those BMPs listed for construction related waste load allocations have also been incorporated.

NAME OF WATER BODY	TYPE (ditch, pond, wetland, lake, etc.)	Special, Prohibited, Restricted Water [1]	Flows to Impaired Water Within 1-Mile [2]	USEPA Approved Construction Related TMDL [3]
UNNAMED WETLAND	WETLAND	NO	NO	NO

[1] Special, prohibited, and restricted waters are listed in Section 23 of the MN Construction Stormwater General Permit (MNR100001).
[2] Identified as impaired under section 303 (d) of the federal Clean Water Act for phosphorus, turbidity, TSS, dissolved oxygen, and/or aquatic biota.
[3] Construction Related TMDLs include those related to: phosphorus, turbidity, TSS, dissolved oxygen, and/or aquatic biota.

IMPLEMENTATION SCHEDULE AND PHASING: The Contractor is required to provide an updated schedule and site management plan meeting the minimum requirements of Section 1717 of the Minnesota Standard Specifications for Construction.

1) Submit SWPPP Updates to Engineer. Submittal shall include any requested changes to the SWPPP, including but not limited to: Trained Personnel, Locations for Stockpiles, Concrete Washout, Sanitation Facilities, Types and Locations of Erosion & Sediment Control. Failure to submit updates shall be considered acceptance of the SWPPP as designed with no changes.
2) Install perimeter sediment control, inlet protection, and construction exit.
3) Perform removals
4) Construct building, parking lots, roads, and sport fields
5) Install utilities
6) Site grading
7) Add additional temporary BMPs as necessary during construction based on inspection reports.
8) Ensure final stabilization measures are complete.
9) Provide digital copy of all Field SWPPP Documentation including Inspection Reports and SWPPP Revisions to the Owner.
10) Submit Notice of Termination (NOT) to MPCA. NOTE: The NOT must be submitted to MPCA before Final Stabilization is considered complete.

CITY SUBMITTAL - NOT FOR CONSTRUCTION

New Rosemount Middle School

Rosemount, Minnesota 55088

Independent School District #196
3455 153RD STREET WEST
ROSEMOUNT, MINNESOTA 55068

WOLD ARCHITECTS AND ENGINEERS
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www.bolton-menk.com

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.

DAVID A. REY
LIC. NO. 40180 DATE 07/31/2024

Revisions		
Description	Date	Num

Comm: 232086
Date: 07/31/2024
Drawn: JDO
Check: DAR
North

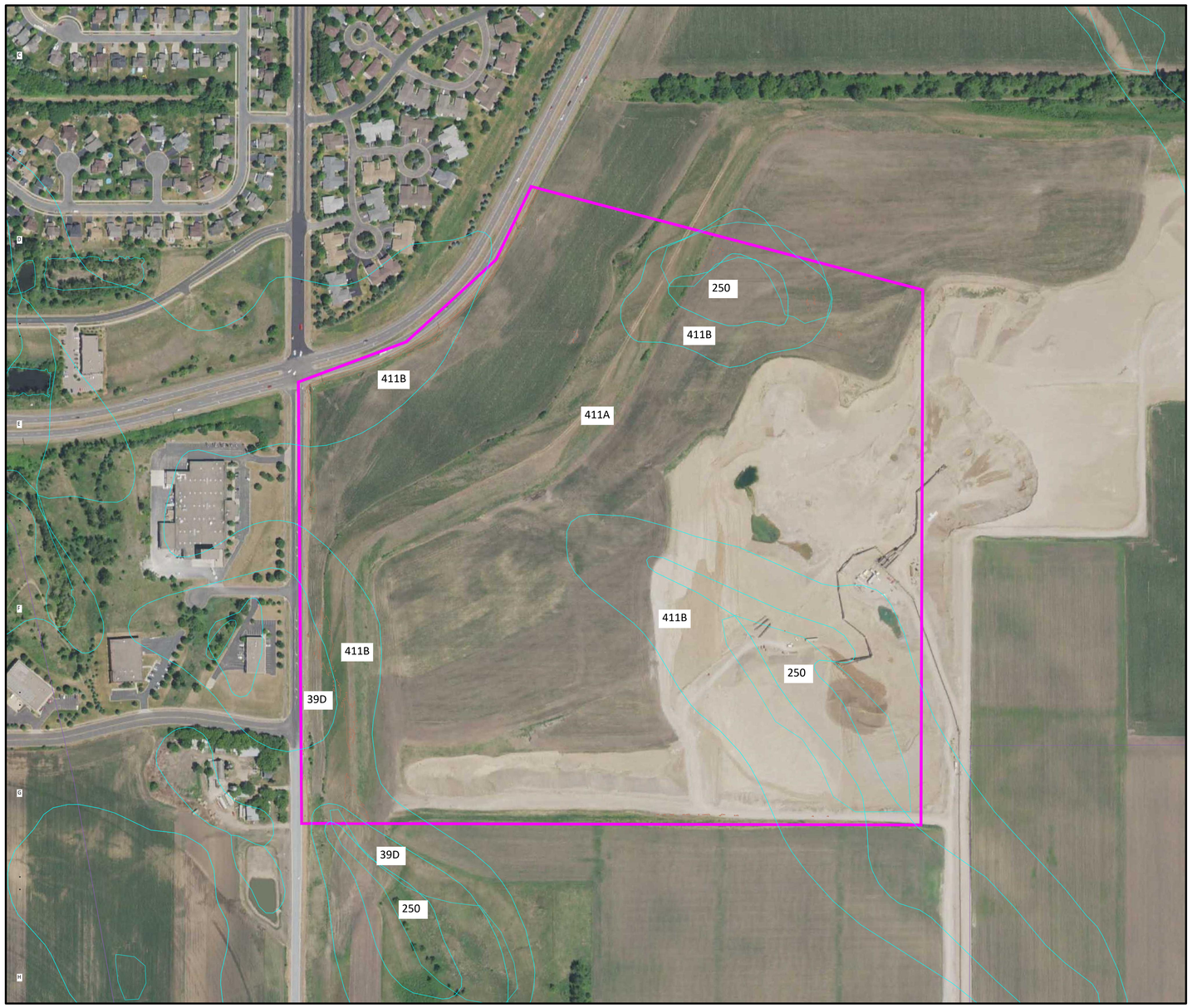
SWPPP PLAN

Scale:

C2.10

MN

C



LEGEND

- PROJECT BOUNDARY
- SOIL TYPE
- IMPAIRED, SPECIAL OR PROTECTED WATERS
- NATIONAL WETLANDS INVENTORY
- DWSMA, LOW VULNERABILITY
- STEEP SLOPES (>33.3%)
- RECEIVING WATERS

0 100 200
SCALE FEET

OTHER SUGGESTED LEGEND ITEMS

- IMPAIRED, SPECIAL OR PROTECTED WATERS
- WETLAND BUFFER
- EXISTING STORMWATER POND
- KARST AREAS
- CALCAREOUS FEN
- DELINEATED WETLAND

SOIL TYPE SUMMARY

Map Unit Symbol	Soil Name	Hyd. Soil Group	Erodibility
39D	WADENA LOAM, 12 TO 18 PERCENT SLOPES	B	HEL
250	KENNEBEC SILT LOAM	C	NHEL
411A	WAUKEGAN SILT LOAM, 0 TO 1 PERCENT SLOPES	B	NHEL
411B	WAUKEGAN SILT LOAM, 1 TO 6 PERCENT SLOPES	B	NHEL

NHEL - Not Highly Erodible Land
PHEL - Potentially Highly Erodible Land
HEL - Highly Erodible Land

LOCATION OF SWPPP REQUIREMENTS IN PROJECT PLAN

DESCRIPTION	SHEET NO.
SITE MAP	C2.10
DIRECTION OF FLOW	C2.10
FINAL STABILIZATION	C2.10
SOILS	C2.12
EROSION & SEDIMENT CONTROL DETAILS	C2.10
EROSION CONTROL TABULATION	C2.10
TURF ESTABLISHMENT TABULATION	C2.10
NARRATIVE & NOTES	C2.10 - C2.12

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SWPPP SOILS

Scale: 1" = 200'

C2.11

CITY SUBMITTAL - NOT FOR CONSTRUCTION

Xref .\Project Border.dwg

MN

C

Information contained in this SWPPP narrative sheet summarizes requirements of the GENERAL PERMIT AUTHORIZATION TO DISCHARGE STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITY UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM/STATE DISPOSAL SYSTEM PROGRAM - Permit No: MN RI0000I (Permit) as they apply to this project. All provisions of the Permit including those not specifically cited herein shall apply to this project. The Contractor is responsible to be familiar with and comply with all conditions of the permit. The full text of the Permit is available at: https://www.pca.state.mn.us/sites/default/files/wq-strm2-80a.pdf

SWPPP AMENDMENTS AND SUBMITTALS

Contractor must prepare and submit to the Engineer a SWPPP amendment as necessary to include additional Best Management Practices (BMPs) to correct problems identified or address the following situations.

1. Contact information and training documentation for Construction SWPPP Manager and BMP Installer,
2. There is a change in construction method of phasing, operation, maintenance, weather or seasonal conditions not anticipated during the design of the SWPPP including but not limited to:
   a. Types and/or Locations of BMPs
   b. Material Storage and Spill Response
   c. Fueling Plans
   d. Locations for Stockpiles, Concrete Washout, and Sanitation Facilities and
   e. Project Phasing
3. It is determined that the SWPPP is not achieving objectives of minimizing pollutants in stormwater discharges associated with construction activity, or
4. The SWPPP is not consistent with the terms and conditions of the permit.

The Contractor may implement SWPPP amendments immediately and is not required to wait for Engineer review of the submittal. The responsibility for completeness of SWPPP amendments and compliance with the Permit lies with the Contractor. Review, comment, or lack of comment by the Engineer on a SWPPP amendment shall not absolve the responsibilities of the Contractor in any way.

If a change order is issued for a design change the SWPPP amendment will be prepared by the Engineer and included in the change order.

In addition to SWPPP amendments, the Contractor shall submit to the Engineer Weekly Erosion and Sediment Control Schedule meeting the requirements of MnDOT 1717.

The Contractor shall keep copies of all SWPPP amendments, Weekly Erosion and Sediment Control Schedules, inspection logs, and maintenance logs with the field copy of the SWPPP. A PDF copy of these documents will be provided along with a copy of the final Field Copy of the SWPPP to the Engineer along with the signed Notice of Termination when final stabilization is complete.

EROSION PREVENTION PRACTICES

Stormwater conveyance channels shall be routed around unstabilized areas. Erosion controls and velocity dissipation devices shall be used at outlets within and along the length of any constructed conveyance channel.

The normal wetted perimeter of all ditches or swales, including storm water management pond slopes, that drain waters from the site must be stabilized within 200' of any property edge or discharge point, including storm sewer inlets, within 24 hours of connection.

Temporary or permanent ditches or swales used as sediment containment during construction do not need to be stabilized during temporary period of use and shall be stabilized within 24 hours after no longer used as sediment containment.

Mulch, hydromulch, tackifier, or similar practice shall not be used in any portion of the wetted perimeter of a temporary or permanent drainage ditch or swale section with a continuous slope of greater than 2 percent.

Energy dissipation shall be installed at all temporary or permanent pipe outlets within 24 hours of connection to a surface water or permanent stormwater treatment system.

The Contractor shall phase construction and use construction methods to the extent practical to minimize exposed soils. The project phasing shall be documented in the Weekly Erosion and Sediment Control Schedule.

SEDIMENT CONTROL PRACTICES

Down gradient BMPs including perimeter BMPs must be in place before up gradient land- disturbing activities begin and shall remain in place until final stabilization.

All BMPs that have been adjusted or removed to accommodate short-term activities shall be re-installed or replaced the earlier of the end of the work day or before the next precipitation event even if the activity is not complete.

Inlet BMPs may be removed for specific safety concerns. The BMPs shall be replaced as soon as the safety concern is resolved. The removal shall be documented in the SWPPP as a SWPPP amendment.

Temporary stockpiles must have sediment control BMPs. The Contractor shall prepare and submit to the Engineer a SWPPP amendment showing the location of temporary stockpiles and the BMPs for each stockpile. The SWPPP amendment must meet the minimum requirements of Section 9 of the Permit.

Soil compaction shall be minimized and topsoil shall be preserved, unless infeasible or if construction activities dictate soil compaction or topsoil stripping.

The use of polymers, flocculants, or other sedimentation treatment chemicals are not proposed as part of this SWPPP as designed by the Engineer. If methods or phasing of construction require the use of any of these chemicals, the Contractor shall prepare and submit to the Engineer a SWPPP amendment that meets the minimum requirements of Section 9 of the Permit.

TEMPORARY SEDIMENTATION BASINS

A temporary sedimentation basin has not been included in this SWPPP as designed by the Engineer. If a basin is later determined to be desirable or necessary the Contractor shall prepare and submit to the Engineer a SWPPP amendment. Temporary sedimentation basins shall meet or exceed the minimum requirements of Section 14 of the Permit and shall include a basin draining plan meeting or exceeding the minimum requirements of Section 10 of the Permit. Where the site discharges to Special and/or Impaired Waters the SWPPP amendment shall also meet or exceed the minimum requirements of Section 23 of the permit.

DEWATERING

A dewatering plan has not been included in this SWPPP as designed by the Engineer. If dewatering is required for this project, the Contractor shall prepare and submit to the Engineer a SWPPP amendment. All dewatering shall meet or exceed the minimum requirements of Section 10 of the Permit.

POLLUTION PREVENTION

Products and materials that have the potential to leach pollutants that are stored on the site must be stored in a manner designed to minimize contact with stormwater. Materials that are not a source of potential contamination to stormwater or that are designed for exposure to stormwater are not required to be covered.

Hazardous materials including but not limited to pesticides, fertilizer, petroleum products, curing compounds and toxic waste must be properly stored and protected from stormwater exposure as recommended by the manufacturer in an access restricted area.

Solid waste must be stored, collected and disposed of in compliance with Minnesota Administrative Rules Chapter 7035.

Portable toilets must be positioned so that they are secure and will not be tipped or knocked over. Sanitary waste must be disposed of properly in accordance with Minn. R. CH 7041.

Exterior vehicle or equipment washing on the project site shall be limited to a defined area of the site. No engine degreasing is allowed on site. 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.

The Contractor shall prepare and submit a SWPPP amendment detailing the location and BMPs proposed for storage of materials, solid waste, portable toilets, and exterior vehicle or equipment washing on the site. The SWPPP amendment shall include a spill prevention and response plan that is appropriate for the materials proposed to be on the site. The SWPPP amendment shall meet or exceed the minimum requirements of Section 12 of the Permit.

INSPECTION & MAINTENANCE

A trained person shall routinely inspect the entire construction site at the time interval indicated on this sheet of the SWPPP during active construction and within 24-hours after a rainfall event greater than 0.5 inches in 24 hours. Following an inspection that occurs within 24-hours after a rainfall event, the next inspection must be conducted at the time interval indicated in the Receiving Waters Table found on the SITE PLAN AND INFORMATION SHEET of the SWPPP.

All inspections and maintenance conducted during construction must be recorded on the day it is completed and must be retained with the SWPPP. Inspection report forms are available in the Project Specifications. Inspection report forms other than those provided shall be approved by the engineer.

The Contractor may request a change in inspection schedule for the following conditions:

a. Inspections of areas with permanent cover to be reduced to once per month,
b. Inspections of areas that have permanent cover and have had no construction activity for 12 months to be suspended until construction resumes,
c. Inspections of areas where construction is suspended due to frozen ground conditions, inspections to be suspended until the earlier of within 24 hours of runoff occurring, or upon resuming construction.

No change in inspection schedule shall occur until authorized by the Engineer.

Inspections must include:

1. All erosion prevention and sediment control BMPs and Pollution Prevention Management Measures to ensure integrity and effectiveness.
2. Surface waters, including drainage ditches and conveyance systems for evidence of erosion and sediment deposition.
3. Construction site vehicle exit locations, streets and curb and gutter systems within and adjacent to the project for sedimentation from erosion or tracked sediment from vehicles.
4. Infiltration areas to ensure that no sediment from ongoing construction activity is reaching the infiltration area and that equipment is not being driven across the infiltration area.

All non-functioning BMPs and those BMPs where sediment reaches one-half (1/2) of the depth of the BMP, or in the case of sediment basins one-half (1/2) of the storage volume, must be repaired, replaced, or supplemented by the end of the next business day after discovery, or as soon as field conditions allow.

Permittees must repair, replace or supplement all nonfunctional BMPs with functional BMPs by the end of the next business day after discovery, or as soon as field conditions allow.

Any sediment that escapes the site must be removed and the area stabilized within 7 calendar days of discovery unless precluded by legal, regulatory, or physical access in which case the work shall be completed within 7 calendar days of authorization. Paved surfaces such as streets shall have any escaped or tracked sediment removed by the end of the day that it is discovered. Sediment release, other than paved surfaces that can be cleaned up with street sweeping shall be reported immediately upon discovery to the Engineer.

PUBLIC WATER RESTRICTIONS:

For public waters that have been promulgated "work in water restrictions" during fish spawning time frames, all exposed soil areas that are within 200 feet of the water's edge, and drain to these waters must complete stabilization within 24-hours during the time period. MN DNR permits are not valid for work in waters that are designated as infested waters unless accompanied by an Infested Waters Permit or written notification has been obtained from MN DNR stating that such permit is not required. There is no exception for pre-existing permits. If a MN DNR Permit has been issued for the project and the water is later designated as infested, the Contractor shall halt all work covered by the MN DNR Permit until an Infested Waters Permit is obtained or that written notification is obtained stating that such permit is not required.

FINAL STABILIZATION

Final Stabilization is not complete until all the following requirements have been met:

1. Substantial Completion has been reached and no ground disturbing activities are anticipated.
2. Permanent cover has been installed with an established minimum uniform perennial vegetation density of 70 percent of its expected final growth. Vegetation is not required in areas where no vegetation is proposed by this project such as impervious surfaces or the base of a sand filter.
3. Accumulated sediment has been removed from all permanent stormwater treatment systems as necessary to ensure the system is operating as designed.
4. All sediment has been removed from conveyance systems
5. All temporary synthetic erosion prevention and sediment control BMPs have been removed. BMPs designated on the SWPPP to remain to decompose on-site may remain.
6. For residential construction only, permit coverage terminates on individual lots if the structures are finished and temporary erosion prevention and downgradient perimeter control is complete, the residence sells to the homeowner, and the permittee distributes the MPCA's "Homeowner Fact Sheet" to the homeowner.
7. For agricultural land only (e.g., pipelines across cropland), the disturbed land must be returned to its preconstruction agricultural use prior to submitting the NOT.

SITE STABILIZATION COMPLETION:

Stabilization of exposed soils shall begin immediately and shall be completed after the construction activity has temporarily or permanently ceased no later than:	14 calendar days

SITE INSPECTION INTERVAL:

A trained person shall routinely inspect the entire construction site during active construction at an interval of no more than:	7 calendar days

SPECIAL ENVIRONMENTAL CONSIDERATIONS AND PERMITS:

1)	Was an environmental review required for this project or any part of a common plan of development or sale that includes all or any portion of this project?	NO
2)	Does any portion of the site have the potential to affect threatened or endangered species or their critical habitat?	NO
3)	Does any portion of this site discharge to a Calcareous fen.	NO
4)	Will any portion of the site potentially affect properties listed on the National Register of Historic Places or a known or discovered archeological site?	NO
5)	Have any Karst features have been identified in the project vicinity?	NO
6)	Is compliance with temporary or permanent stormwater management design requirements infeasible for this project?	NO
7)	Has the MN DNR promulgated "work in water restrictions" for any Public Water this site disharges to during fish spawning?	NO

TYPE OF PERMIT	PERMITTING AGENCY	PERMIT STATUS AND CONDITIONS
Construction Stormwater NPDES	MPCA	TO BE APPLIED FOR

SWPPP DESIGNER TRAINING DOCUMENTATION:

New Rosemount Middle School

Rosemount, Minnesota 55088

Independent School District #196
3455 153RD STREET WEST
ROSEMOUNT, MINNESOTA 55068

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DAVID A. REY
LIC. NO. 40180 DATE 07/31/2024

Revisions		
Description	Date	Num

Comm: 232086
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Drawn: JDO
Check: DAR
North

SWPPP NARRATIVE

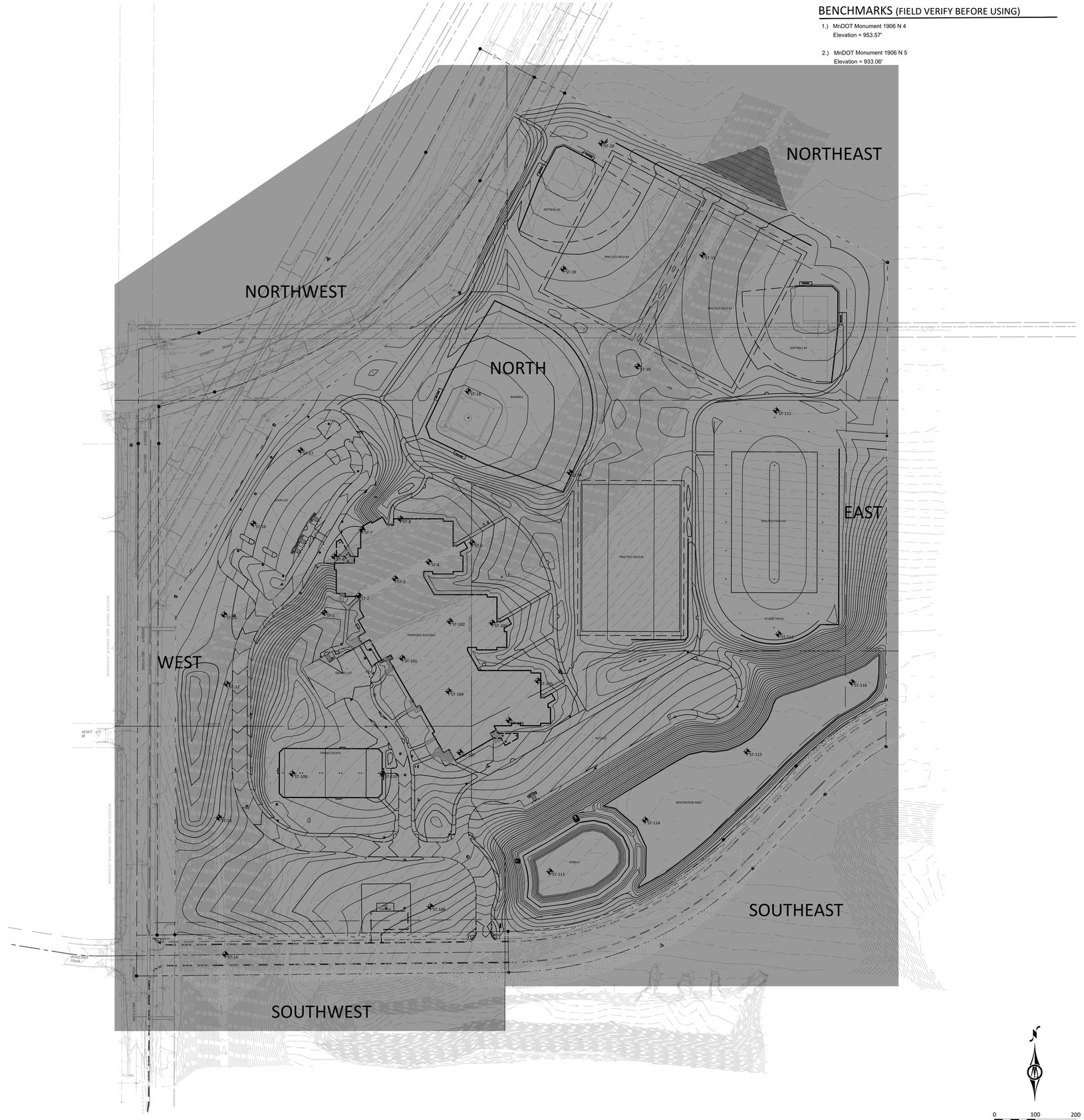
Scale:

C2.12

CITY SUBMITTAL - NOT FOR CONSTRUCTION

MN

C



BENCHMARKS (FIELD VERIFY BEFORE USING)

1.) MnDOT Monument 1906 N 4
Elevation = 953.57'

2.) MnDOT Monument 1906 N 5
Elevation = 933.06'

LEGEND

1 / C5.01	REFERENCE KEY TO SITE DETAILS DETAIL I.D. NUMBER (TOP) DETAIL SHEET NUMBER (BOTTOM)
955	EXISTING CONTOUR
954.6	EXISTING SPOT ELEVATION
955	PROPOSED CONTOUR
54.6	PROPOSED SPOT ELEVATION ME = MATCH EXISTING EOF = EMERGENCY OVERFLOW TC = TOP OF CURB TW = FINISH GRADE AT HIGH SIDE OF WALL BW = FINISH GRADE AT LOW SIDE OF WALL
	PROPOSED GRADING LIMITS
	PROPOSED SAND SUBBASE AT FROST FOOTED STOOPS 11 / C5.01
	PROPOSED FOAM INSULATION AT FROST FOOTED STOOPS 12 / C5.01
ST-1	APPROXIMATE SOIL BORING / TEST PIT LOCATION
	PROPOSED MANHOLE (MH)
	PROPOSED CATCH BASIN (CB)
	PROPOSED RISER INLET (RI)
	PROPOSED FLARED END SECTION (FES)
	PROPOSED HYDRANT (HYD)
	PROPOSED GATE VALVE (GV)
	PROPOSED POST INDICATOR VALVE (PIV)
	PROPOSED STOOP - REFER TO ARCHITECTURAL PLANS
	PROPERTY LINE

GENERAL NOTES

1. ALL CONSTRUCTION SHALL COMPLY WITH APPLICABLE STATE AND LOCAL ORDINANCES.
2. THE CONTRACTOR WILL BE RESPONSIBLE FOR AND SHALL PAY FOR ALL CONSTRUCTION STAKING / LAYOUT.
3. OBTAIN AND PAY FOR ALL RELATED CONSTRUCTION PERMITS, INCLUDING THE NPDES PERMIT FROM THE MPCA. SUBMIT A COPY OF ALL PERMITS TO THE CITY.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL SIGNAGE (CONSTRUCTION ZONES) NECESSARY TO CONSTRUCT PROPOSED IMPROVEMENTS. ALL SIGNAGE LAYOUTS MUST BE DESIGNED BY THE CONTRACTOR AND APPROVED BY LOCAL AUTHORITIES.
5. INSTALL CONTROL FENCING AND BARRICADING AS NECESSARY TO PROTECT THE PUBLIC.
6. INSPECT SITE AND REVIEW SOIL BORINGS TO DETERMINE EXTENT OF WORK AND NATURE OF MATERIALS TO BE HANDLED.
7. REFER TO SPECIFICATIONS FOR DEWATERING REQUIREMENTS.
8. CHECK ALL PLAN AND DETAIL DIMENSIONS AND VERIFY SAME BEFORE FIELD LAYOUT.
9. REFER TO ARCHITECTURAL PLANS FOR BUILDING AND STOOP DIMENSIONS AND LAYOUT.
10. REFER TO THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) NARRATIVE, SHEET C2.12, FOR EROSION CONTROL REQUIREMENTS. SECTION 31 00 00 SHALL BE RESPONSIBLE FOR FULL IMPLEMENTATION OF THE SWPPP.
11. MAINTAIN ADJACENT PROPERTY AND PUBLIC STREETS CLEAN FROM CONSTRUCTION CAUSED DIRT AND DEBRIS ON A DAILY BASIS. PROTECT DRAINAGE SYSTEMS FROM SEDIMENTATION AS A RESULT OF CONSTRUCTION RELATED DIRT AND DEBRIS.
12. MAINTAIN DUST CONTROL DURING GRADING OPERATIONS.
13. ALL EROSION CONTROL METHODS SHALL COMPLY WITH MPCA AND LOCAL REGULATIONS.
14. MINIMIZE DISTURBANCE TO SITE AND PROTECT EXISTING SITE FEATURES (INCLUDING TURF AND VEGETATION) WHICH ARE TO REMAIN.
15. PROPOSED CONTOURS AND SPOT ELEVATIONS ARE SHOWN TO FINISH GRADE UNLESS OTHERWISE NOTED.
16. PROPOSED ELEVATIONS SHOWN TYPICALLY AS 10.1 OR 10 SHALL BE UNDERSTOOD TO MEAN 1010.1 OR 1010.
17. SPOT ELEVATIONS SHOWN IN PARKING LOTS, DRIVES AND ROADS INDICATE GUTTER GRADES, UNLESS NOTED OTHERWISE. SPOT ELEVATIONS WITH LABELS OUTSIDE THE BUILDING PERIMETER INDICATE PROPOSED GRADES OUTSIDE THE BUILDING. SPOT ELEVATIONS WITH LABELS INSIDE THE BUILDING PERIMETER INDICATE PROPOSED FINISH FLOOR ELEVATIONS.
18. THE CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR DETERMINING QUANTITIES OF CUT, FILL AND WASTE MATERIALS TO BE HANDLED, AND FOR AMOUNT OF GRADING TO BE DONE IN ORDER TO COMPLETELY PERFORM ALL WORK INDICATED ON THE DRAWINGS. IMPORT SUITABLE MATERIAL AND EXPORT UNSUITABLE / EXCESS / WASTE MATERIAL, AS REQUIRED, AT NO ADDITIONAL COST TO THE OWNER.
19. IT IS INTENDED THAT EARTHWORK (CUT VS. FILL) BALANCE ON SITE. SUBMIT THE QUANTITY OF MATERIAL AND AMOUNT OF ANTICIPATED GRADE ADJUSTMENT FOR REVIEW BY THE ENGINEER A MINIMUM OF FOUR WEEKDAYS PRIOR TO MAKING ADJUSTMENTS. ALL GRADE ADJUSTMENTS MUST BE APPROVED BY THE ENGINEER. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR WORK ASSOCIATED WITH GRADING ADJUSTMENTS, INCLUDING, BUT NOT LIMITED TO, EARTHWORK OPERATIONS, STORM SEWER PIPING AND STRUCTURE ADJUSTMENTS, CONSTRUCTION SURVEYING FOR ADJUSTING FEATURE LOCATIONS ACCORDINGLY, SILT FENCE, ETC.
20. NO FINISHED SLOPES SHALL EXCEED 4' HORIZONTAL TO 1' VERTICAL (4:1), UNLESS OTHERWISE NOTED.
21. ALL DISTURBED AREAS OUTSIDE THE BUILDING PAD, WHICH ARE NOT DESIGNATED TO BE PAVED OR RECEIVE AGLIME, SHALL RECEIVE AT LEAST 6" OF TOPSOIL AND SHALL BE SODDED OR SEEDED. REFER TO LANDSCAPING PLANS FOR SOD AND SEED LOCATIONS. ALL AREAS NOT DESIGNATED FOR SOD OR A SPECIFIC SEED MIX, WHICH ARE DISTURBED BY CONSTRUCTION, SHALL BE SEEDED WITH SEED MIX #1.
22. WHERE NEW SOD MEETS EXISTING SOD, CUT A CLEAN, SHARP EDGE TO ALLOW FOR A CONSISTENT, UNIFORM, AND STRAIGHT JOINT BETWEEN NEW SOD AND EXISTING TURFGRASS. JAGGED OR UNEVEN JOINTS WILL NOT BE ACCEPTED. REMOVE TOPSOIL AT THE JOINT BETWEEN NEW SOD AND EXISTING TURFGRASS, AS REQUIRED, TO ALLOW NEW SOD SURFACE TO BE FLUSH WITH EXISTING TURFGRASS SURFACE.
23. FAILURE OF TURF DEVELOPMENT: IN THE EVENT THE CONTRACTOR FAILS TO PROVIDE AN ACCEPTABLE TURF, RE-SEED OR RE-SOD ALL APPLICABLE AREAS, AT NO ADDITIONAL COST TO THE OWNER, TO THE SATISFACTION OF THE ENGINEER OR LANDSCAPE ARCHITECT.
24. ALL WATERMAIN PIPE SHALL BE DIP, CLASS 52. ALL WATERMAIN SHALL HAVE MINIMUM 8'-0" BURY (TOP OF PIPE TO FINISH GRADE). DIP SHALL BE ENCASED WITH POLYETHYLENE FILM CONFORMING TO ASTM D 1248-889.
25. ALL WATERMAIN SHALL BE AWWA C900, CAST IRON OD, DR 18, PVC PIPE INSTALLED IN ACCORDANCE WITH ASTM D2321. ALL WATERMAIN SHALL HAVE MINIMUM 8'-0" BURY (TOP OF PIPE TO FINISH GRADE).
26. ALL SANITARY SEWER PIPE SHALL BE PVC PIPE (ASTM D 3034, SDR 26), UNLESS OTHERWISE NOTED. SANITARY SEWER INSTALLATION SHALL BE IN ACCORDANCE WITH ASTM D2321.
27. ALL SANITARY SEWER PIPE CROSSING WATERMAIN, OUTSIDE OF THE PUBLIC RIGHT-OF-WAY, SHALL BE ASTM D2665, SCHEDULE 40 PVC WITH SOLVENT WELD JOINTS.
28. ALL STORM SEWER PIPE SHALL BE RCP, CLASS III (MIN.), WITH FLEXIBLE WATERTIGHT JOINTS IN ACCORDANCE WITH ASTM C-361 OR PVC PIPE (ASTM D3034, SDR 35) INSTALLED IN ACCORDANCE WITH ASTM D2321, UNLESS OTHERWISE NOTED.
29. ALL STORM SEWER PIPE CROSSING WATERMAIN, OUTSIDE OF THE PUBLIC RIGHT-OF-WAY, SHALL BE ASTM D2665, SCHEDULE 40 PVC WITH SOLVENT WELD JOINTS.
30. FLEXIBLE JOINTS AT STORM SEWER PIPE CONNECTIONS TO STRUCTURES:
    a. IN ACCORDANCE WITH MINNESOTA PLUMBING CODE, PROVIDE FLEXIBLE JOINTS AT ALL PIPE CONNECTIONS TO ALL STORM SEWER STRUCTURES.
    b. ACCEPTABLE MANUFACTURERS / PRODUCTS:
        i. FERNCO, "CONCRETE MANHOLE ADAPTORS" OR "LARGE-DIAMETER WATERSTOPS"
        ii. PRESS-SEAL, WATERSTOP GROUTING RINGS"
        iii. OR APPROVED EQUAL.
31. INSTALL WATERMAIN AT LEAST 10 FEET HORIZONTALLY FROM ANY MANHOLE, CATCH BASIN, STORM SEWER, SANITARY SEWER, DRAIN TILE, OR OTHER POTENTIAL SOURCE FOR CONTAMINATION PER MN PLUMBING CODE. THIS ISOLATION DISTANCE IS MEASURED FROM THE OUTER EDGE OF THE PIPE TO THE OUTER EDGE OF THE CONTAMINATION SOURCE (OUTER EDGE OF STRUCTURES OR SIMILAR).
32. INSTALL MANOLES, CATCH BASINS, STORM SEWER, SANITARY SEWER, DRAIN TILE, AND OTHER POTENTIAL SOURCES OF CONTAMINATION AT LEAST 10 FEET HORIZONTALLY FROM ANY WATERMAIN PER MN PLUMBING CODE. THIS ISOLATION DISTANCE IS MEASURED FROM THE OUTER EDGE OF THE PIPE TO THE OUTER EDGE OF THE CONTAMINATION SOURCE (OUTER EDGE OF STRUCTURES OR SIMILAR).
33. LOCATE ALL EXISTING UTILITIES. VERIFY LOCATION, SIZE AND INVERT ELEVATION OF ALL EXISTING UTILITIES. BEFORE BEGINNING CONSTRUCTION.
34. PRIOR TO CONSTRUCTION OF PROPOSED BUILDING UTILITY SERVICES (STORM, SANITARY SEWER, WATERMAIN), VERIFY ALL PROPOSED BUILDING UTILITY SERVICE PIPE SIZES, LOCATIONS AND ELEVATIONS WITH MECHANICAL PLANS. COORDINATE CONSTRUCTION AND CONNECTIONS WITH MECHANICAL CONTRACTOR.
35. MAINTAIN DRAINAGE FROM EXISTING BUILDING AT ALL TIMES. PROVIDE TEMPORARY STORM SEWER, INCLUDING, BUT NOT LIMITED TO, CATCH BASINS, MANHOLES, PIPING, AND SIMILAR. DO NOT REMOVE EXISTING STORM SEWER UNTIL TEMPORARY OR PERMANENT STORM SEWER IS INSTALLED AND FUNCTIONAL. COORDINATE ALL REMOVALS WITH APPROPRIATE TRADES (SITE UTILITY CONTRACTOR, MECHANICAL CONTRACTOR, ETC.) AS REQUIRED.
36. STAKE LIMITS OF WALKS AND CURBING PRIOR TO INSTALLATION OF GATE VALVES, CATCH BASINS, AND MANHOLES. ADJUST GATE VALVE AND MANHOLE LOCATIONS TO AVOID PLACEMENT OF THESE STRUCTURES IN WALKS AND CURB AND GUTTER. STAKE CURB AND GUTTER ALIGNMENTS TO ALLOW CURB INLET TYPE CATCH BASINS TO PROPERLY ALIGN WITH CURB AND GUTTER.

HORZ. SCALE 0 100 200 FEET

CITY SUBMITTAL - NOT FOR CONSTRUCTION

New Rosemount Middle School

Rosemount, Minnesota 55088

Independent School District #196

3455 153RD STREET WEST
ROSEMOUNT, MINNESOTA 55068

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DAVID A. REY
LIC. NO. 40180 DATE 07/31/2024

Revisions		
Description	Date	Num

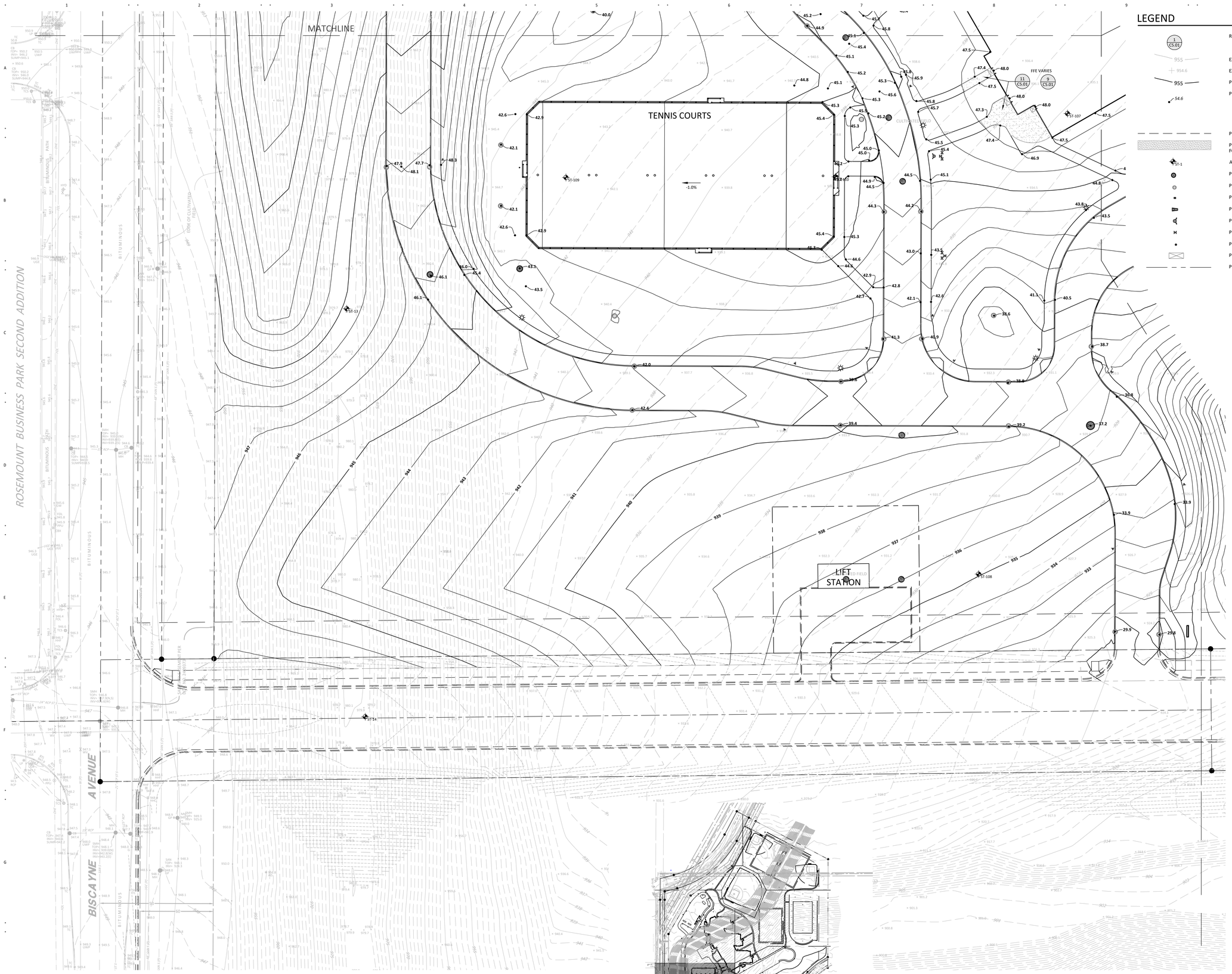
Comm: 232086
Date: 07/31/2024
Drawn: JDO
Check: DAR
North

GRADING AND DRAINAGE PLAN OVERALL

Scale: 1" = 100'

C3.01

MN



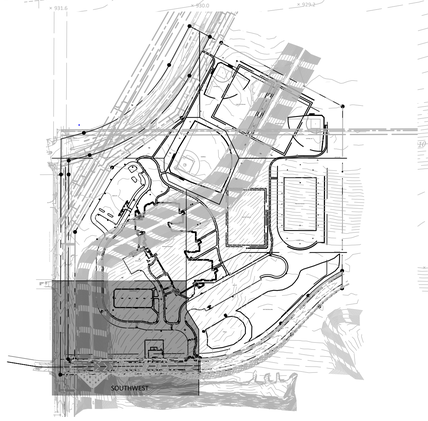
LEGEND

1 / C5.01	REFERENCE KEY TO SITE DETAILS DETAIL I.D. NUMBER (TOP) DETAIL SHEET NUMBER (BOTTOM)
955	EXISTING CONTOUR
954.6	EXISTING SPOT ELEVATION
955	PROPOSED CONTOUR
54.6	PROPOSED SPOT ELEVATION ME = MATCH EXISTING EOF = EMERGENCY OVERFLOW TC = TOP OF CURB TW = FINISH GRADE AT HIGH SIDE OF WALL BW = FINISH GRADE AT LOW SIDE OF WALL
	PROPOSED GRADING LIMITS
11 / C5.01	PROPOSED SAND SUBBASE AT FROST FOOTED STOOPS
ST-1	APPROXIMATE SOIL BORING LOCATION
	PROPOSED MANHOLE (MH)
	PROPOSED CATCH BASIN (CB)
	PROPOSED RISER INLET (RI)
	PROPOSED FLARED END SECTION (FES)
	PROPOSED HYDRANT (HYD)
M	PROPOSED GATE VALVE (GV)
	PROPOSED POST INDICATOR VALVE (PIV)
	PROPOSED STOOP - REFER TO ARCHITECTURAL PLANS
	PROPERTY LINE

NOTES

1. REFER TO SHEET C3.01, GRADING AND DRAINAGE PLAN OVERALL, FOR GENERAL NOTES.

C



KEYMAP
1"=400'

HORZ. 0 30 60
SCALE FEET

CITY SUBMITTAL - NOT FOR CONSTRUCTION

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North

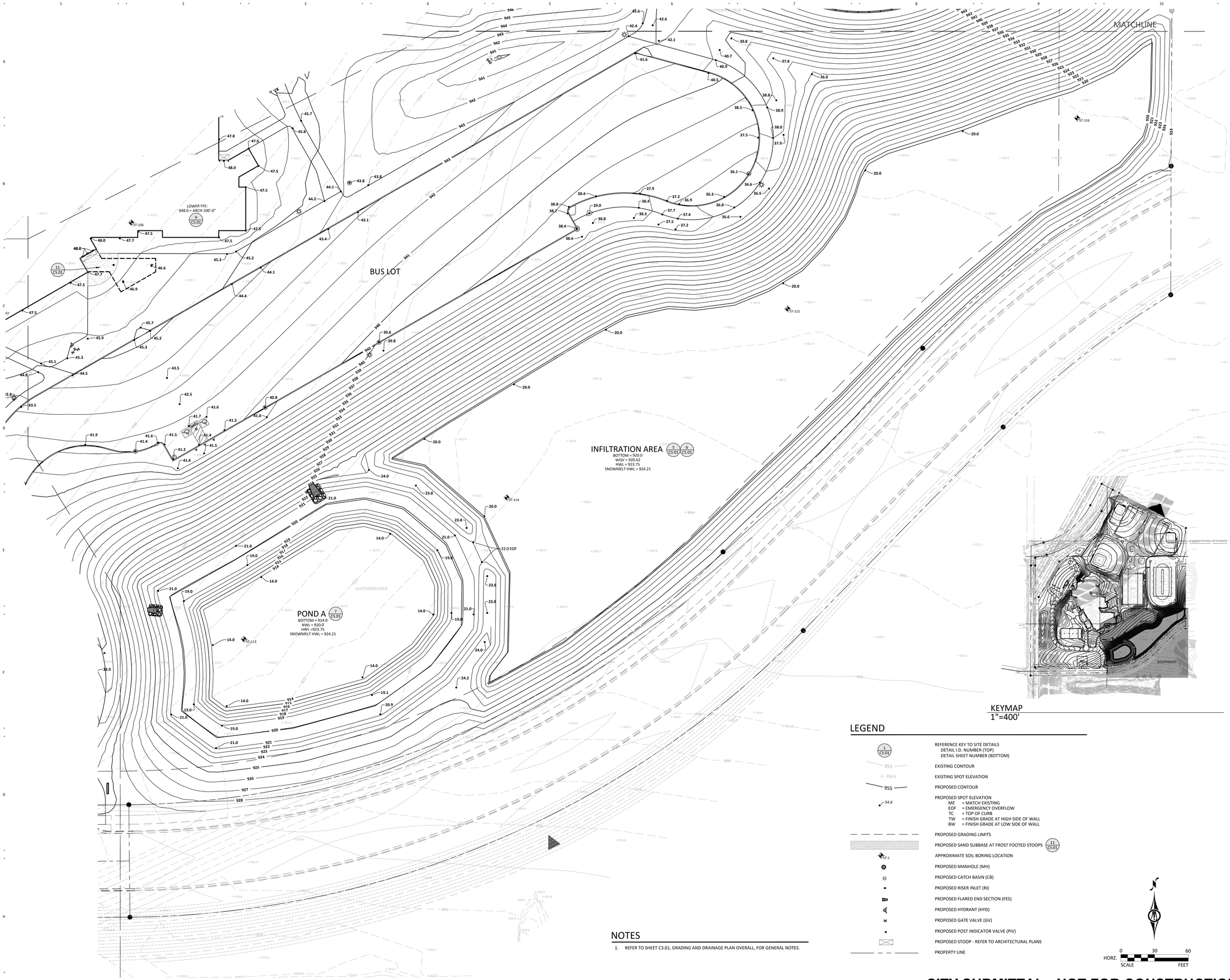
GRADING AND DRAINAGE PLAN SOUTHWEST

Scale: 1" = 30'

C3.02

MN

C



KEYMAP
1"=400'

LEGEND

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	PROPOSED GRADING LIMITS
	PROPOSED SAND SUBBASE AT FROST FOOTED STOOPS 11 / C5.01
ST-1	APPROXIMATE SOIL BORING LOCATION
	PROPOSED MANHOLE (MH)
	PROPOSED CATCH BASIN (CB)
	PROPOSED RISER INLET (RI)
	PROPOSED FLARED END SECTION (FES)
	PROPOSED HYDRANT (HYD)
	PROPOSED GATE VALVE (GV)
	PROPOSED POST INDICATOR VALVE (PIV)
	PROPOSED STOOP - REFER TO ARCHITECTURAL PLANS
	PROPERTY LINE

NOTES

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HORZ. SCALE 0 30 60 FEET

CITY SUBMITTAL - NOT FOR CONSTRUCTION

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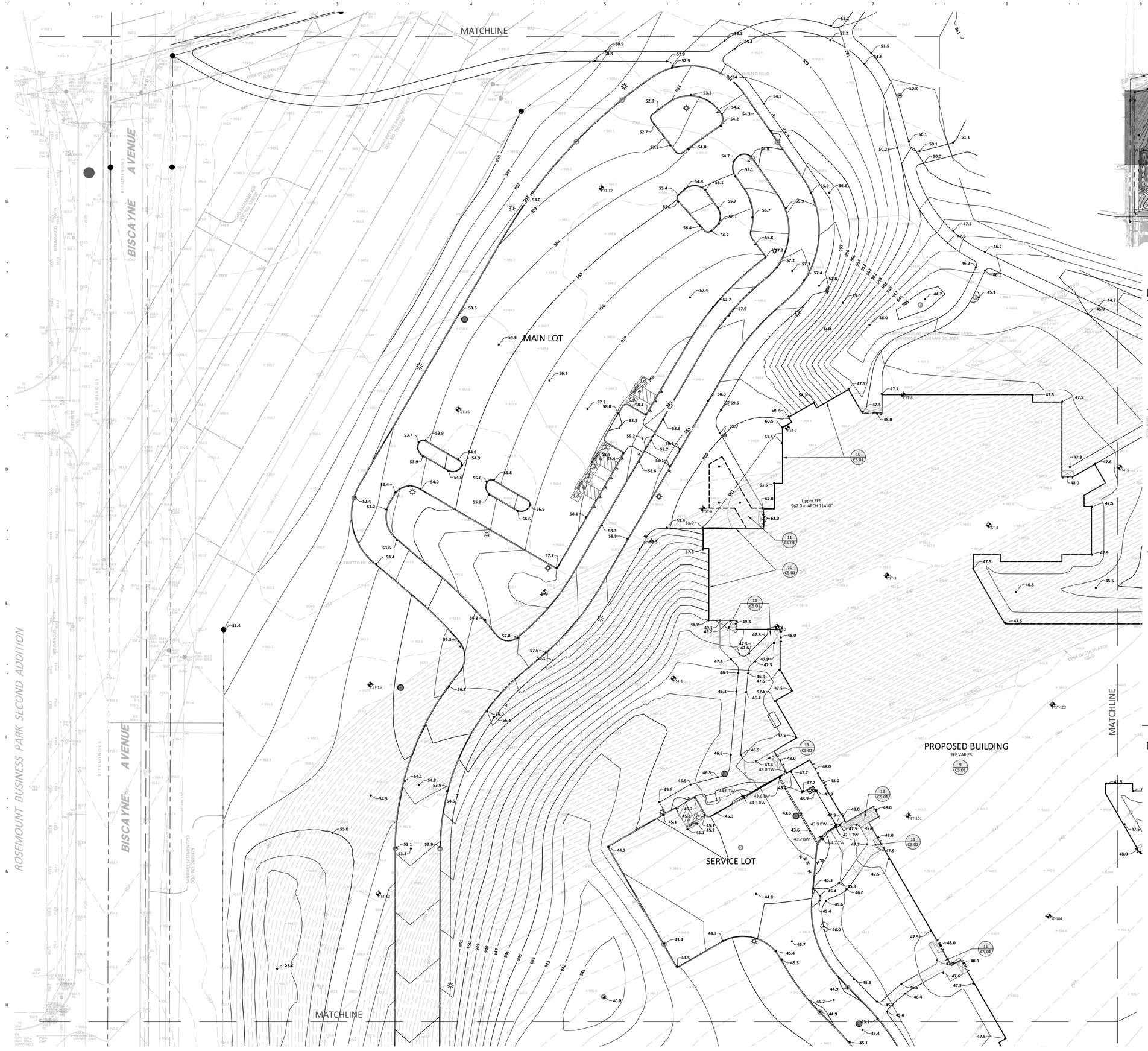
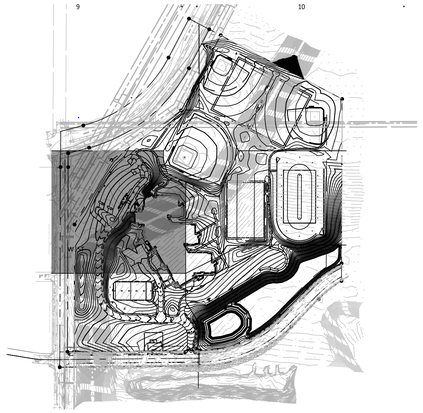
North

GRADING AND DRAINAGE PLAN SOUTHEAST

Scale: 1" = 30'

C3.03





KEYMAP
1"=400'

LEGEND

- REFERENCE KEY TO SITE DETAILS (1 / C5.01): DETAIL I.D. NUMBER (TOP), DETAIL SHEET NUMBER (BOTTOM)
- EXISTING CONTOUR
- EXISTING SPOT ELEVATION
- PROPOSED CONTOUR
- PROPOSED SPOT ELEVATION
  - ME = MATCH EXISTING
  - EOF = EMERGENCY OVERFLOW
  - TC = TOP OF CURB
  - TW = FINISH GRADE AT HIGH SIDE OF WALL
  - BW = FINISH GRADE AT LOW SIDE OF WALL
- PROPOSED GRADING LIMITS
- PROPOSED SAND SUBBASE AT FROST FOOTED STOOPS (11 / C5.01)
- PROPOSED FOAM INSULATION AT FROST FOOTED STOOPS (12 / C5.01)
- APPROXIMATE SOIL BORING / TEST PIT LOCATION
- PROPOSED MANHOLE (MH)
- PROPOSED CATCH BASIN (CB)
- PROPOSED RISER INLET (RI)
- PROPOSED FLARED END SECTION (FES)
- PROPOSED HYDRANT (HYD)
- PROPOSED GATE VALVE (GV)
- PROPOSED POST INDICATOR VALVE (PIV)
- PROPOSED STOOP - REFER TO ARCHITECTURAL PLANS
- PROPERTY LINE

NOTES

1. REFER TO SHEET C3.01, GRADING AND DRAINAGE PLAN OVERALL, FOR GENERAL NOTES.

HORZ. SCALE 0 30 60 FEET

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LIC. NO. 40180 DATE 07/31/2024

Revisions		
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Comm: 232086
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Drawn: JDO
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North

GRADING AND DRAINAGE PLAN WEST

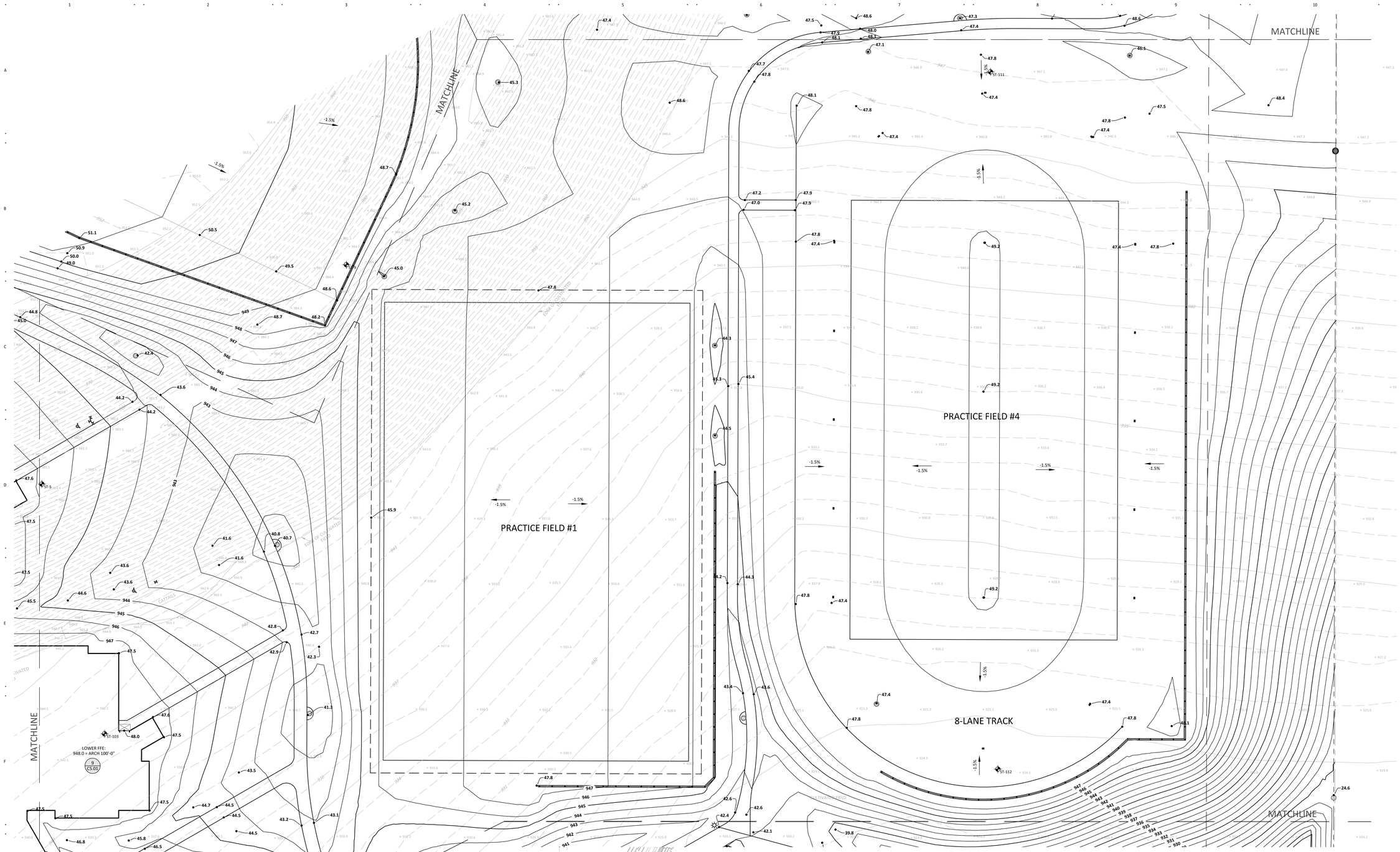
Scale: 1" = 30'

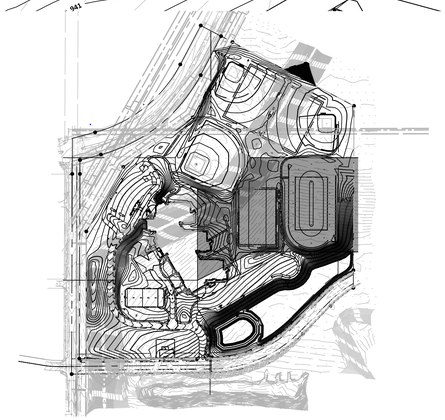
C3.04

CITY SUBMITTAL - NOT FOR CONSTRUCTION

MN

C





KEYMAP
1"=400'

LEGEND

1 / C5.01	REFERENCE KEY TO SITE DETAILS DETAIL I.D. NUMBER (TOP) DETAIL SHEET NUMBER (BOTTOM)
955	EXISTING CONTOUR
954.6	EXISTING SPOT ELEVATION
955	PROPOSED CONTOUR
54.6	PROPOSED SPOT ELEVATION ME = MATCH EXISTING EOF = EMERGENCY OVERFLOW TC = TOP OF CURB TW = FINISH GRADE AT HIGH SIDE OF WALL BW = FINISH GRADE AT LOW SIDE OF WALL
	PROPOSED GRADING LIMITS
	PROPOSED SAND SUBBASE AT FROST FOOTED STOOPS 11 / C5.01
ST-1	APPROXIMATE SOIL BORING LOCATION
	PROPOSED MANHOLE (MH)
	PROPOSED CATCH BASIN (CB)
	PROPOSED RISER INLET (RI)
	PROPOSED FLARED END SECTION (FES)
	PROPOSED HYDRANT (HYD)
	PROPOSED GATE VALVE (GV)
	PROPOSED POST INDICATOR VALVE (PIV)
	PROPOSED STOOP - REFER TO ARCHITECTURAL PLANS
	PROPERTY LINE

NOTES

1. REFER TO SHEET C3.01, GRADING AND DRAINAGE PLAN OVERALL, FOR GENERAL NOTES.

HORZ. 0 30 60
SCALE FEET

CITY SUBMITTAL - NOT FOR CONSTRUCTION

New Rosemount Middle School

Rosemount, Minnesota 55088

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3455 153RD STREET WEST
ROSEMOUNT, MINNESOTA 55068

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DAVID A. REY
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North

GRADING AND DRAINAGE PLAN EAST

Scale: 1" = 30'

C3.05

LEGEND

- REFERENCE KEY TO SITE DETAILS (1 / C5.01)
  - DETAIL I.D. NUMBER (TOP)
  - DETAIL SHEET NUMBER (BOTTOM)
- EXISTING CONTOUR (955)
- EXISTING SPOT ELEVATION (954.6)
- PROPOSED CONTOUR (955)
- PROPOSED SPOT ELEVATION (54.6)
  - ME = MATCH EXISTING
  - EOF = EMERGENCY OVERFLOW
  - TC = TOP OF CURB
  - TW = FINISH GRADE AT HIGH SIDE OF WALL
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- PROPOSED GRADING LIMITS
- PROPOSED SAND SUBBASE AT FROST FOOTED STOOPS (11 / C5.01)
- APPROXIMATE SOIL BORING LOCATION (ST-1)
- PROPOSED MANHOLE (MH)
- PROPOSED CATCH BASIN (CB)
- PROPOSED RISER INLET (RI)
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- PROPOSED HYDRANT (HYD)
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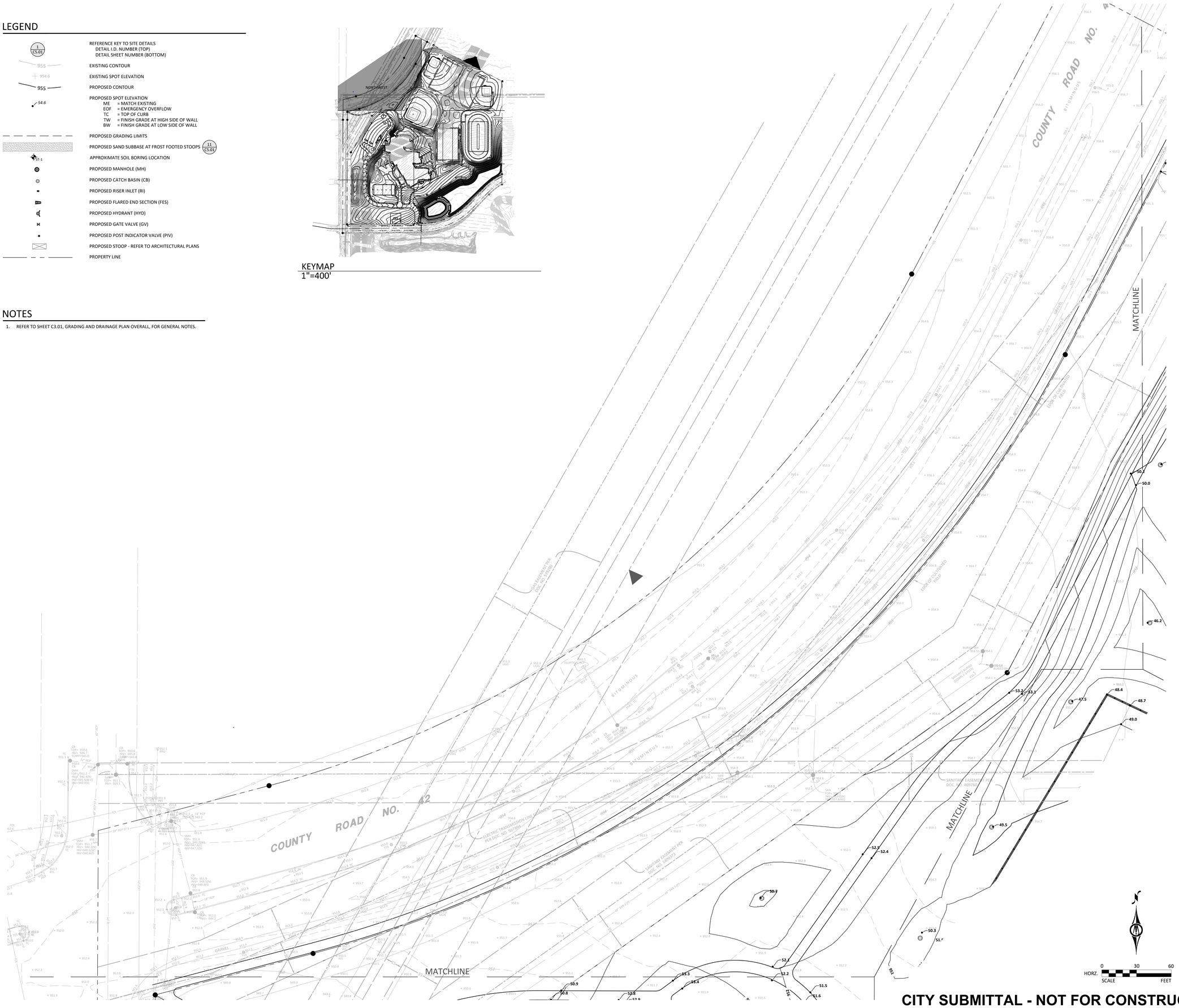
- PROPOSED POST INDICATOR VALVE (PIV)
- PROPOSED STOOP - REFER TO ARCHITECTURAL PLANS
- PROPERTY LINE

KEYMAP
1"=400'

NOTES

1. REFER TO SHEET C3.01, GRADING AND DRAINAGE PLAN OVERALL, FOR GENERAL NOTES.



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North

GRADING AND DRAINAGE PLAN NORTHWEST

Scale: 1" = 30'

C3.06

MN

C

LEGEND

- REFERENCE KEY TO SITE DETAILS (DETAIL I.D. NUMBER (TOP), DETAIL SHEET NUMBER (BOTTOM))
- EXISTING CONTOUR
- EXISTING SPOT ELEVATION
- PROPOSED CONTOUR
- PROPOSED SPOT ELEVATION
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NOTES

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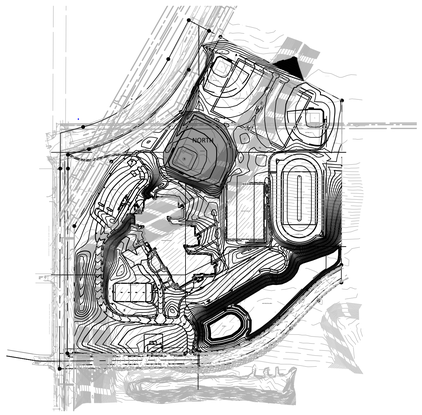

KEYMAP
1"=400'

HORZ. SCALE 0 30 60 FEET

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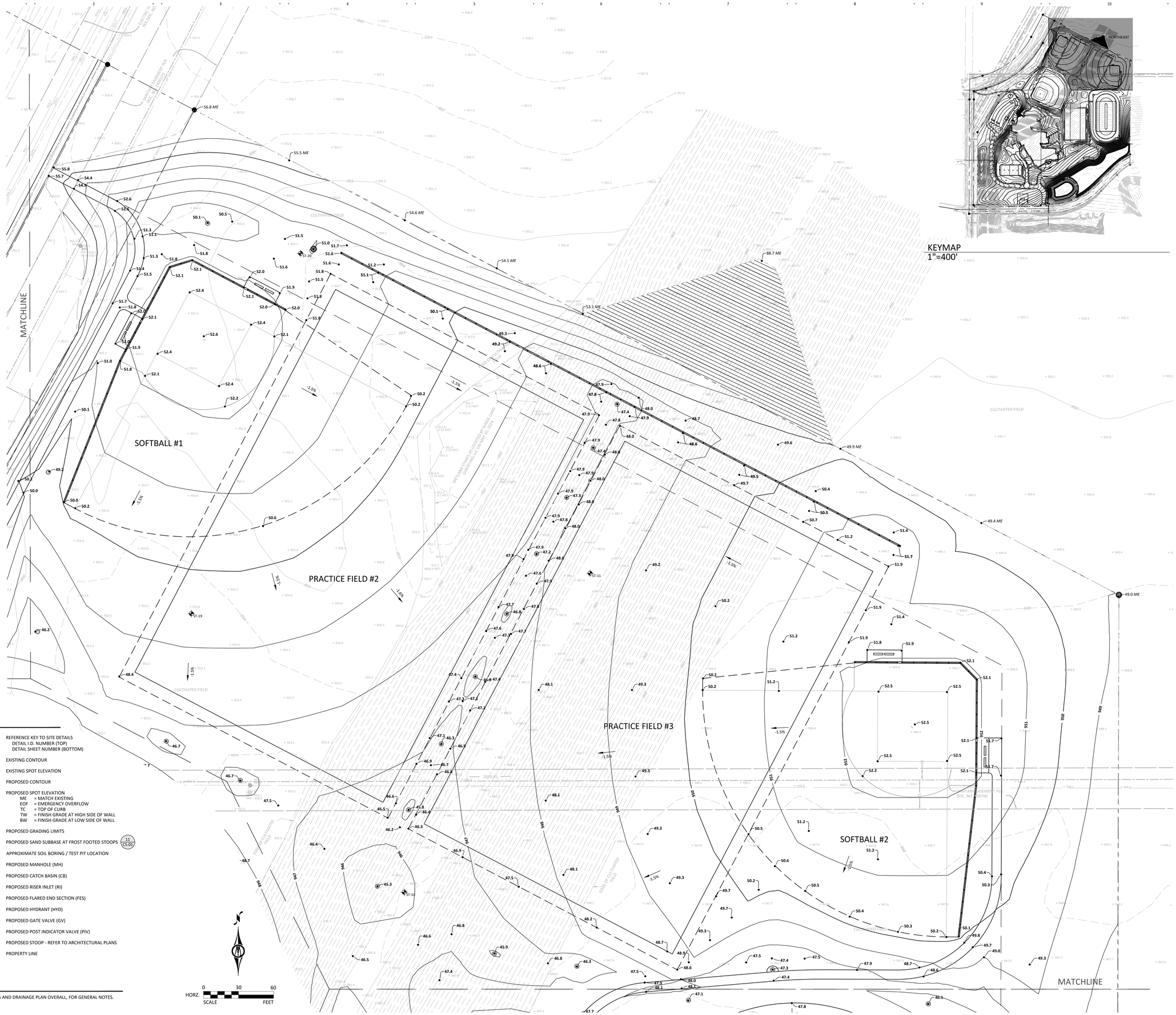
North

GRADING AND DRAINAGE PLAN NORTH

Scale: 1" = 30'

C3.07

MN



KEYMAP
1"=400'

LEGEND

- REFERENCE KEY TO SITE DETAILS — DETAIL I.D. NUMBER (TOP) / DETAIL SHEET NUMBER (BOTTOM)
- EXISTING CONTOUR
- EXISTING SPOT ELEVATION
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- PROPOSED SPOT ELEVATION
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- PROPERTY LINE

NOTES

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HORZ. SCALE 0 30 60 FEET

C

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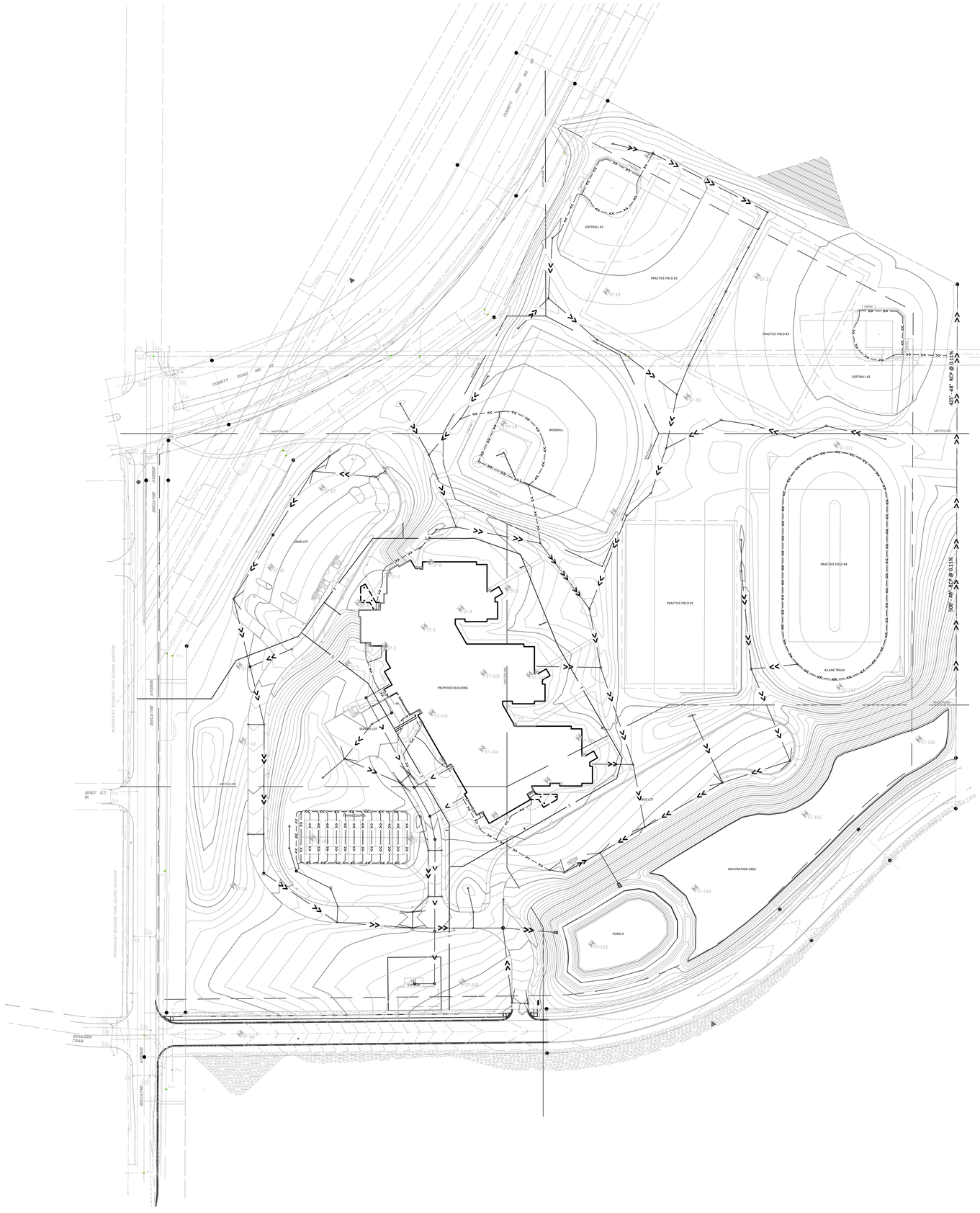
GRADING AND DRAINAGE PLAN NORTHEAST

Scale: 1" = 30'

C3.08

MN



C

LEGEND

X / X	REFERENCE KEY TO SITE DETAILS DETAIL I.D. NUMBER (TOP) DETAIL SHEET NUMBER (BOTTOM)
955	EXISTING CONTOUR
x.xx	EXISTING SPOT ELEVATION
955	PROPOSED CONTOUR
54.6	PROPOSED SPOT ELEVATION ME = MATCH EXISTING EOF = EMERGENCY OVERFLOW TC = TOP OF CURB TW = FINISH GRADE AT HIGH SIDE OF WALL BW = FINISH GRADE AT LOW SIDE OF WALL
	PROPOSED GRADING LIMITS
	PROPOSED SANITARY SEWER
	PROPOSED STORM SEWER
	PROPOSED WATERMAIN
	PROPOSED DRAIN TILE / SUBSURFACE DRAINS (SD)
	PROPOSED MANHOLE (MH) — 23 / C5.01, 2 / C5.02
	PROPOSED CATCH BASIN (CB) — 25 / C5.01
	PROPOSED RISER INLET (RI) — 24 / C5.01
	PROPOSED SURGE BASIN (SB)
	PROPOSED FLARED END SECTION (FES) — 19 / C5.01
	PROPOSED HYDRANT (HYD) — 5 / C5.02
	PROPOSED GATE VALVE (GV) — 5 / C5.02
	PROPOSED POST INDICATOR VALVE (PIV) — 8 / C5.02
1	PROVIDE MINIMUM 18" VERTICAL SEPARATION AT CROSSING - PROVIDE VERTICAL BENDS IN WATERMAIN AS REQUIRED TO ACCOMPLISH. CENTER ONE LENGTH WATERMAIN PIPE ON CROSSING.
2	CONNECT DRAIN TILE TO STRUCTURE AND PROVIDE BACKWATER VALVE
3	CENTER ONE LENGTH OF SOLID PVC PIPE ON WATERMAIN AT CROSSING
	PROPOSED BUILDING STOOP - REFER TO ARCHITECTURAL PLANS
	PROPERTY LINE

NOTES

1. REFER TO SHEET C3.01, GRADING AND DRAINAGE PLAN OVERALL, FOR GENERAL NOTES.
2. ALL WATERMAIN PIPE SHALL BE DIP, CLASS 52. ALL WATERMAIN SHALL HAVE MINIMUM 8'-0" BURY (TOP OF PIPE TO FINISH GRADE). DIP SHALL BE ENCASED WITH POLYETHYLENE FILM CONFORMING TO ASTM D 1248-889.
3. ALL WATERMAIN SHALL BE AWWA C900, CAST IRON OD, DR 18, PVC PIPE INSTALLED IN ACCORDANCE WITH ASTM D2321. ALL WATERMAIN SHALL HAVE MINIMUM 8'-0" BURY (TOP OF PIPE TO FINISH GRADE).
4. ALL SANITARY SEWER PIPE SHALL BE PVC PIPE (ASTM D 3034, SDR 26), UNLESS OTHERWISE NOTED. SANITARY SEWER INSTALLATION SHALL BE IN ACCORDANCE WITH ASTM D2321.
5. ALL SANITARY SEWER PIPE CROSSING WATERMAIN, OUTSIDE OF THE PUBLIC RIGHT-OF-WAY, SHALL BE ASTM D2665, SCHEDULE 40 PVC WITH SOLVENT WELD JOINTS.
6. ALL STORM SEWER PIPE SHALL BE RCP, CLASS III (MIN.), WITH FLEXIBLE WATERTIGHT JOINTS IN ACCORDANCE WITH ASTM C-361 OR PVC PIPE (ASTM D3034, SDR 35) INSTALLED IN ACCORDANCE WITH ASTM D2321, UNLESS OTHERWISE NOTED.
7. ALL STORM SEWER PIPE CROSSING WATERMAIN, OUTSIDE OF THE PUBLIC RIGHT-OF-WAY, SHALL BE ASTM D2665, SCHEDULE 40 PVC WITH SOLVENT WELD JOINTS.
8. FLEXIBLE JOINTS AT STORM SEWER PIPE CONNECTIONS TO STRUCTURES:
   a. IN ACCORDANCE WITH MINNESOTA PLUMBING CODE, PROVIDE FLEXIBLE JOINTS AT ALL PIPE CONNECTIONS TO ALL STORM SEWER STRUCTURES.
   b. ACCEPTABLE MANUFACTURERS / PRODUCTS:
      i. FERNCO, "CONCRETE MANHOLE ADAPTORS" OR "LARGE-DIAMETER WATERSTOPS"
      ii. PRESS-SEAL, WATERSTOP GROUTING RINGS"
      iii. OR APPROVED EQUAL.
9. INSTALL WATERMAIN AT LEAST 10 FEET HORIZONTALLY FROM ANY MANHOLE, CATCH BASIN, STORM SEWER, SANITARY SEWER, DRAIN TILE, OR OTHER POTENTIAL SOURCE FOR CONTAMINATION PER MN PLUMBING CODE. THIS ISOLATION DISTANCE IS MEASURED FROM THE OUTER EDGE OF THE PIPE TO THE OUTER EDGE OF THE CONTAMINATION SOURCE (OUTER EDGE OF STRUCTURES OR SIMILAR).
10. INSTALL MANOLES, CATCH BASINS, STORM SEWER, SANITARY SEWER, DRAIN TILE, AND OTHER POTENTIAL SOURCES OF CONTAMINATION AT LEAST 10 FEET HORIZONTALLY FROM ANY WATERMAIN PER MN PLUMBING CODE. THIS ISOLATION DISTANCE IS MEASURED FROM THE OUTER EDGE OF THE PIPE TO THE OUTER EDGE OF THE CONTAMINATION SOURCE (OUTER EDGE OF STRUCTURES OR SIMILAR).
11. LOCATE ALL EXISTING UTILITIES. VERIFY LOCATION, SIZE AND INVERT ELEVATION OF ALL EXISTING UTILITIES BEFORE BEGINNING CONSTRUCTION.
12. PRIOR TO CONSTRUCTION OF PROPOSED BUILDING UTILITY SERVICES (STORM, SANITARY SEWER, WATERMAIN), VERIFY ALL PROPOSED BUILDING UTILITY SERVICE PIPE SIZES, LOCATIONS AND ELEVATIONS WITH MECHANICAL PLANS. COORDINATE CONSTRUCTION AND CONNECTIONS WITH MECHANICAL CONTRACTOR.
13. MAINTAIN DRAINAGE FROM EXISTING BUILDING AT ALL TIMES. PROVIDE TEMPORARY STORM SEWER, INCLUDING, BUT NOT LIMITED TO, CATCH BASINS, MANHOLES, PIPING, AND SIMILAR. DO NOT REMOVE EXISTING STORM SEWER UNTIL TEMPORARY OR PERMANENT STORM SEWER IS INSTALLED AND FUNCTIONAL. COORDINATE ALL REMOVALS WITH APPROPRIATE TRADES (SITE UTILITY CONTRACTOR, MECHANICAL CONTRACTOR, ETC.) AS REQUIRED.
14. STAKE LIMITS OF WALKS AND CURBING PRIOR TO INSTALLATION OF GATE VALVES, CATCH BASINS, AND MANHOLES. ADJUST GATE VALVE AND MANHOLE LOCATIONS TO AVOID PLACEMENT OF THESE STRUCTURES IN WALKS AND CURB AND GUTTER. STAKE CURB AND GUTTER ALIGNMENTS TO ALLOW CURB INLET TYPE CATCH BASINS TO PROPERLY ALIGN WITH CURB AND GUTTER

0 100 200
HORZ. SCALE FEET

CITY SUBMITTAL - NOT FOR CONSTRUCTION

New Rosemount Middle School

Rosemount, Minnesota 55088

Independent School District #196

3455 153RD STREET WEST
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DAVID A. REY
LIC. NO. 40180 DATE 07/31/2024

Revisions		
Description	Date	Num

Comm: 232086
Date: 07/31/2024
Drawn: JDO
Check: DAR

North

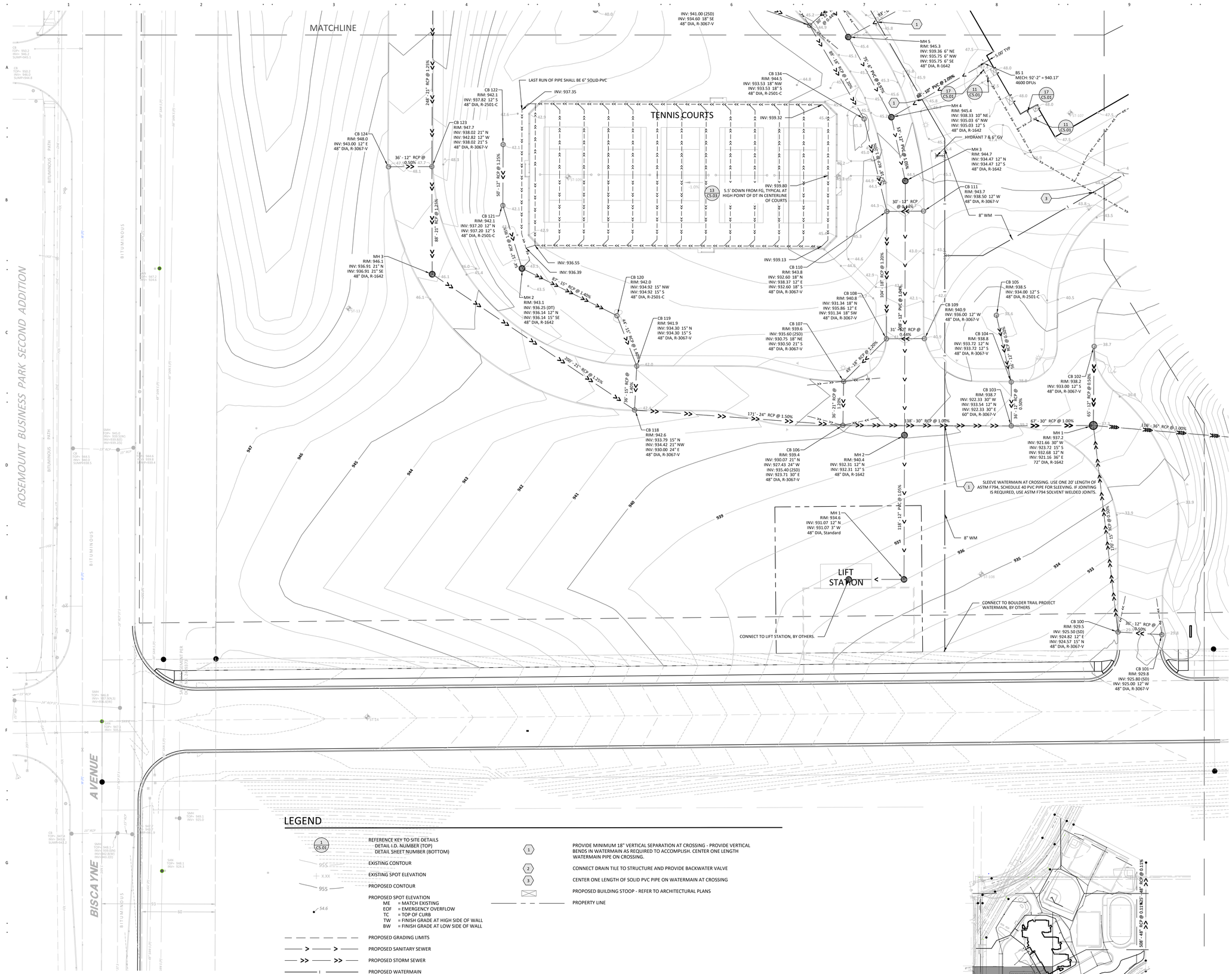
UTILITY PLAN OVERALL

Scale: 1" = 100'

C4.01

MN

C



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Wold

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North

UTILITY PLAN SOUTHWEST

Scale: 1" = 30'

C4.02

LEGEND

- REFERENCE KEY TO SITE DETAILS — DETAIL I.D. NUMBER (TOP) / DETAIL SHEET NUMBER (BOTTOM)
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- PROPERTY LINE

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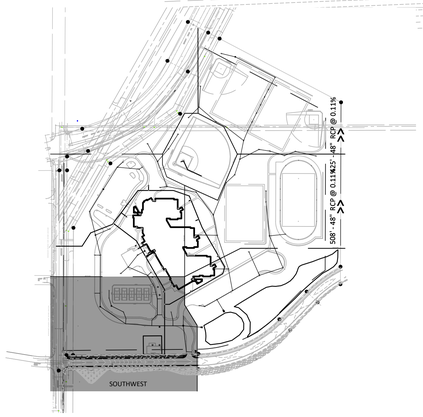


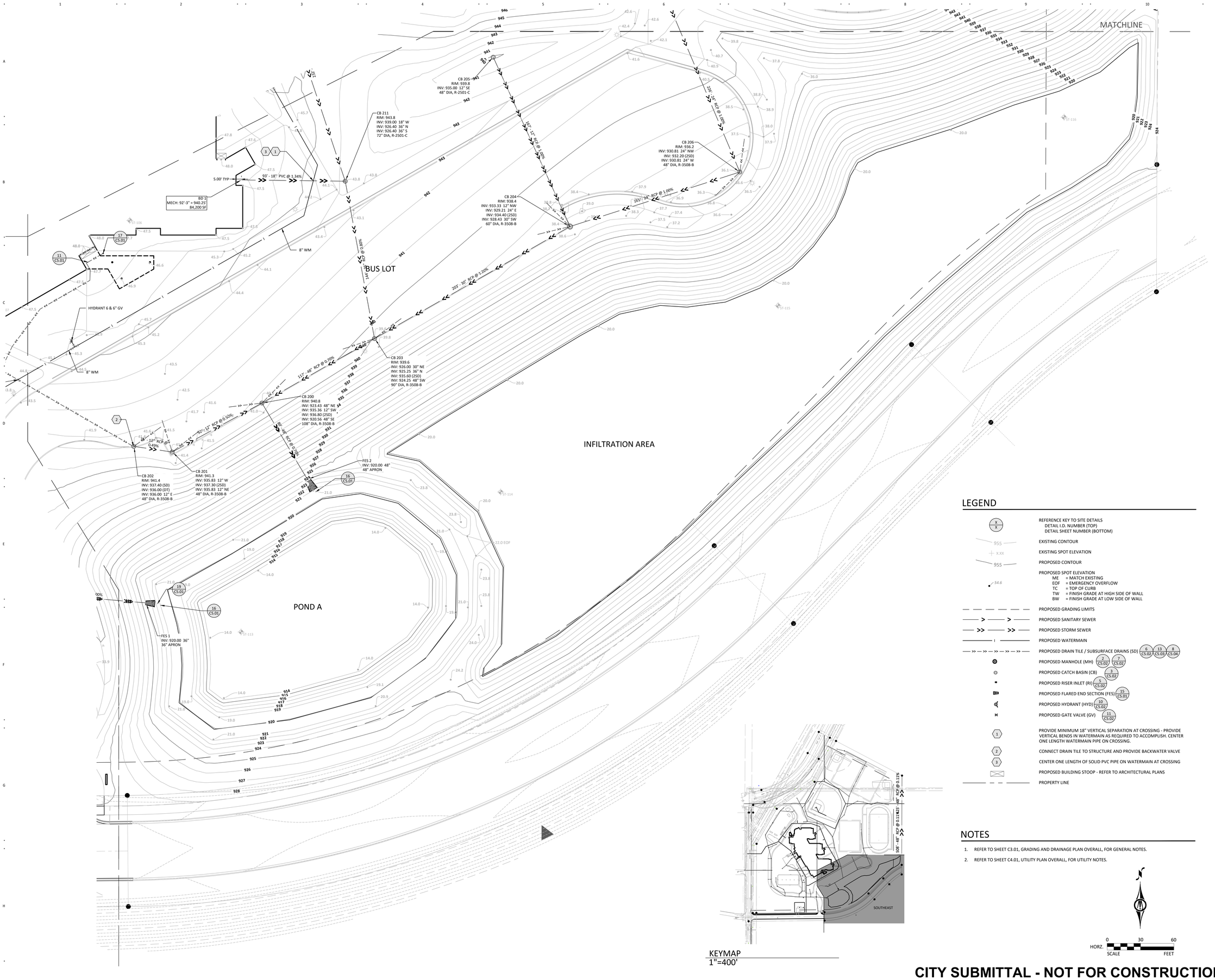
KEYMAP
1"=400'

HORZ. SCALE 0 30 60 FEET

CITY SUBMITTAL - NOT FOR CONSTRUCTION

MN

C



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HORZ. 0 30 60
SCALE FEET

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Revisions		
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Comm: 232086
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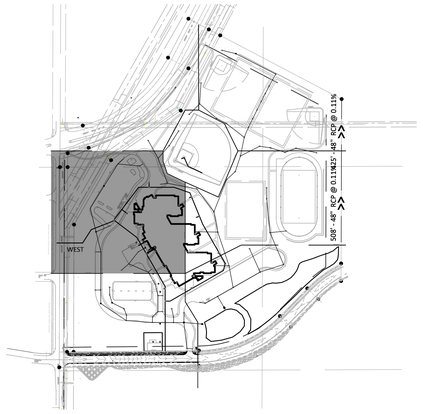
North

UTILITY PLAN SOUTHEAST

Scale: 1" = 30'

C4.03



KEYMAP
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LEGEND

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- PROPOSED WATERMAIN
- PROPOSED DRAIN TILE / SUBSURFACE DRAINS (SD) 6 C5.02 13 C5.03 8 C5.04
- PROPOSED MANHOLE (MH) 2 C5.02 7 C5.02
- PROPOSED CATCH BASIN (CB) 3 C5.02
- PROPOSED RISER INLET (RI) 5 C5.02
- PROPOSED FLARED END SECTION (FES) 15 C5.01
- PROPOSED HYDRANT (HYD) 10 C5.02
- PROPOSED GATE VALVE (GV) 11 C5.02
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- PROPERTY LINE

NOTES

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HORZ. SCALE 0 30 60 FEET

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North

UTILITY PLAN WEST

Scale: 1" = 30'

C4.04

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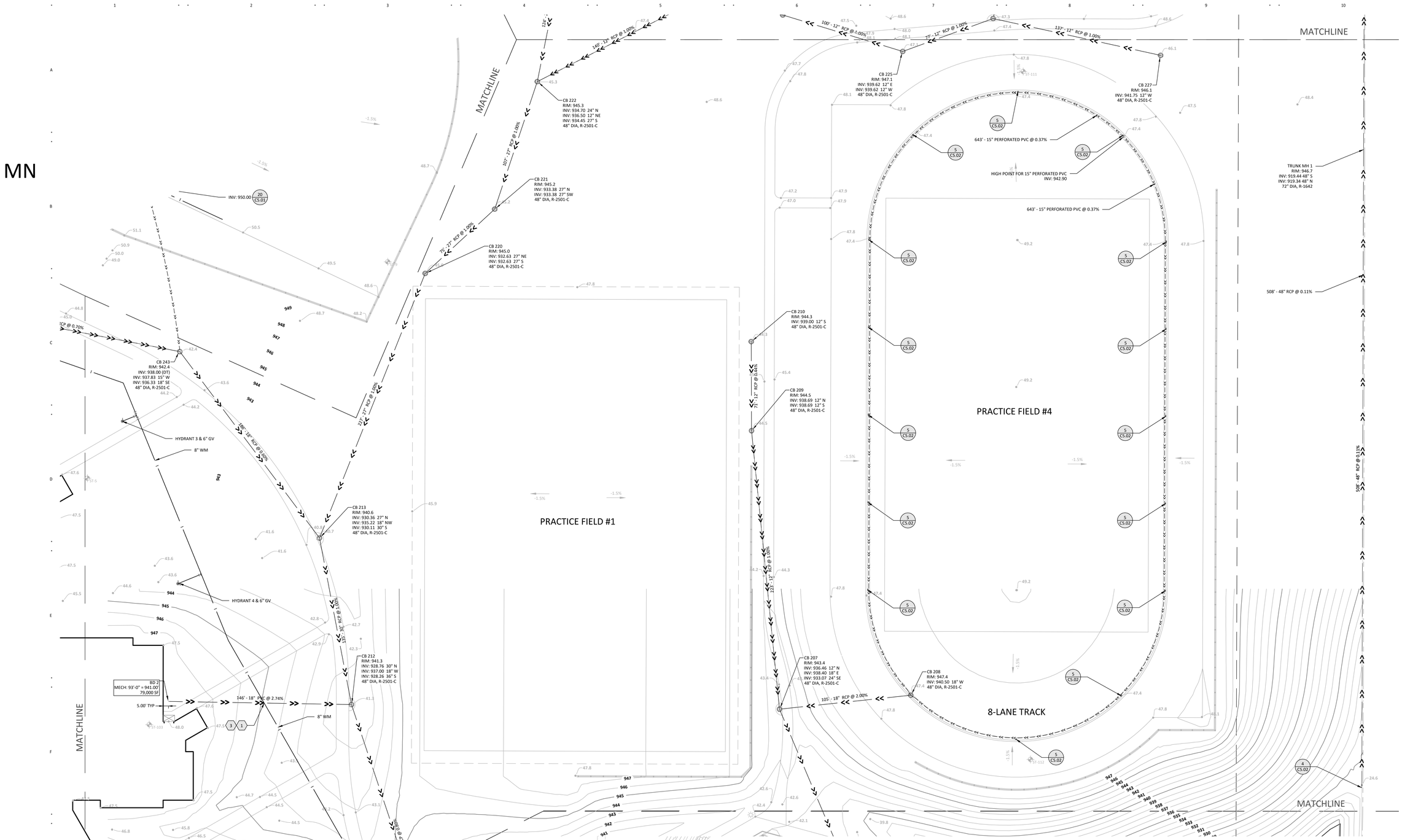

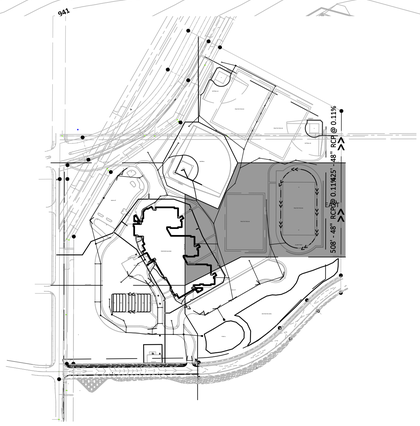

KEYMAP
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HORZ. SCALE 0 30 60 FEET

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UTILITY PLAN EAST

Scale: 1" = 30'

C4.05

MN

LEGEND

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KEYMAP
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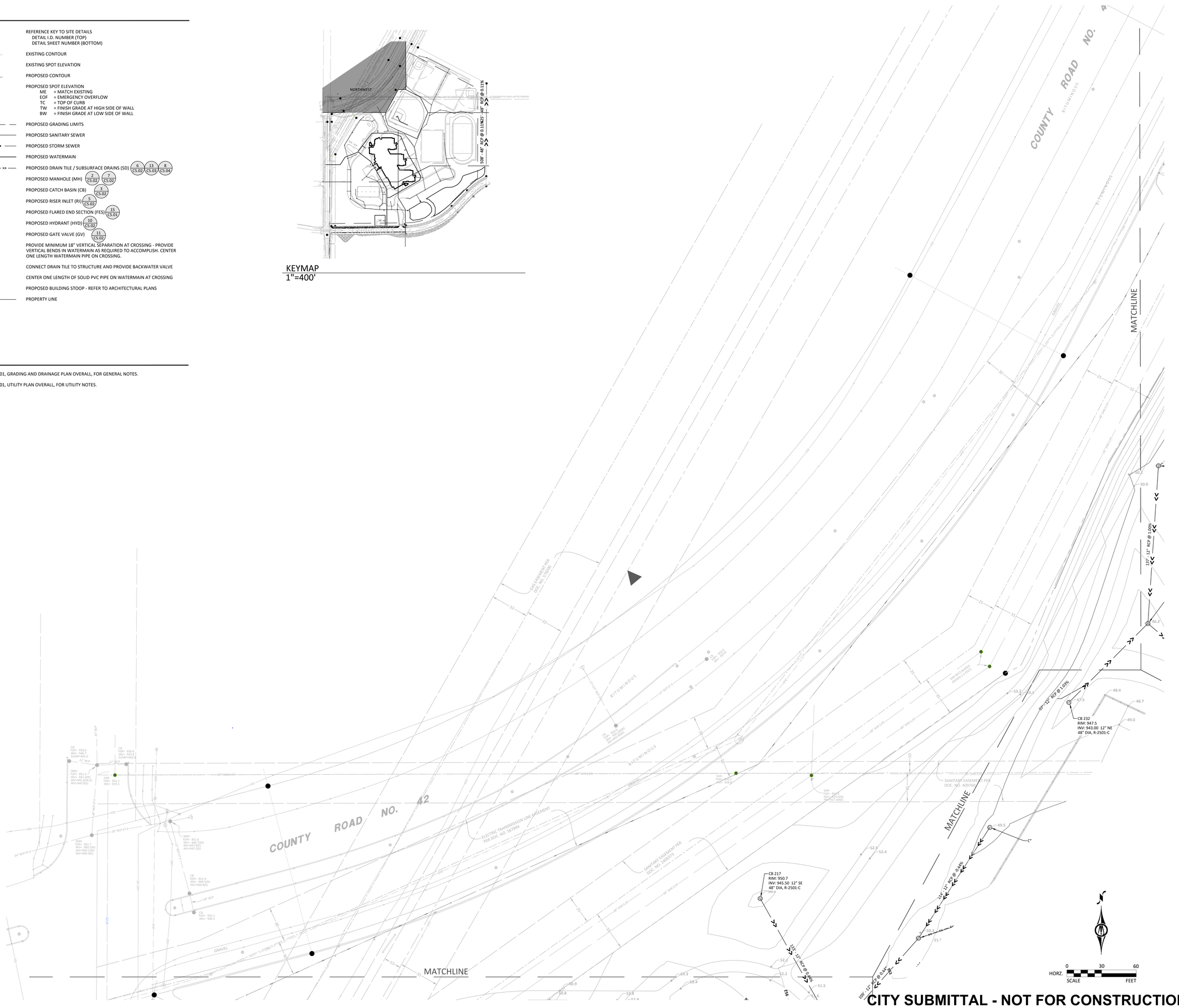

C

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North

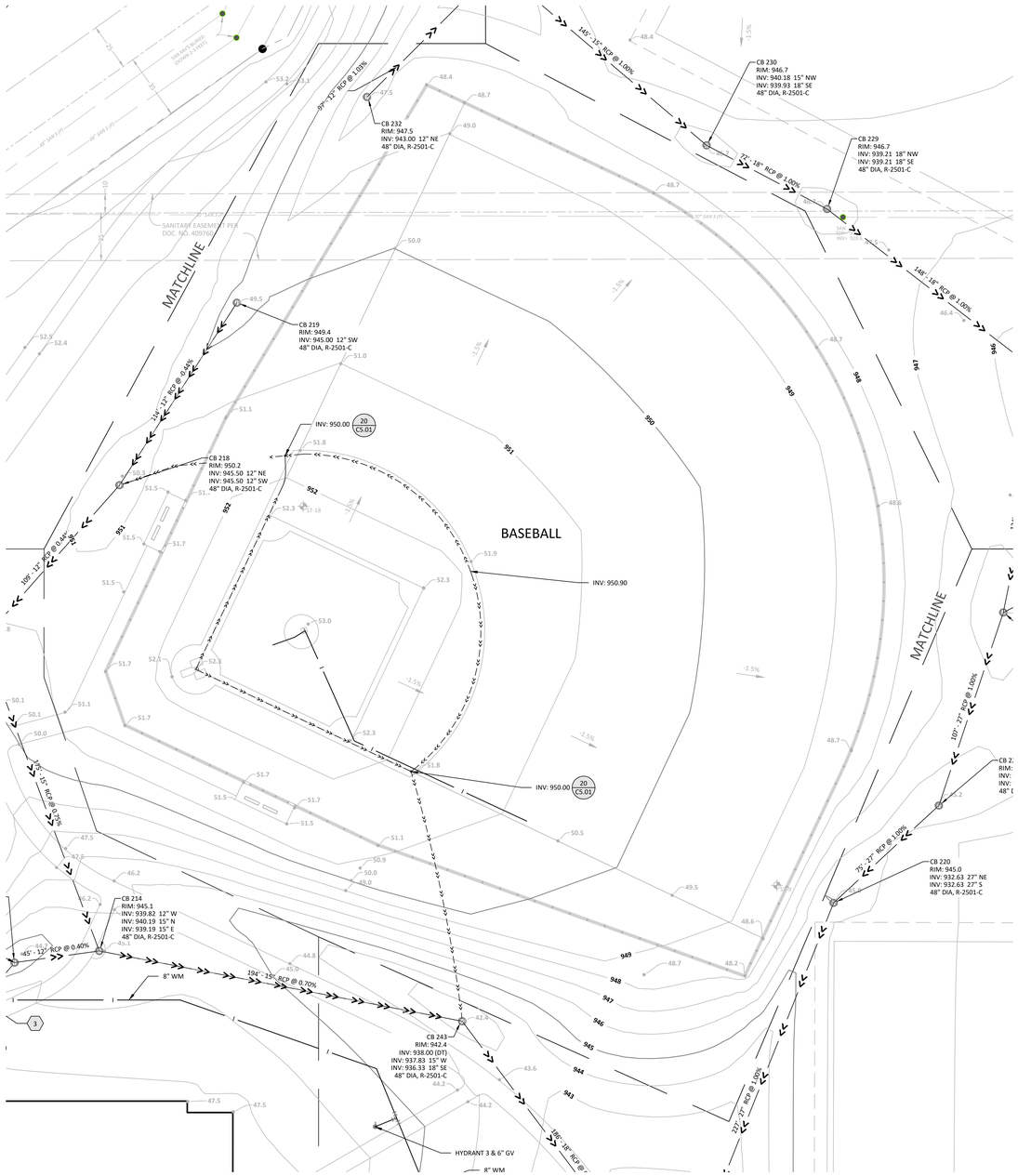
UTILITY PLAN
NORTHWEST

Scale: 1" = 30'

C4.06

MN

C



LEGEND

X / X	REFERENCE KEY TO SITE DETAILS DETAIL I.D. NUMBER (TOP) DETAIL SHEET NUMBER (BOTTOM)
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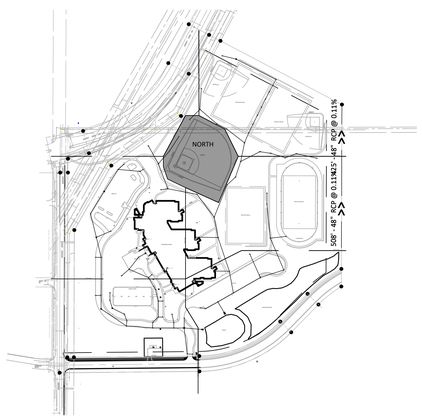

KEYMAP
1"=400'

HORZ. 0 30 60
SCALE FEET

CITY SUBMITTAL - NOT FOR CONSTRUCTION

New Rosemount Middle School

Rosemount, Minnesota 55088

Independent School District #196
3455 153RD STREET WEST
ROSEMOUNT, MINNESOTA 55068

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DAVID A. REY
LIC. NO. 40180 DATE 07/31/2024

Revisions		
Description	Date	Num

Comm: 232086
Date: 07/31/2024
Drawn: JDO
Check: DAR

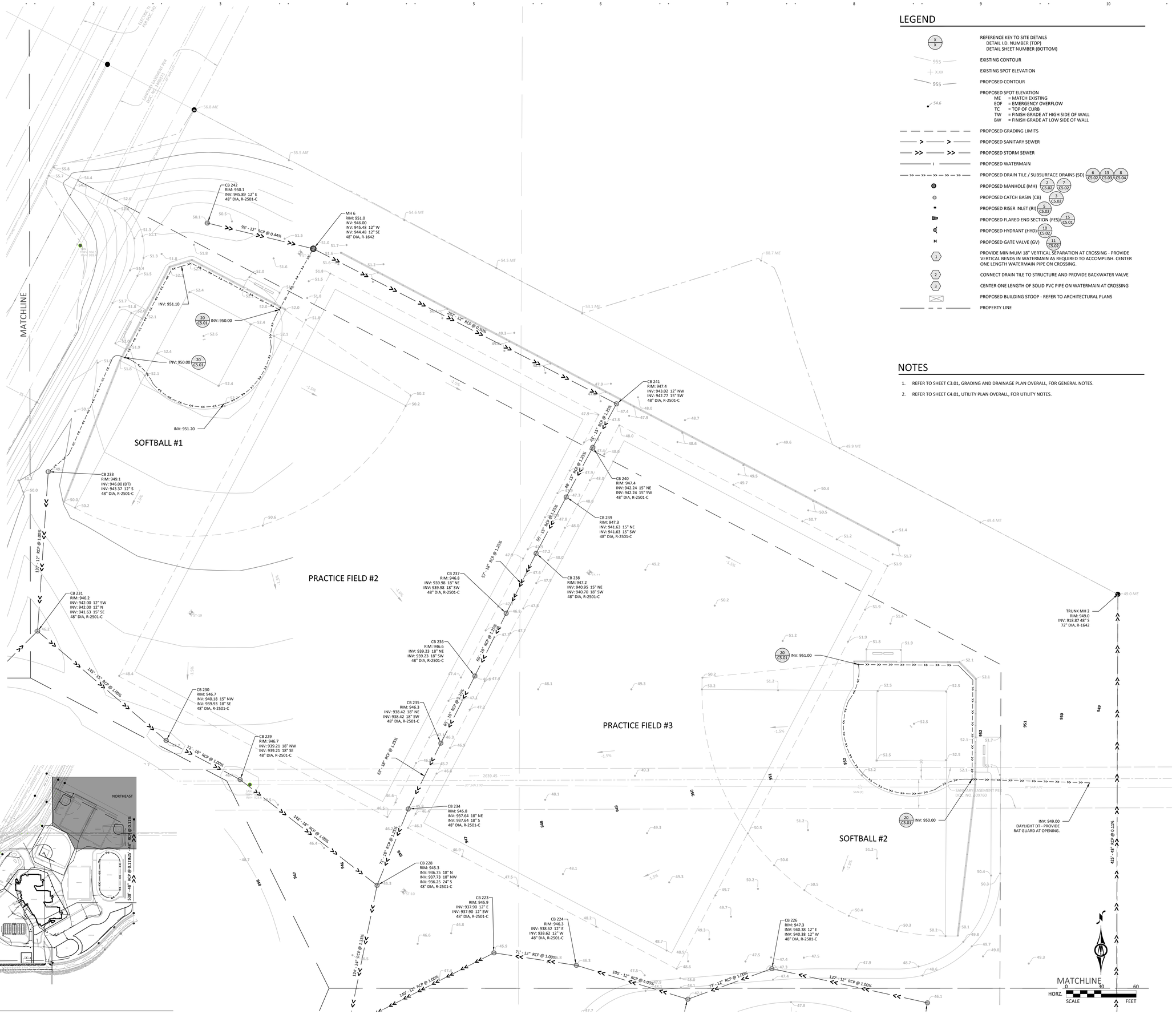
North

UTILITY PLAN NORTH

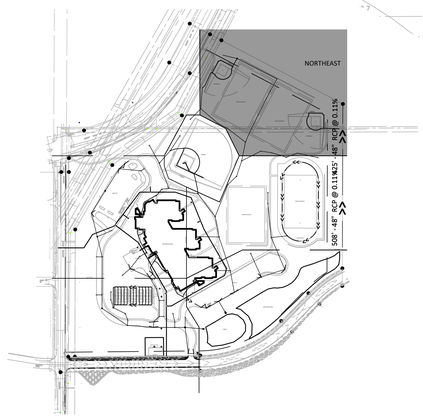
Scale: 1" = 30'

C4.07

MN



C



KEYMAP
1"=400'

LEGEND

X / X	REFERENCE KEY TO SITE DETAILS DETAIL I.D. NUMBER (TOP) DETAIL SHEET NUMBER (BOTTOM)
955	EXISTING CONTOUR
x.xx	EXISTING SPOT ELEVATION
955	PROPOSED CONTOUR
54.6	PROPOSED SPOT ELEVATION ME = MATCH EXISTING EOF = EMERGENCY OVERFLOW TC = TOP OF CURB TW = FINISH GRADE AT HIGH SIDE OF WALL BW = FINISH GRADE AT LOW SIDE OF WALL
	PROPOSED GRADING LIMITS
	PROPOSED SANITARY SEWER
	PROPOSED STORM SEWER
	PROPOSED WATERMAIN
	PROPOSED DRAIN TILE / SUBSURFACE DRAINS (SD) 6 C5.02, 13 C5.03, 8 C5.04
	PROPOSED MANHOLE (MH) 1 C5.02, 2 C5.02
	PROPOSED CATCH BASIN (CB) 3 C5.02
	PROPOSED RISER INLET (RI) 5 C5.02
	PROPOSED FLARED END SECTION (FES) 15 C5.01
	PROPOSED HYDRANT (HYD) 10 C5.02
	PROPOSED GATE VALVE (GV) 11 C5.02
1	PROVIDE MINIMUM 18" VERTICAL SEPARATION AT CROSSING - PROVIDE VERTICAL BENDS IN WATERMAIN AS REQUIRED TO ACCOMPLISH. CENTER ONE LENGTH WATERMAIN PIPE ON CROSSING.
2	CONNECT DRAIN TILE TO STRUCTURE AND PROVIDE BACKWATER VALVE
3	CENTER ONE LENGTH OF SOLID PVC PIPE ON WATERMAIN AT CROSSING
	PROPOSED BUILDING STOOP - REFER TO ARCHITECTURAL PLANS
	PROPERTY LINE

NOTES

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North

UTILITY PLAN
NORTHEAST

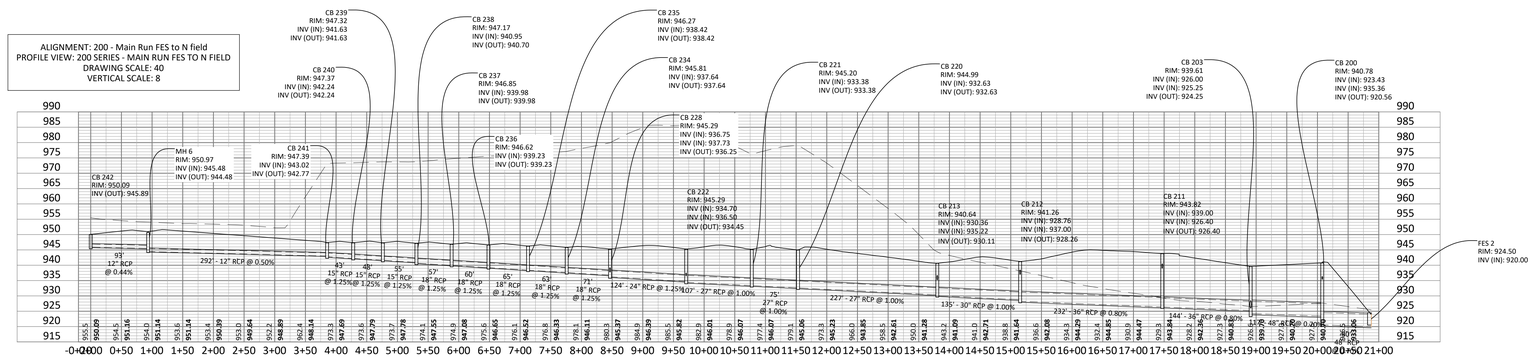
Scale: 1" = 30'

C4.08

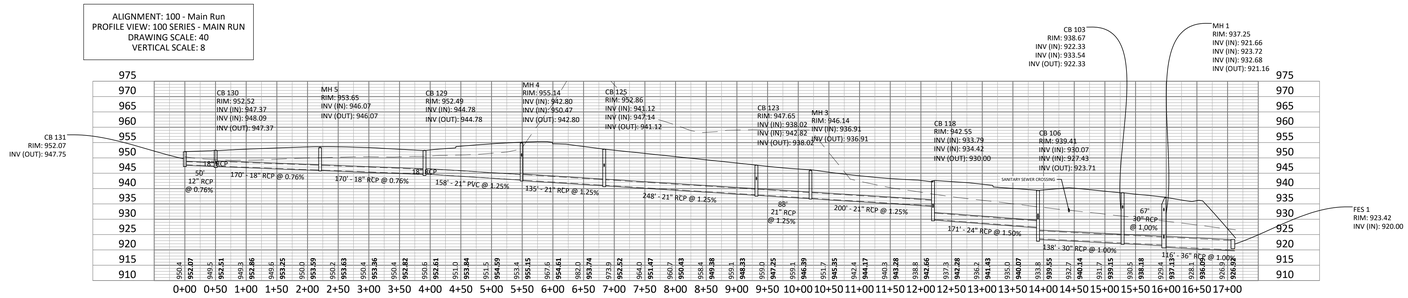
MN

C

ALIGNMENT: 200 - Main Run FES to N field
PROFILE VIEW: 200 SERIES - MAIN RUN FES TO N FIELD
DRAWING SCALE: 40
VERTICAL SCALE: 8



ALIGNMENT: 100 - Main Run
PROFILE VIEW: 100 SERIES - MAIN RUN
DRAWING SCALE: 40
VERTICAL SCALE: 8



HORZ. 0 100 200
SCALE FEET

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North

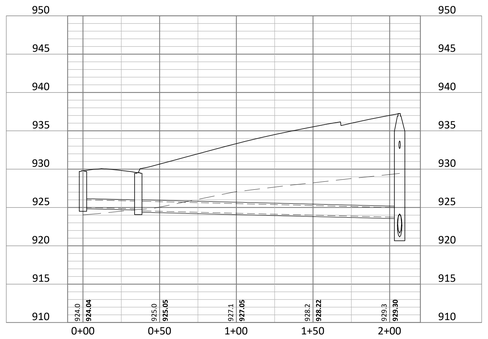
STORM PROFILE 1

Scale:

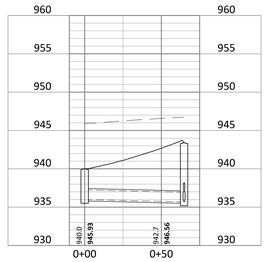
C4.09

MN

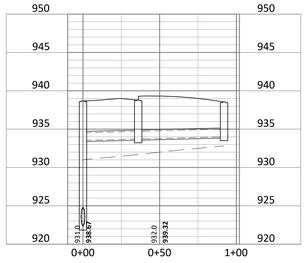
ALIGNMENT: CB 101 - MH 1
PROFILE VIEW: CB 101 - MH 1
DRAWING SCALE: 40
VERTICAL SCALE: 8



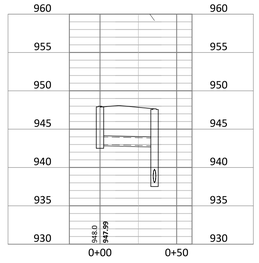
ALIGNMENT: CB 114 - CB 117
PROFILE VIEW: CB 114 - CB 117
DRAWING SCALE: 40
VERTICAL SCALE: 8



ALIGNMENT: CB 103 - CB 105
PROFILE VIEW: CB 103 - CB 105
DRAWING SCALE: 40
VERTICAL SCALE: 8



ALIGNMENT: CB 123 - CB 124
PROFILE VIEW: CB 123 - CB 124
DRAWING SCALE: 40
VERTICAL SCALE: 8



C

HORZ. 0 40 80
SCALE FEET

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North

STORM PROFILE 2

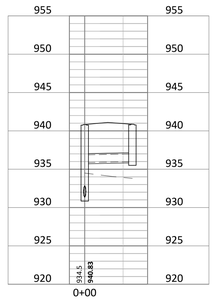
Scale:

C4.10

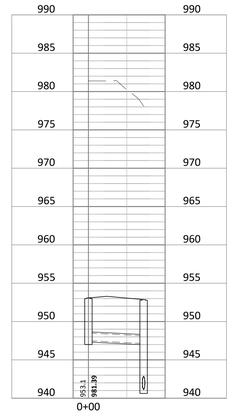
MN

C

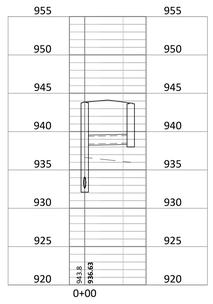
ALIGNMENT: CB 108 - CB 109
PROFILE VIEW: CB 108 - CB 109
DRAWING SCALE: 40
VERTICAL SCALE: 8



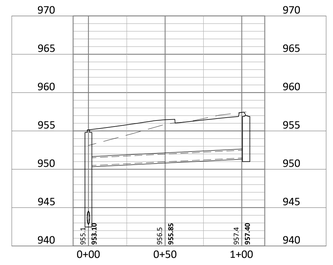
ALIGNMENT: CB 125 - CB 126
PROFILE VIEW: CB 125 - CB 126
DRAWING SCALE: 40
VERTICAL SCALE: 8



ALIGNMENT: CB 110 - CB 111
PROFILE VIEW: CB 110 - CB 111
DRAWING SCALE: 40
VERTICAL SCALE: 8



ALIGNMENT: CB 127 - MH 5
PROFILE VIEW: CB 127 - MH 5
DRAWING SCALE: 40
VERTICAL SCALE: 8



HORZ. 0 40 80
SCALE FEET

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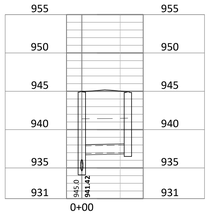
North

STORM PROFILE 3

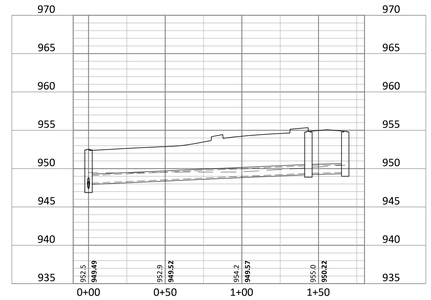
Scale:

C4.11

ALIGNMENT: CB 112 - CB 113
PROFILE VIEW: CB 112 - CB 113
DRAWING SCALE: 40
VERTICAL SCALE: 8



ALIGNMENT: CB 130 - CB 133
PROFILE VIEW: CB 130 - CB 133
DRAWING SCALE: 40
VERTICAL SCALE: 8



HORZ. 0 40 80
SCALE FEET

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North

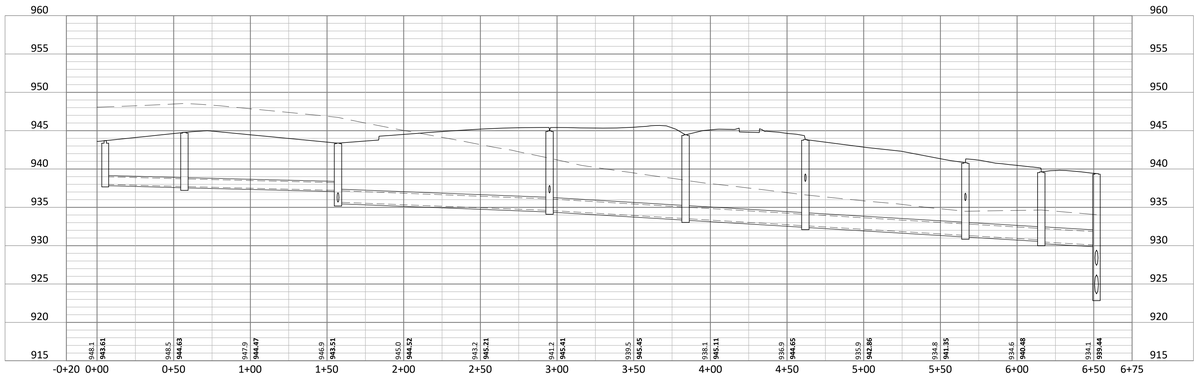
STORM PROFILE 4

Scale:

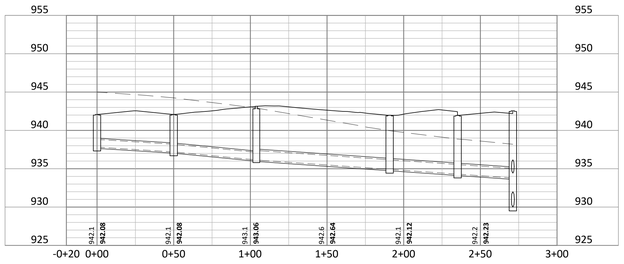
C4.12

MN

ALIGNMENT: 100 - Delivery Drive
PROFILE VIEW: 100 SERIES - DELIVERY DRIVE
DRAWING SCALE: 40
VERTICAL SCALE: 8



ALIGNMENT: 100 - West of Tennis Courts
PROFILE VIEW: 100 SERIES - WEST OF TENNIS COURTS
DRAWING SCALE: 40
VERTICAL SCALE: 8



C

HORZ. 0 40 80
SCALE FEET

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North

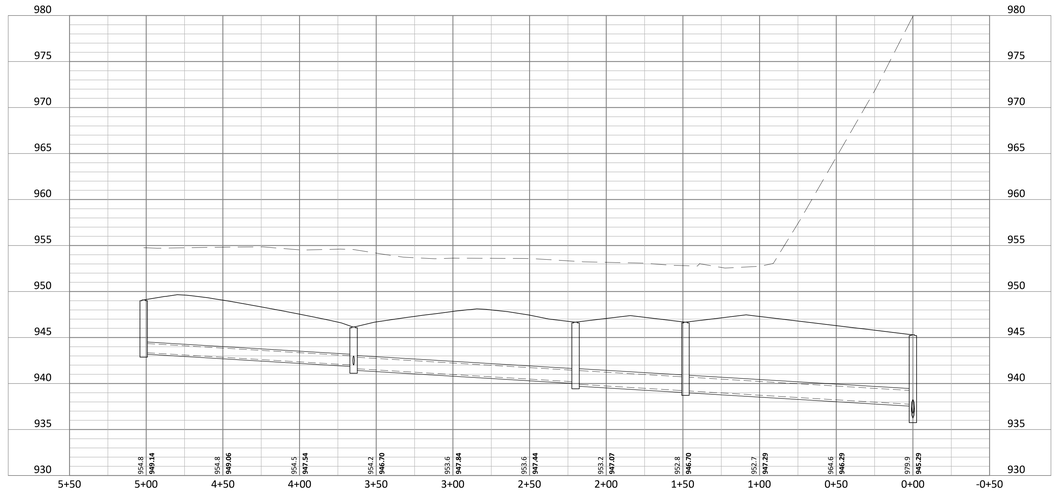
STORM PROFILE 5

Scale:

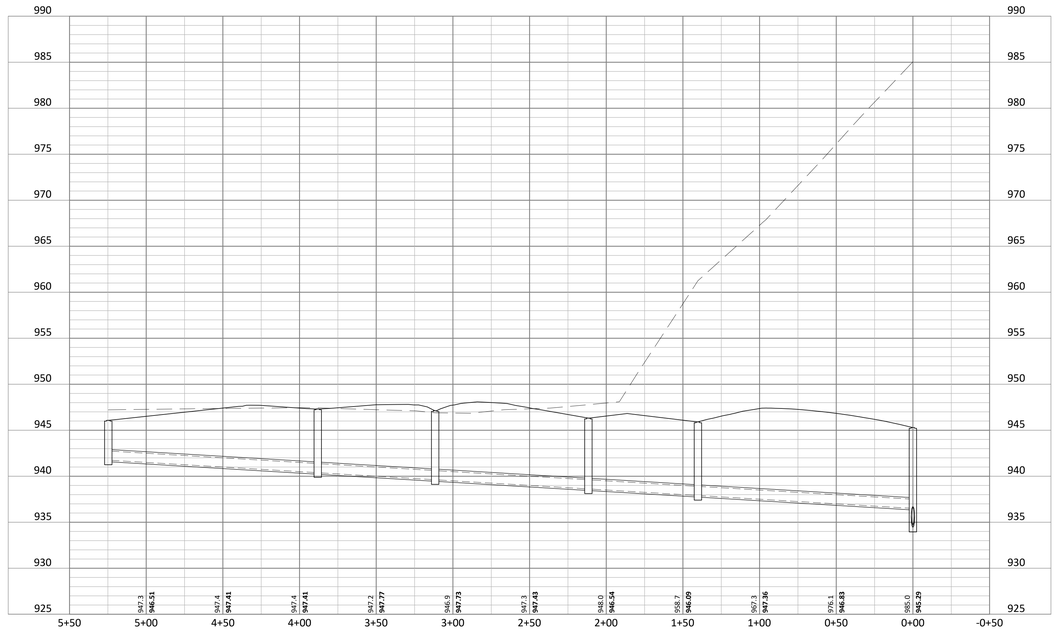
C4.13

MN

ALIGNMENT: 200 - N of Baseball run
PROFILE VIEW: 200 SERIES - N OF BASEBALL RUN
DRAWING SCALE: 40
VERTICAL SCALE: 7



ALIGNMENT: 200 - N of Track run
PROFILE VIEW: 200 SERIES - N OF TRACK RUN
DRAWING SCALE: 40
VERTICAL SCALE: 7



C

HORZ. 0 40 80
SCALE FEET

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North

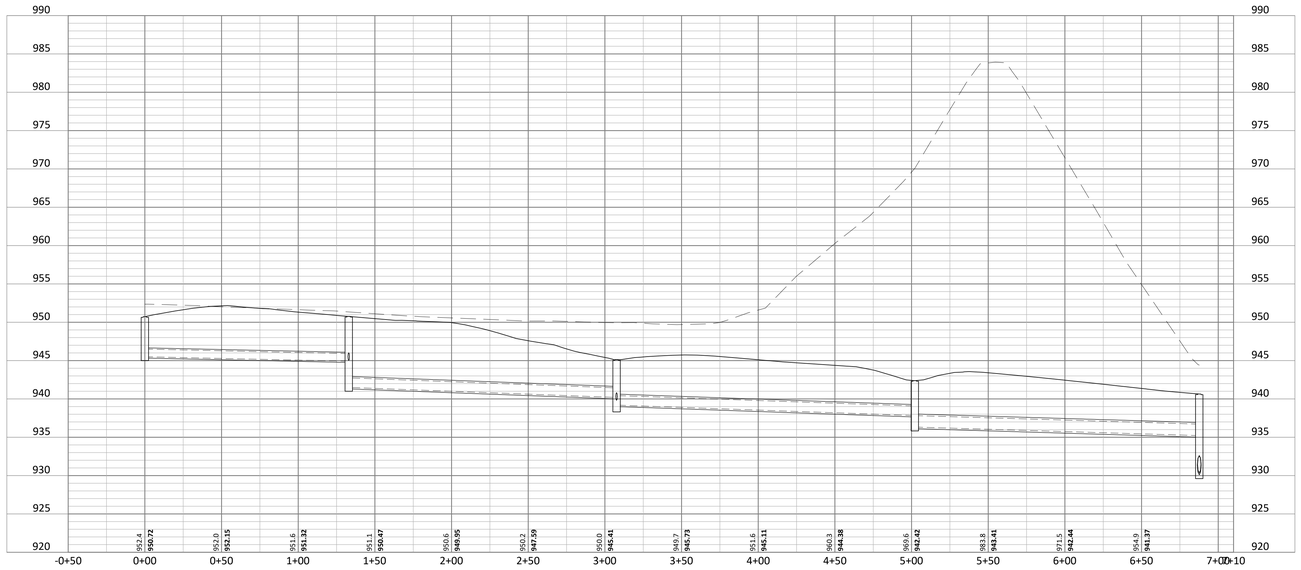
STORM PROFILE 6

Scale:

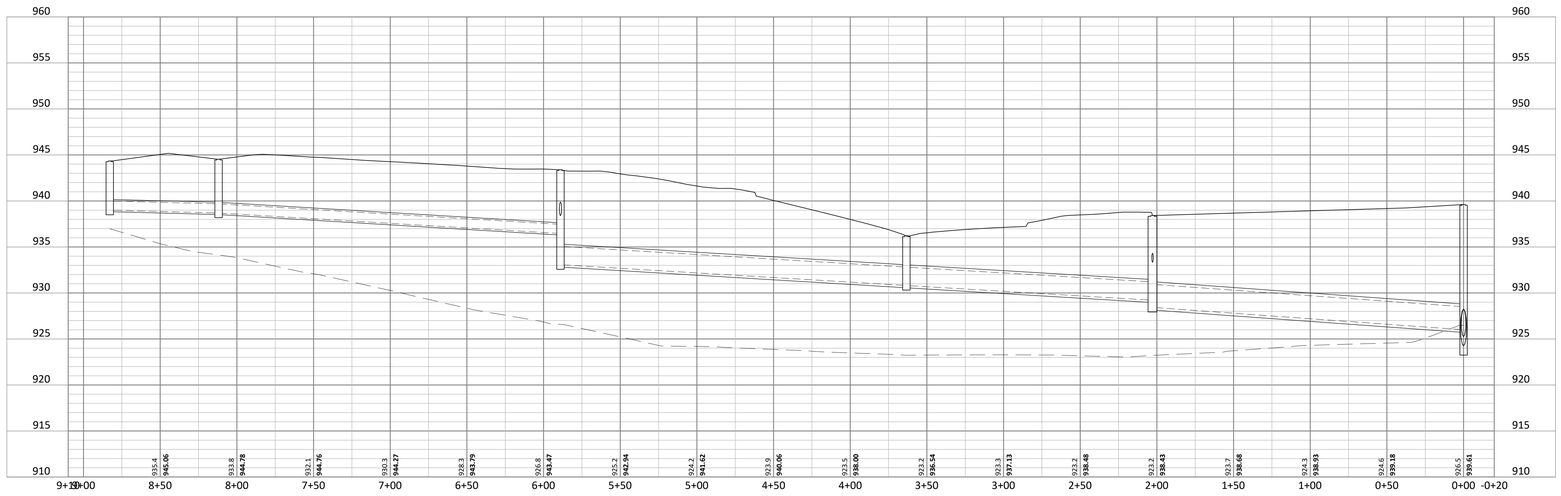
C4.14

MN

ALIGNMENT: 200 - S of Baseball run
PROFILE VIEW: 200 SERIES - S OF BASEBALL RUN
DRAWING SCALE: 40
VERTICAL SCALE: 8



ALIGNMENT: 200 - East run along track
PROFILE VIEW: 200 SERIES - TRACK RUN
DRAWING SCALE: 40
VERTICAL SCALE: 7



HORZ. SCALE 0 40 80 FEET

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North

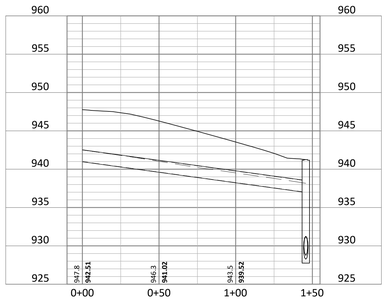
STORM PROFILE 7

Scale:

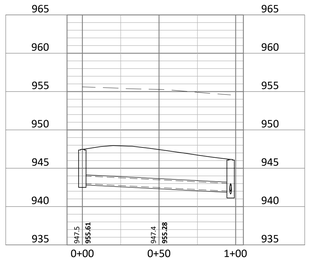
C4.15

MN

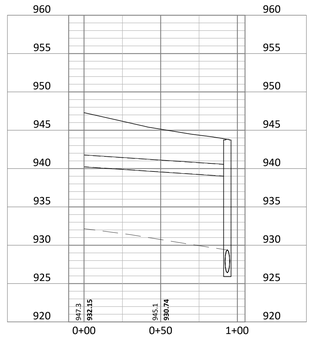
ALIGNMENT: SD 2 - CB 212
PROFILE VIEW: BD 2 - CB 212
DRAWING SCALE: 40
VERTICAL SCALE: 8



ALIGNMENT: CB 231 - CB 232
PROFILE VIEW: CB 231 - CB 232
DRAWING SCALE: 40
VERTICAL SCALE: 8



ALIGNMENT: SD 1 - CB 211
PROFILE VIEW: BD 1 - CB 211
DRAWING SCALE: 40
VERTICAL SCALE: 8



C

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STORM PROFILE 8

Scale:

C4.16

HORZ. 0 40 80
SCALE FEET

CITY SUBMITTAL - NOT FOR CONSTRUCTION

MN

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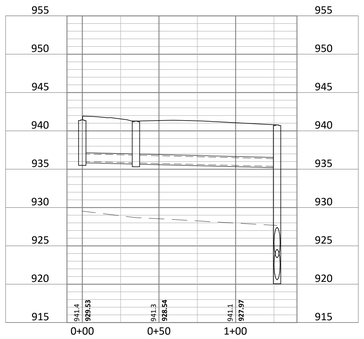
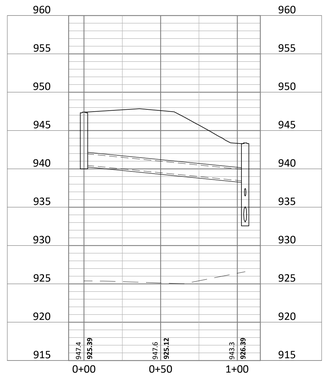
ALIGNMENT: CB 200 - CB 202
PROFILE VIEW: CB 200 - CB 202
DRAWING SCALE: 40
VERTICAL SCALE: 8



ALIGNMENT: CB 207 - CB 208
PROFILE VIEW: CB 207 - CB 208
DRAWING SCALE: 40
VERTICAL SCALE: 8



ALIGNMENT: CB 204 - CB 205
PROFILE VIEW: CB 205 - CB 204
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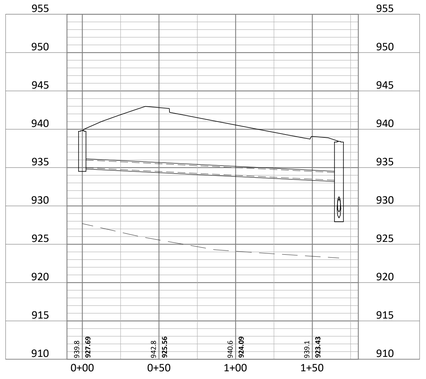
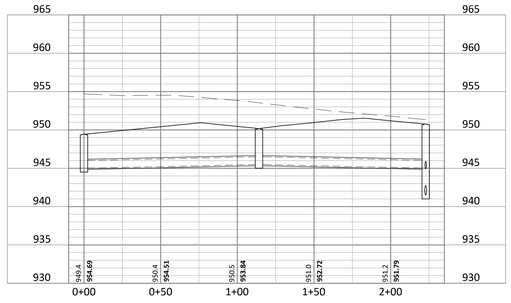
VERTICAL SCALE: 8



ALIGNMENT: CB 216 - CB 219
PROFILE VIEW: CB 216 - CB 219
DRAWING SCALE: 40
VERTICAL SCALE: 8



HORZ. 0 40 80
SCALE FEET

CITY SUBMITTAL - NOT FOR CONSTRUCTION

New Rosemount Middle School

Rosemount, Minnesota 55088

Independent School District #196
3455 153RD STREET WEST
ROSEMOUNT, MINNESOTA 55068

WOLD ARCHITECTS AND ENGINEERS
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3300 FERNBROOK LANE NORTH, SUITE 300
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I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DAVID A. REY
LIC. NO. 40180 DATE 07/31/2024

Revisions		
Description	Date	Num

Comm: 232086
Date: 07/31/2024
Drawn: JDO
Check: DAR

North

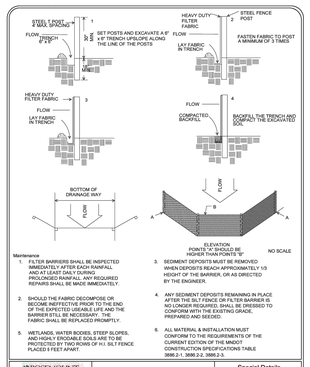
STORM PROFILE 9

Scale:

C4.17

MN

C



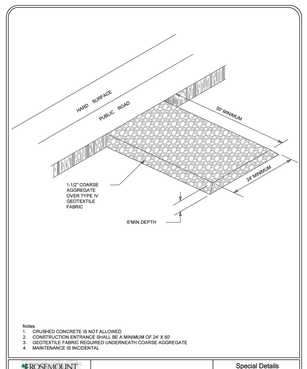
Maintenance

1. FILTER BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
2. SHOULD THE FABRIC DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER STILL BE NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY.
5. WETLANDS, WATER BODIES, STEEP SLOPES, AND HIGHLY ERODABLE SOILS ARE TO BE PROTECTED BEST AND MORE OF H1 SILT FENCE PLACED 3 FEET APART.
3. SEDIMENT DEPOSITS MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY 1/3 HEIGHT OF THE BARRIER. OR AS DIRECTED BY THE ENGINEER.
4. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OR FILTER BARRIER IS NO LONGER REQUIRED, SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE, PREPARED AND SEEDED.
6. ALL MATERIAL & INSTALLATION MUST CONFORM TO THE REQUIREMENTS OF THE CURRENT EDITION OF THE MNDOT CONSTRUCTION SPECIFICATIONS TABLE 3886.2-1, 3886.2-2, 3886.2-3.

ROSEMOUNT DEPT OF PRIDE AND PROGRESS Standard Plate Library for the City of Rosemount	PLACEMENT & CONSTRUCTION OF SILT FENCE BARRIER	Special Details: Date 01-06-06, Revised 02-01-23	EC-3

1 C5.01 SILT FENCE

NOT TO SCALE

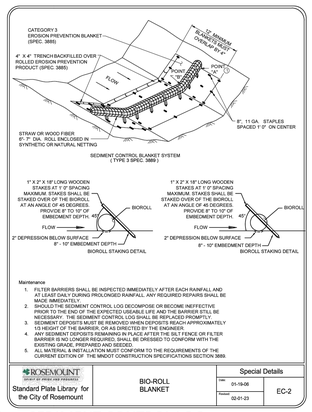


Notes
1. CRUSHED CONCRETE IS NOT ALLOWED.
2. CONSTRUCTION ENTRANCE SHALL BE A MINIMUM OF 24' X 50'
3. GEOTEXTILE FABRIC REQUIRED UNDERNEATH COARSE AGGREGATE
4. MAINTENANCE IS INCIDENTAL.

ROSEMOUNT DEPT OF PRIDE AND PROGRESS Standard Plate Library for the City of Rosemount	ROCK CONSTRUCTION ENTRANCE	Special Details: Date 01-10-06, Revised	EC-1

3 C5.01 ROCK CONSTRUCTION ENTRANCE

NOT TO SCALE



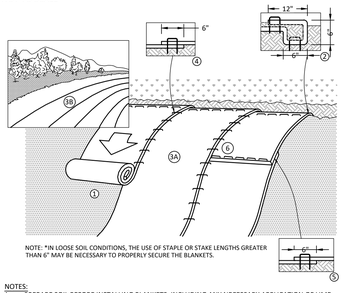
Maintenance

1. FILTER BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
2. SHOULD THE SEDIMENT CONTROL LOG DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER STILL BE NECESSARY, THE SEDIMENT CONTROL LOG SHALL BE REPLACED PROMPTLY.
3. SEDIMENT DEPOSITS MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY 1/3 HEIGHT OF THE BARRIER, OR AS DIRECTED BY THE ENGINEER.
4. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OR FILTER BARRIER IS NO LONGER REQUIRED, SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE, PREPARED AND SEEDED.
5. ALL MATERIAL & INSTALLATION MUST CONFORM TO THE REQUIREMENTS OF THE CURRENT EDITION OF THE MNDOT CONSTRUCTION SPECIFICATIONS SECTION 3885.

ROSEMOUNT DEPT OF PRIDE AND PROGRESS Standard Plate Library for the City of Rosemount	BIO-ROLL BLANKET	Special Details: Date 01-19-06, Revised 02-01-23	EC-2

2 C5.01 SEDIMENT CONTROL LOG

NOT TO SCALE



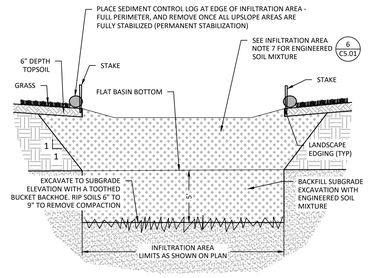
NOTE: *IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE BLANKETS.

NOTES:

1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE BLANKET.
3. ROLL THE BLANKETS (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. BLANKETS SHALL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING OPTIONAL DOT SYSTEM , STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 6" OVERLAP DEPENDING ON BLANKET TYPE. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE COLORED SEAM STITCH ON THE PREVIOUSLY INSTALLED BLANKET.
5. CONSECUTIVE BLANKETS SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 6" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE BLANKET WIDTH.
6. BLANKET SHALL BE STAPLED AS PER MANUFACTURER'S RECOMMENDATION.

4 C5.01 EROSION CONTROL BLANKET

NOT TO SCALE



5 C5.01 INFILTRATION AREA SECTION

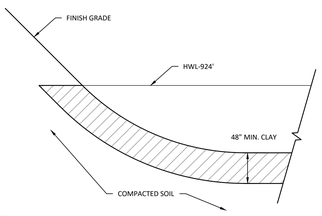
NOT TO SCALE

INFILTRATION AREA CONSTRUCTION SHALL COMPLY WITH THE FOLLOWING:

1. INFILTRATION AREA LIMITS SHALL BE SURVEYED AND A VISUAL BARRIER, SUCH AS ORANGE SNOW FENCE, SHALL BE PLACED AROUND THE FULL PERIMETER TO KEEP ALL CONSTRUCTION TRAFFIC, EQUIPMENT AND MATERIAL STOCKPILES OUT OF THE PROPOSED INFILTRATION AREAS. THE VISUAL BARRIER MUST BE INSTALLED BEFORE NEW CONSTRUCTION BEGINS AND SHALL BE MAINTAINED THROUGH THE DURATION OF THE PROJECT.
2. DELIVER SAMPLE MATERIALS ONSITE FOR PRIOR APPROVAL. PRIOR TO BEGINNING THE INSTALLATION, SUFFICIENT MATERIAL QUANTITIES SHALL BE ONSITE TO COMPLETE THE INSTALLATION. STABILIZE EXPOSED SOIL AREAS WITHOUT DELAY.
3. CARE MUST BE TAKEN TO AVOID CONTAMINATION OF ENGINEERED SOILS WITH SEDIMENT, IN-SITU OR TOPSOIL DURING AND AFTER INSTALLATION. MATERIALS MUST BE SEGREGATED.
4. INSTALLATION WITH DRY SOIL CONDITIONS IS CRITICAL TO PREVENT SMEARING AND COMPACTION. SCHEDULE WORK FOR PERIODS OF DRY WEATHER. DO NOT WORK IF SOIL CONDITIONS ARE WET. EXCAVATION, SOIL PLACEMENT AND RAPID STABILIZATION OF PERIMETER SLOPES WITH TURF SOD MUST COMPLETED BEFORE THE NEXT PRECIPITATION EVENT. TURF SOD PLACED IN FLOW PATHS SHALL BE SECURED WITH AT LEAST 6 STAKES PER SQUARE YARD. PLACE STAKES ALONG UPHILL SEAM EDGES TO PREVENT UNDERMINING FLOWS UNTIL SOD ROOTS ESTABLISH.
5. DO NOT LEAVE STORMWATER AREAS AND / OR PERIMETER SLOPES EXPOSED OVERNIGHT. SECURE THE SITE FROM RISK OF PRECIPITATION DAMAGES AT THE END OF EVERY WORK DAY. IN THE EVENT OF RAIN, TAKE ACTION TO DIVERT STORMWATER AWAY FROM THE WORK AREA AND TEMPORARILY COVER OF ALL EXPOSED SOILS WITH WOVEN GEOTEXTILE FABRIC OR IMPERMEABLE SHEETING.
6. FIELD OBSERVATION OF EXCAVATION AND SOIL PLACEMENT IS REQUIRED. NOTIFY GEOTECHNICAL ENGINEER PRIOR TO DIGGING. USE BACKHOE WITH TOOTH BUCKET FOR CELL EXCAVATION TO AVOID COMPACTING OR SMEARING OF SOILS. DO NOT USE SKID STEER FOR EXCAVATION WITHIN THE CELL. USE TOOTH BUCKET TO SCARIFY (RIP) UNDERLYING SOILS 6" TO 9" DEEP TO REMOVE COMPACTION. GENTLY MIX THE FIRST LIFT OF ENGINEERED SOILS WITH THE LOOSENED UNDERLYING SOILS TO AVOID STRATIFICATION AND PROMOTE PERMEABILITY. USE EXCAVATOR BUCKET TO PLACE MATERIALS. CONSTRUCTION EQUIPMENT SHALL NOT BE ALLOWED INTO THE STORMWATER AREAS. LEVELING AND FINAL GRADING WITHIN THE CELL MUST BE COMPLETED BY HAND.
7. INFILTRATION AREA SOIL MIX SHALL BE MINNESOTA STORMWATER MANUAL 4.1.2 MIX B: ENHANCED FILTRATION BLEND (WELL BLENDED MIXTURE OF 70% ASTM C-33 COARSE WASHED SAND (MN/DOT 3126) AND 30% MN/DOT 3890 GRADE 2 LEAF LITTER COMPOST). THE MATERIAL SUPPLIER SHALL PROVIDE DOCUMENTATION THAT THE COMPOST HAS BEEN SAMPLED AND TESTED AS REQUIRED BY THE SEAL OF TESTING ASSURANCE (STA) PROGRAM OF THE UNITED STATES COMPOSTING COUNCIL (USCC) AND A GRADATION SIEVE ANALYSIS FOR THE WASHED SAND. THE ENGINEERED SOIL SHALL NOT CONTAIN ANY TOPSOIL OR FILTER AGGREGATE WITH FINES.
8. REMOVAL OF ACCUMULATED SEDIMENT AND DEBRIS SHALL BE DONE BY HAND OR, IF SELF-PROPELLED EQUIPMENT IS REQUIRED, FROM OUTSIDE THE PERIMETER OF THE INFILTRATION AREAS.

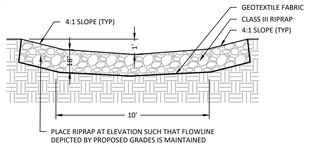
6 C5.01 INFILTRATION AREA NOTES

NOT TO SCALE



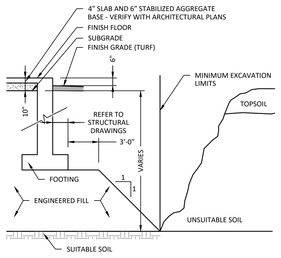
7 C5.01 POND CLAY LINER

NOT TO SCALE



8 C5.01 OVERFLOW SWALE

NOT TO SCALE

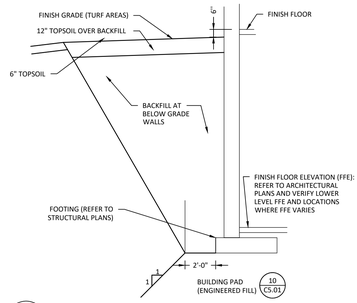


NOTES:

1. BOTTOM OF EXCAVATION MUST BE APPROVED BY THE GEOTECHNICAL ENGINEER'S REPRESENTATIVE PRIOR TO PLACEMENT OF ANY FILL.

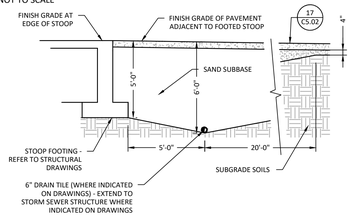
9 C5.01 ENGINEERED FILL

NOT TO SCALE



10 C5.01 BELOW GRADE BUILDING WALLS

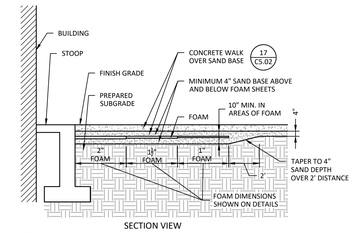
NOT TO SCALE



NOTE:
REFER TO GRADING AND DRAINAGE PLAN FOR LIMITS OF SAND SUBBASE

11 C5.01 SAND SUBBASE / DRAIN TILE AT DOORS & FROST FOOTED STOOPS

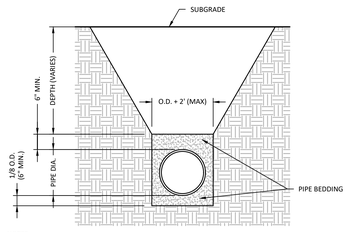
NOT TO SCALE



NOTE:
REFER TO GRADING AND DRAINAGE PLAN FOR LIMITS OF FOAM

12 C5.01 FOAM INSULATION AT DOORS & FROST FOOTED STOOPS

NOT TO SCALE

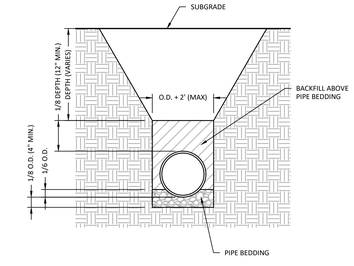


NOTES:

1. TRENCH SIDEWALLS TO MEET O.S.H.A REQUIREMENTS.
2. UPPER 3 FT. OF BACKFILL SHALL BE COMPACTED TO AT LEAST 100% STANDARD PROCTOR DRY DENSITY. BELOW THIS ELEVATION, BACKFILL SHALL BE COMPACTED TO AT LEAST 95% STANDARD PROCTOR DRY DENSITY.
3. INSTALLATION SHALL BE IN ACCORDANCE WITH ASTM D2321.

13 C5.01 PIPE BEDDING PVC

NOT TO SCALE

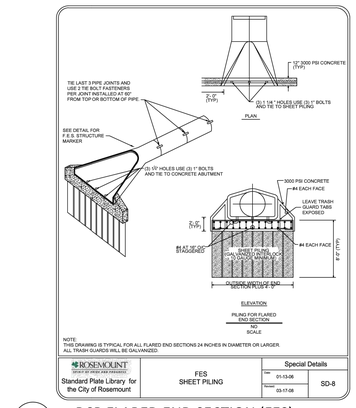


NOTES:

1. TRENCH SIDEWALLS TO MEET O.S.H.A REQUIREMENTS.
2. UPPER 3 FT. OF BACKFILL SHALL BE COMPACTED TO AT LEAST 100% STANDARD PROCTOR DRY DENSITY. BELOW THIS ELEVATION, BACKFILL SHALL BE COMPACTED TO AT LEAST 95% STANDARD PROCTOR DRY DENSITY.

14 C5.01 PIPE BEDDING - RCP

NOT TO SCALE

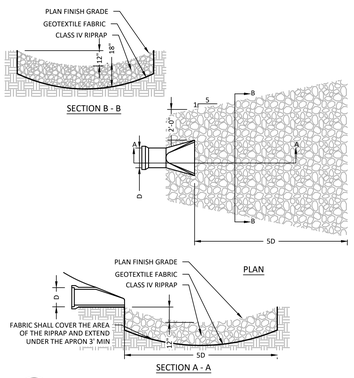


NOTE:
THIS DRAWING IS TYPICAL FOR ALL FLARED END SECTIONS 24 INCHES IN DIAMETER OR LARGER.
ALL TRASH GUARDS WILL BE GALVANIZED.

ROSEMOUNT DEPT OF PRIDE AND PROGRESS Standard Plate Library for the City of Rosemount	FES SHEET PILING	Special Details: Date 01-13-06, Revised 03-17-08	SD-8

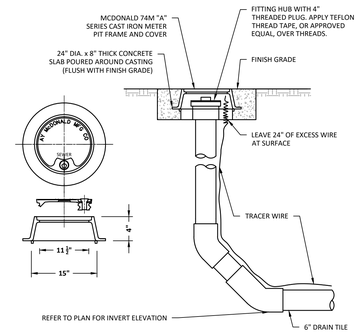
15 C5.01 RCP FLARED END SECTION (FES)

NOT TO SCALE



16 C5.01 RIPRAP AT FLARED END SECTION

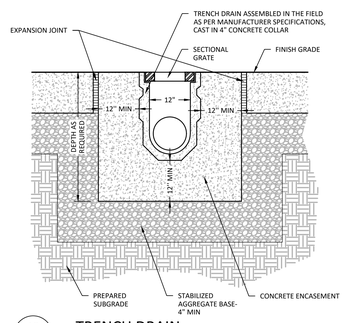
NOT TO SCALE



NOTE:
ATTACH TRACER WIRE WITH BROWN STRIPE TO PIPE AT 3' O.C. WITH PLASTIC ZIP-TIES (OR APPROVED EQUAL).

17 C5.01 CLEANOUT ASSEMBLY

NOT TO SCALE



18 C5.01 TRENCH DRAIN

NOT TO SCALE

CITY SUBMITTAL - NOT FOR CONSTRUCTION

New Rosemount Middle School

Rosemount, Minnesota 55088

Independent School District #196
3455 153RD STREET WEST
ROSEMOUNT, MINNESOTA 55068

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www.bolton-menk.com

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.

DAVID A. REY
LIC. NO. 40180 DATE 07/31/2024

Revisions		
Description	Date	Num

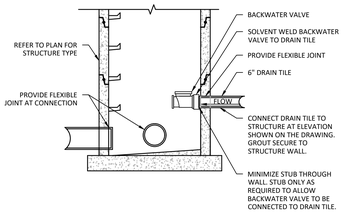
Comm: 232086
Date: 07/31/2024
Drawn: JDO
Check: DAR
North

CIVIL DETAILS

Scale:

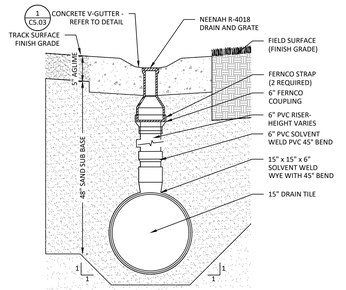
C5.01

MN



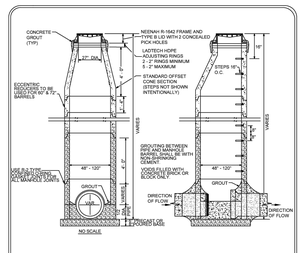
1 C5.02 BACKWATER VALVE

NOT TO SCALE



5 C5.02 RISER INLET (RI)

NOT TO SCALE

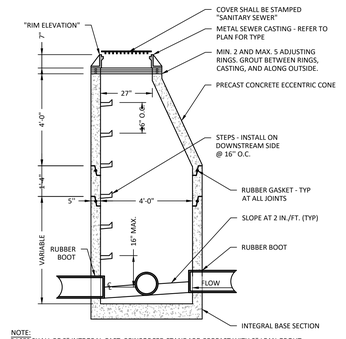


NOTES:
1. MANHOLE STEPS SHALL BE CAST ALUMINUM OR MA INDUSTRY WITH VINYL COATING OR APPROVED EQUIVALENT AND SHALL BE LOCATED ON THE DOWN STREAM SIDE OF THE MANHOLE
2. STEPS SHALL BE PLACED SO THAT THE OFFSET VERTICAL PORTION OF THE CONE IS FACING DOWN STREAM
3. THE INVERT ELEVATION OF THE OUTLET PIPE SHALL BE CONFIRMED
4. THE INITIAL AND FINAL FINISHING OF CASTINGS SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT
5. MAXIMUM DEPTH FROM TOP OF CASTING TO FIRST STEP SHALL NOT BE MORE THAN 18"
6. STEPS SHALL ALIGN WITH THE OPENING TO PROVIDE ACCESS TO THE MANHOLE

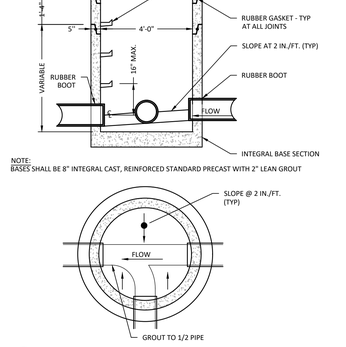
ROSEMOUNT (WHAT AT PRICE AND PARAMETER) Standard Plate Library for the City of Rosemount	STANDARD MANHOLE FOR STORM DRAIN	Special Details: Date 01-08-09, Revised 01-21-15	SD-3

2 C5.02 STORM SEWER MANHOLE

NOT TO SCALE

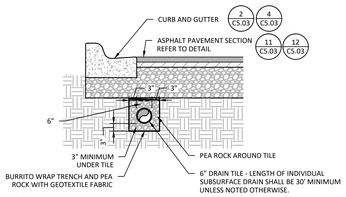


NOTE:
BASES SHALL BE 8" INTEGRAL CAST, REINFORCED STANDARD PRECAST WITH 2" LEAN GROUT



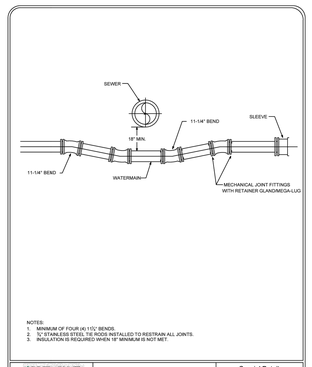
7 C5.02 SANITARY SEWER MANHOLE

NOT TO SCALE



6 C5.02 SUBSURFACE DRAIN

NOT TO SCALE

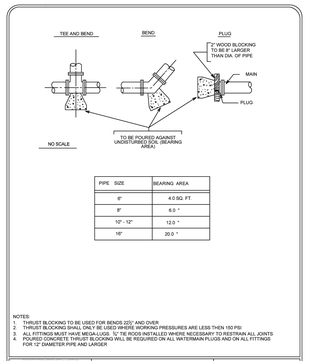


NOTES:
1. MINIMUM OF FOUR (4) 11½° BENDS.
2. ½" STAINLESS STEEL TIE RODS INSTALLED TO RESTRAIN ALL JOINTS.
3. INSULATION IS REQUIRED WHEN 18" MINIMUM IS NOT MET.

ROSEMOUNT (WHAT AT PRICE AND PARAMETER) Standard Plate Library for the City of Rosemount	WATERMAIN OFFSET	Special Details: Date 02-01-07, Revised 02-01-23	W-7

8 C5.02 WATERMAIN OFFSET

NOT TO SCALE



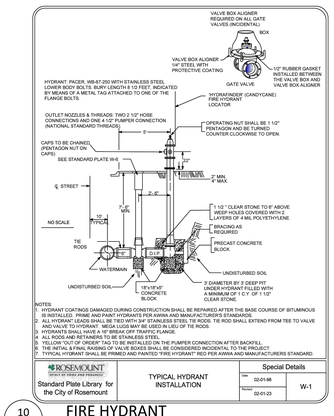
PIPE SIZE	BEARING AREA
6"	4.0 SQ. FT.
8"	6.0 "
10" - 12"	12.0 "
18"	20.0 "

NOTES:
1. THRUST BLOCKING TO BE USED FOR BENDS 22½° AND OVER
2. THRUST BLOCKING SHALL ONLY BE USED WHERE WORKING PRESSURES ARE LESS THEN 150 PSI
3. ALL FITTINGS MUST HAVE MEGA-LUGS. ½" TIE RODS INSTALLED WHERE NECESSARY TO RESTRAIN ALL JOINTS
4. POURED CONCRETE THRUST BLOCKING WILL BE REQUIRED ON ALL WATERMAIN PLUGS AND ON ALL FITTINGS FOR 12" DIAMETER PIPE AND LARGER

ROSEMOUNT (WHAT AT PRICE AND PARAMETER) Standard Plate Library for the City of Rosemount	THRUST BLOCKING FOR WATERMAIN	Special Details: Date 01-01-96, Revised 01-08-05	W-5

9 C5.02 THRUST BLOCK

NOT TO SCALE

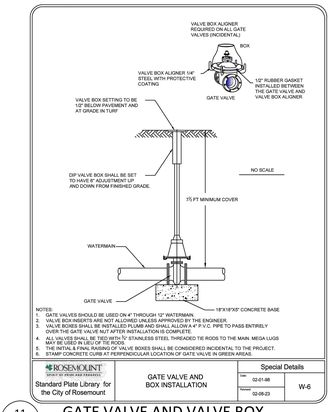


NOTES:
1. HYDRANT COATINGS DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED AFTER THE BASE COURSE OF BITUMINOUS IS INSTALLED. PRIME AND PAINT HYDRANTS PER AWWA AND MANUFACTURER'S STANDARDS.
2. ALL HYDRANT LEADS SHALL BE TIED WITH 3/4" STAINLESS STEEL TIE RODS. TIE ROD SHALL EXTEND FROM TEE TO VALVE BOX. ADJUST TIE RODS TO PROVIDE 2" CLEARANCE BETWEEN THE BOLT OF THE RODS.
3. HYDRANTS SHALL HAVE A 16" BREAK OFF TRAFFIC FLANGE.
4. ALL RODS AND RETAINERS TO BE STAINLESS STEEL.
5. YELLOW "OUT OF ORDER" TAG TO BE INSTALLED ON THE PUMPER CONNECTION AFTER BACKFILL.
6. THE INITIAL & FINAL PAINING OF VALVE BOXES SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.
7. TYPICAL HYDRANT SHALL BE PRIMED AND PAINTED "FIRE HYDRANT" RED PER AWWA AND MANUFACTURERS STANDARD.

ROSEMOUNT (WHAT AT PRICE AND PARAMETER) Standard Plate Library for the City of Rosemount	TYPICAL HYDRANT INSTALLATION	Special Details: Date 02-01-96, Revised 02-01-23	W-1

10 C5.02 FIRE HYDRANT

NOT TO SCALE

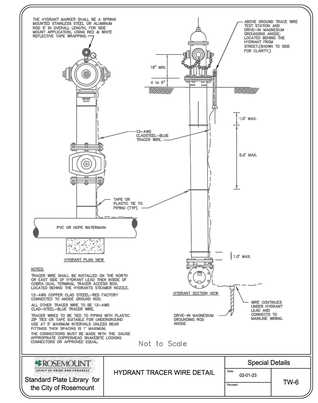


NOTES:
1. GATE VALVES SHOULD BE USED ON 4" THROUGH 12" WATERMAIN.
2. VALVE BOX INSERTS ARE NOT ALLOWED UNLESS APPROVED BY THE ENGINEER.
3. VALVE BOXES SHALL BE INSTALLED PLUMB AND SHALL ALLOW A 4" 9 1/2 L PIPE TO PASS ENTIRELY OVER THE GATE VALVE NUT AFTER INSTALLATION IS COMPLETE.
4. ALL VALVES SHALL BE TIED WITH ½" STAINLESS STEEL THREADED TIE RODS TO THE MAIN. MEGA LUGS SHALL BE USED ON ALL TIE RODS.
5. THE INITIALS & FINAL PAINTING OF VALVE BOXES SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.
6. STAMP CONCRETE CURB AT PERPENDICULAR LOCATION OF GATE VALVE IN GREEN AREAS.

ROSEMOUNT (WHAT AT PRICE AND PARAMETER) Standard Plate Library for the City of Rosemount	GATE VALVE AND BOX INSTALLATION	Special Details: Date 02-01-96, Revised 02-08-23	W-6

11 C5.02 GATE VALVE AND VALVE BOX

NOT TO SCALE



NOTES:
TRACER WIRE SHALL BE INSTALLED ON THE NORTH OR EAST SIDE OF HYDRANT LEAD OVER MIDDLE OF PIPE. TRACER WIRE SHALL BE TAPED TO PIPE LOCATED BEHIND THE HYDRANTS STEAMER NOZZLE.
10-AWG COPPER CLAD STEEL-RED FACTORY COATED TRACER WIRE TO BE USED.
ALL STEEL TRACER WIRE TO BE 10-AWG CLAD-STEEL, SOLID, BLUE, 30 MIL.
TRACER WIRES TO BE TED TO PIPING WITH PLASTIC OR TEFLON TAPE SUITABLE FOR UNDERGROUND USE. TAPE SHALL BE APPLIED TO PIPE AND FITTINGS TWICE SPACING IN 1" MAXIMUM.
THE CONNECTIONS MUST BE MADE WITH THE GAUGE SPECIFIED ABOVE USING SOLDERLESS UL LISTED CONNECTORS OR APPROVED EQUAL.

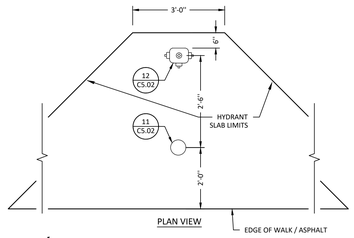
ROSEMOUNT (WHAT AT PRICE AND PARAMETER) Standard Plate Library for the City of Rosemount	HYDRANT TRACER WIRE DETAIL	Special Details: Date 02-01-23, Revised	TW-6

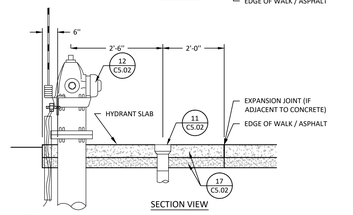
12 C5.02 HYDRANT TRACER WIRE

NOT TO SCALE

13 C5.02 DETAIL NOT USED

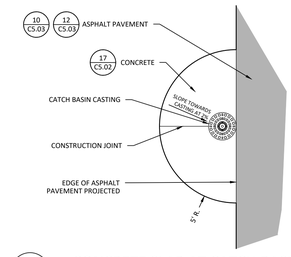
NOT TO SCALE





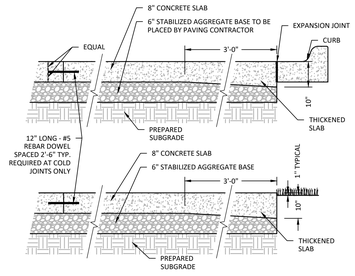
14 C5.02 CONCRETE HYDRANT SLAB

NOT TO SCALE



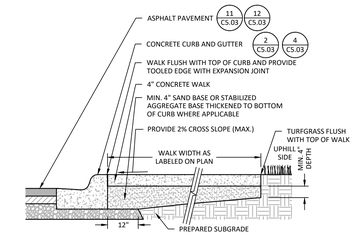
15 C5.02 CONCRETE SLAB AT CATCH BASIN

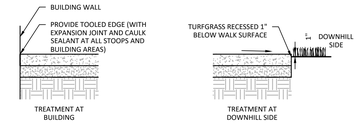
NOT TO SCALE



16 C5.02 CONCRETE SLAB

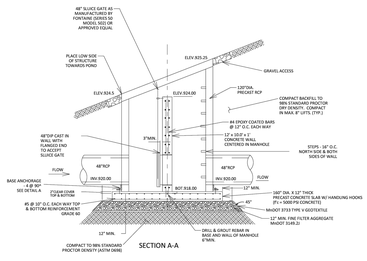
NOT TO SCALE





17 C5.02 CONCRETE WALK

NOT TO SCALE



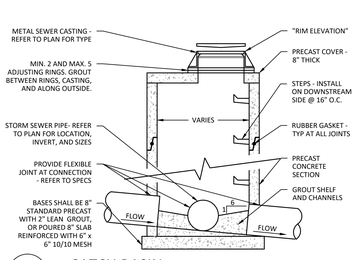
PLAN VIEW-AT GRADE

NOTES:
1. ALL FASTENERS INSIDE MANHOLE SHALL BE STAINLESS STEEL.
2. TIE ALL PIPING JOINTS WITHIN 20' OF THE STRUCTURE OR TO CONCRETE FLARED END SECTION, WHICHEVER IS GREATER (INCIDENTAL).
3. ALL MANHOLE SECTION JOINTS SHALL HAVE CONFINED GASKET JOINTS AND RUBBER GASKETS TO MEET THE REQUIREMENTS OF ASTM C 443 AND MnDOT SPEC 3726.
4. ALL LIFTING HOLES SHALL BE SEALED WITH GROUT.

OUTLET CONTROL STRUCTURE DETAIL
DESIGN SPECIAL 2 - (STR. NO. 5100B)

4 C5.02 OUTLET CONTROL STRUCTURE

NOT TO SCALE



3 C5.02 CATCH BASIN

NOT TO SCALE

PAINT ALL CONNECTION ITEMS WITH HEAVY COAT OF BITUMASTIC PAINT

A BASE ANCHOR DETAIL
Detail Scale

New Rosemount Middle School

Rosemount, Minnesota 55088

Independent School District #196
3455 153RD STREET WEST
ROSEMOUNT, MINNESOTA 55068

Wold

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www.bolton-menk.com

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.

DAVID A. REY
LIC. NO. 40180 DATE 07/31/2024

Revisions		
Description	Date	Num

Comm: 232086
Date: 07/31/2024
Drawn: JDO
Check: DAR

North

CIVIL DETAILS

Scale:

C5.02

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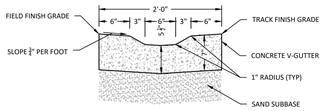
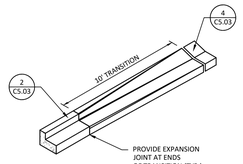


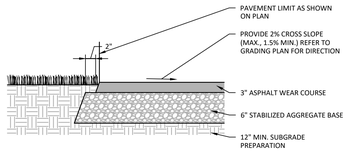
1 C5.03 CONCRETE V-GUTTER

NOT TO SCALE



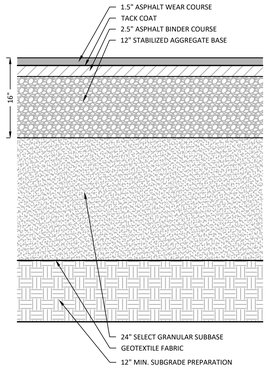
6 C5.03 CURB TRANSITION D-412 TO B-612

NOT TO SCALE



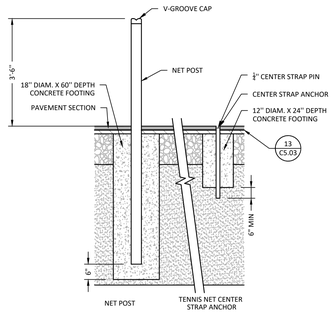
10 C5.03 LIGHT DUTY ASPHALT PAVEMENT

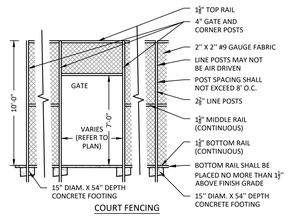
NOT TO SCALE



12 C5.03 HEAVY DUTY ASPHALT PAVEMENT

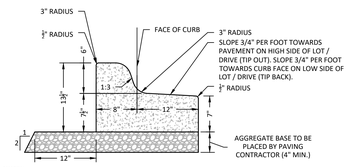
NOT TO SCALE





14 C5.03 TENNIS COURT FENCING, NET POSTS AND CENTER STRAP ANCHOR

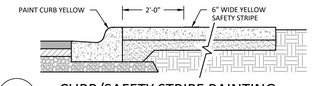
NOT TO SCALE



NOTES:
1. DIRECTION OF TRANSVERSE GUTTER SLOPE SHALL MATCH DIRECTION OF ADJACENT PAVEMENT SLOPE
2. CONSTRUCT WITH CURBING MACHINE.
3. AT CURB INLET CATCH BASINS, ADJUST CASTING TO BE 1" BELOW GUTTER GRADE. SLOPE GUTTER 5' EACH SIDE OF CATCH BASIN. PROVIDE POSITIVE DRAINAGE TO CATCH BASINS.

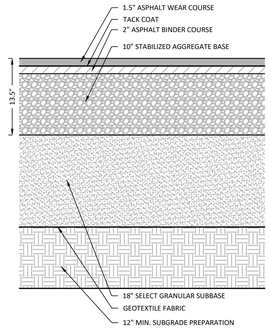
2 C5.03 B-612 CURB AND GUTTER

NOT TO SCALE



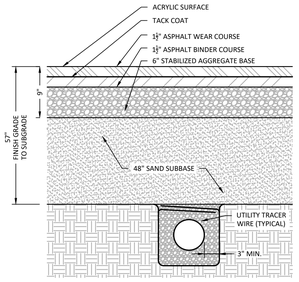
7 C5.03 CURB/SAFETY STRIPE PAINTING

NOT TO SCALE



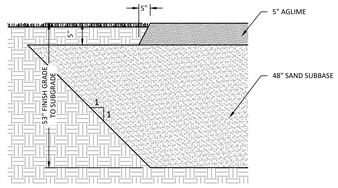
11 C5.03 MEDIUM DUTY ASPHALT PAVEMENT (WITH SAND SUBBASE)

NOT TO SCALE



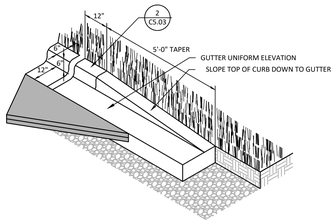
13 C5.03 ATHLETIC ASPHALT PAVEMENT TENNIS COURTS

NOT TO SCALE



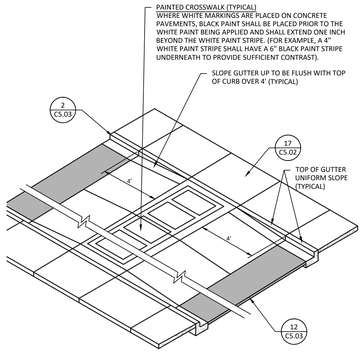
15 C5.03 ATHLETIC ASPHALT PAVEMENT RUNNING TRACK & FIELD EVENTS

NOT TO SCALE



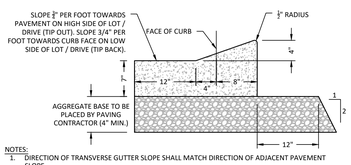
3 C5.03 B-612 CURB TERMINATOR

NOT TO SCALE



8 C5.03 CONCRETE RAISED CROSSWALK

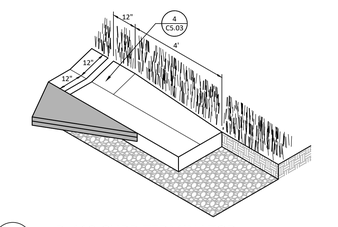
NOT TO SCALE



NOTES:
1. DIRECTION OF TRANSVERSE GUTTER SLOPE SHALL MATCH DIRECTION OF ADJACENT PAVEMENT SLOPE.
2. CONSTRUCT WITH CURBING MACHINE.
3. AT CURB INLET CATCH BASINS, ADJUST CASTING TO BE 1" BELOW GUTTER GRADE. SLOPE GUTTER 5' ON EACH SIDE OF CATCH BASIN. PROVIDE POSITIVE DRAINAGE TO CATCH BASINS.

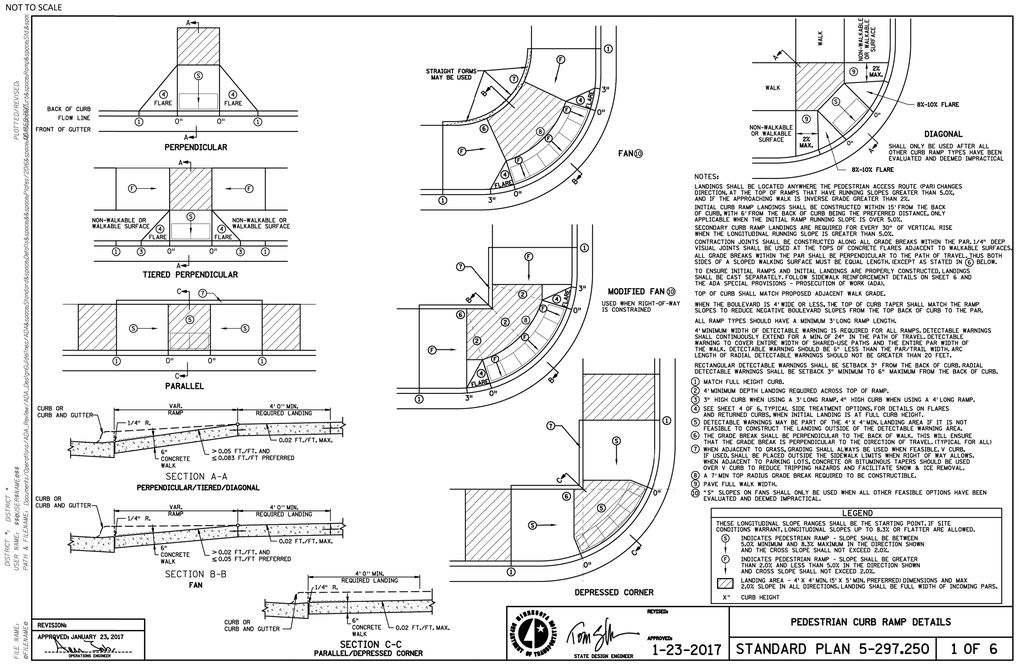
4 C5.03 D-412 CURB & GUTTER

NOT TO SCALE



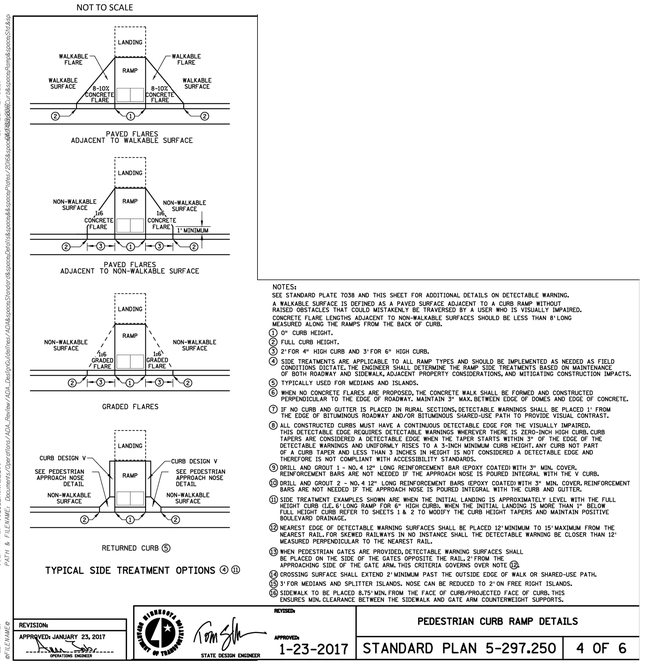
5 C5.03 D-412 CURB TERMINATOR

NOT TO SCALE



9 C5.03 PEDESTRIAN CURB RAMPS

NOT TO SCALE



MN

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New Rosemount Middle School

Rosemount, Minnesota 55088

Independent School District #196
3455 153RD STREET WEST
ROSEMOUNT, MINNESOTA 55068

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DAVID A. REY
LIC. NO. 40180 DATE 07/31/2024

Revisions		
Description	Date	Num

Comm: 232086
Date: 07/31/2024
Drawn: JDO
Check: DAR
North

CIVIL DETAILS

Scale:

C5.03

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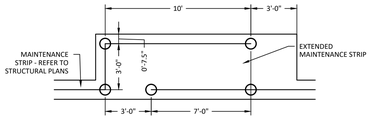

1 C5.04 LIMITED ACCESS OPENING

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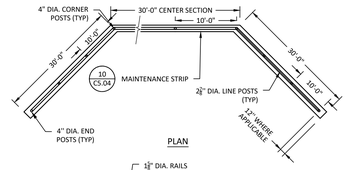
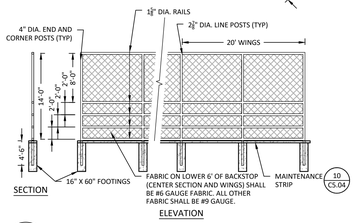
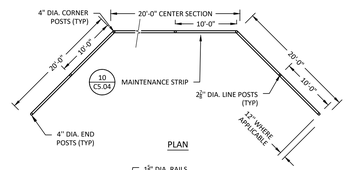
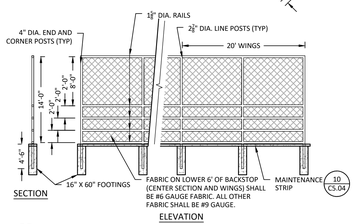




2 C5.04 BACKSTOP-BASEBALL

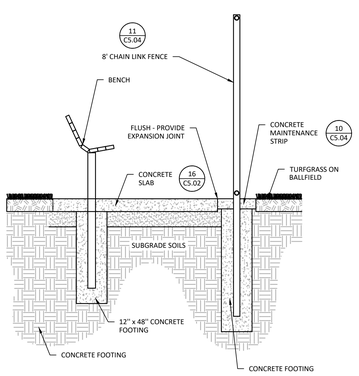
NOT TO SCALE





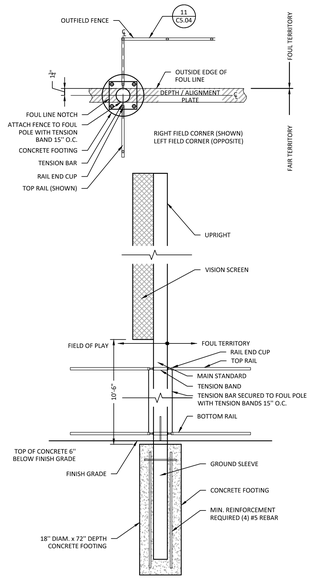
3 C5.04 BACKSTOP-SOFTBALL

NOT TO SCALE



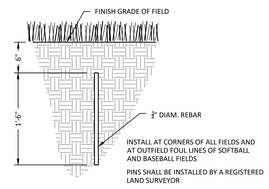
4 C5.04 PLAYERS DUGOUT WITH BENCH

NOT TO SCALE



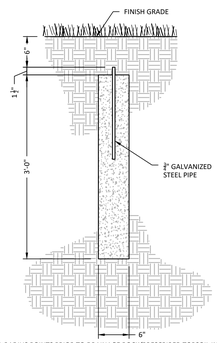
5 C5.04 FOUL POLE

NOT TO SCALE



6 C5.04 FIELD MARKING PINS

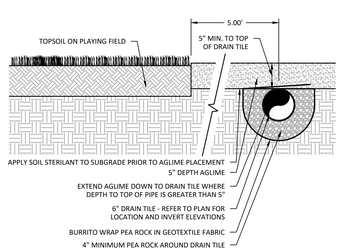
NOT TO SCALE



NOTES:
1. INSTALL RADIUS POINTS PRIOR TO DRAINAGE ROCK/PRESCRIBED TOPSOIL INSTALLATION TO AVOID CONTAMINATION OF ROCK/TOPSOIL
2. HORIZONTAL TOLERANCE: 0.05 FEET IN ANY DIRECTION

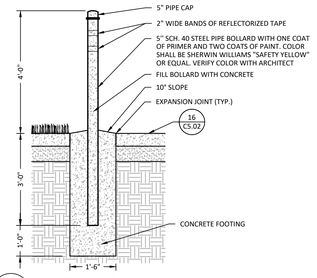
7 C5.04 TRACK RADIUS POINTS

NOT TO SCALE



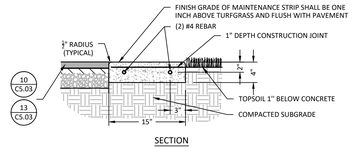
8 C5.04 AGLIME AND DRAIN TILE

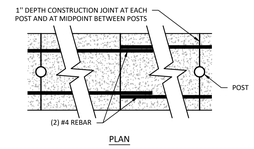
NOT TO SCALE



9 C5.04 BOLLARD

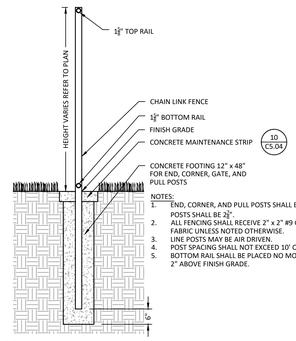
NOT TO SCALE





10 C5.04 CONCRETE MAINTENANCE STRIP

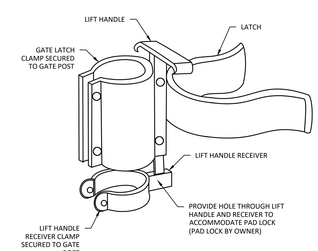
NOT TO SCALE

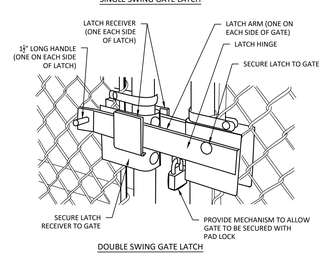


NOTES:
1. END, CORNER, AND PULL POSTS SHALL BE 4". LINE POSTS SHALL BE 2½".
2. ALL FENCING SHALL RECEIVE 2" x 2" #9 GAUGE FABRIC UNLESS NOTED OTHERWISE.
3. LINE POSTS MAY BE AIR DRIVEN.
4. POST SPACING SHALL NOT EXCEED 10' O.C.
5. BOTTOM RAIL SHALL BE PLACED NO MORE THAN 2" ABOVE FINISH GRADE.

11 C5.04 CHAIN LINK FENCE WITH MAINTENANCE STRIP

NOT TO SCALE

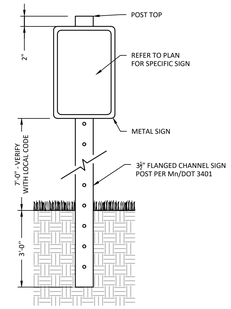




NOTE:
PROVIDE ADEQUATE SPACE BETWEEN GATE POST AND GATE SUCH THAT GATE IS IN LINE WITH FENCING WHEN FULLY CLOSED AND LATCHED.

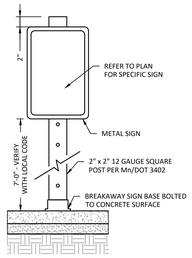
12 C5.04 GATE LATCH

NOT TO SCALE



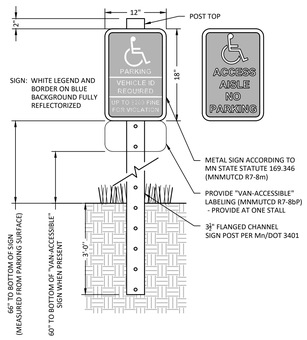
13 C5.04 TRAFFIC SIGN AND POST IN GRASS

NOT TO SCALE



14 C5.04 TRAFFIC SIGN AND POST WITH BREAKAWAY BASE

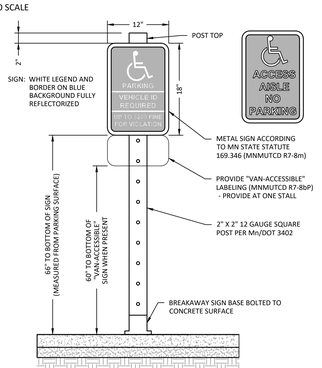
NOT TO SCALE



NOTE:
SIGN SHALL BE PLACED NOT MORE THAN 96" FROM FACE OR EDGE OF PAVEMENT AT THE ACCESSIBLE STALL.

15 C5.04 ACCESSIBLE PARKING SIGN AND POST IN GRASS

NOT TO SCALE



NOTE:
SIGN SHALL BE PLACED NOT MORE THAN 96" FROM FACE OR EDGE OF PAVEMENT AT THE ACCESSIBLE STALL.

16 C5.04 ACCESSIBLE PARKING SIGN AND POST WITH BREAKAWAY BASE

NOT TO SCALE

CITY SUBMITTAL - NOT FOR CONSTRUCTION

New Rosemount Middle School

Rosemount, Minnesota 55088

Independent School District #196

3455 153RD STREET WEST
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DAVID A. REY
LIC. NO. 40180 DATE 07/31/2024

Revisions		
Description	Date	Num

Comm: 232086
Date: 07/31/2024
Drawn: JDO
Check: DAR
North

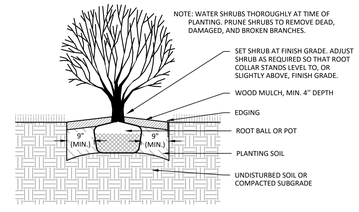
CIVIL DETAILS

Scale:

C5.04

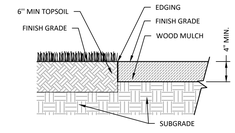
MN

C



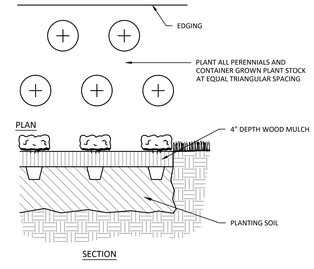
1 C5.05 SHRUB

NOT TO SCALE



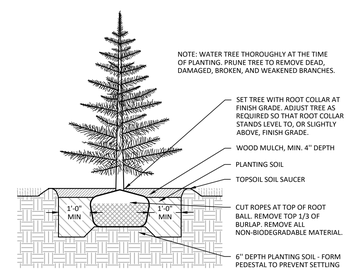
5 C5.05 WOOD MULCH BED

NOT TO SCALE



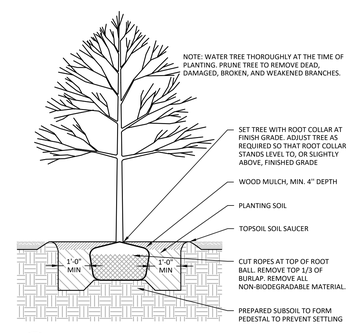
2 C5.05 PERENNIALS AND CONTAINER GROWN PLANT STOCK

NOT TO SCALE



3 C5.05 CONIFEROUS TREE

NOT TO SCALE



4 C5.05 DECIDUOUS TREE

NOT TO SCALE

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LIC. NO. 40180 DATE 07/31/2024

Revisions		
Description	Date	Num

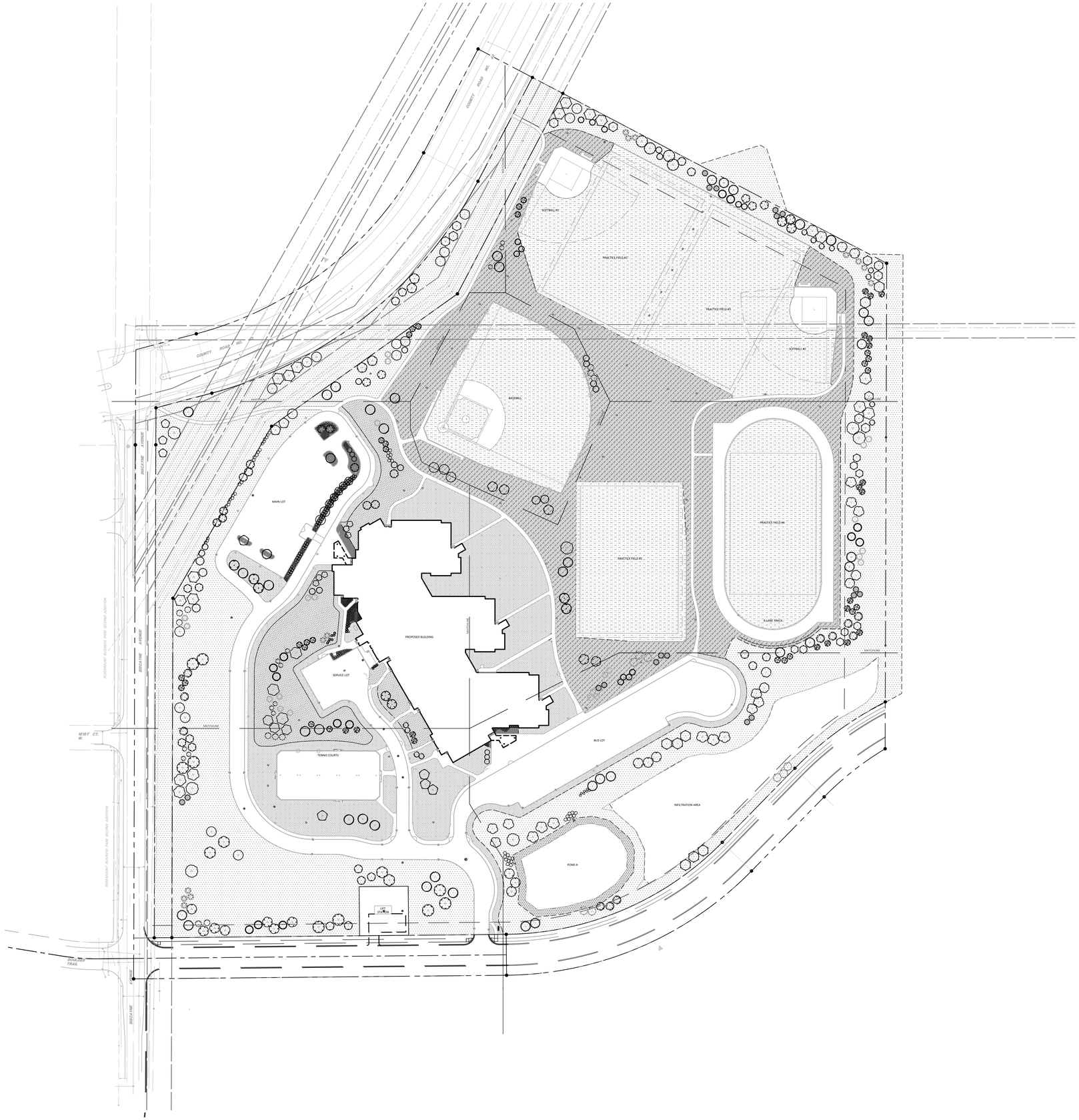
Comm: 232086
Date: 07/31/2024
Drawn: JDO
Check: DAR
North

CIVIL DETAILS

Scale:

C5.05

MN



C

LEGEND

REFERENCE KEY TO SITE DETAILS
DETAIL I.D. NUMBER (TOP)
DETAIL SHEET NUMBER (BOTTOM)

PROPOSED SOD LIMITS

PROPOSED SEED MIX #1

PROPOSED SEED MIX #2

PROPOSED NATIVE SEEDING #1

PROPOSED NATIVE SEEDING #2

PROPOSED NATIVE SEEDING #3

PROPOSED MULCH BED

PROPOSED LIGHT POLE - REFER TO ELECTRICAL PLANS

PROPERTY LINE

NOTES

1. REFER TO SHEET C3.01, GRADING AND DRAINAGE PLAN OVERALL, FOR GENERAL NOTES.
2. REFER TO SHEET L1.07, LANDSCAPE PLAN NORTH, FOR PLANT SCHEDULE.
3. REFER TO SWPPP NARRATIVE, SHEET C2.12, FOR CONSTRUCTION SEQUENCING AND EROSION CONTROL REQUIREMENTS.
4. LANDSCAPE ARCHITECT MUST INSPECT AND APPROVE FINE GRADING BEFORE CONTRACTOR PROCEEDS WITH SODDING OR SEEDING.
5. ALL DISTURBED AREAS OUTSIDE THE BUILDING PAD, WHICH ARE NOT DESIGNATED TO BE PAVED OR RECEIVE AGLIME, SHALL RECEIVE AT LEAST 6" OF TOPSOIL AND SHALL BE SODDED OR SEEDED. ALL AREAS NOT DESIGNATED FOR SOD OR A SPECIFIC SEED MIX, WHICH ARE DISTURBED BY CONSTRUCTION, SHALL BE SEEDED WITH SEED MIX #1.
6. WHERE NEW SOD MEETS EXISTING SOD, CUT A CLEAN, SHARP EDGE TO ALLOW FOR A CONSISTENT, UNIFORM, AND STRAIGHT JOINT BETWEEN NEW SOD AND EXISTING TURFGRASS. JAGGED OR UNEVEN JOINTS WILL NOT BE ACCEPTED. REMOVE TOPSOIL AT THE JOINT BETWEEN NEW SOD AND EXISTING TURFGRASS, AS REQUIRED, TO ALLOW NEW SOD SURFACE TO BE FLUSH WITH EXISTING TURFGRASS SURFACE.
7. FAILURE OF TURF DEVELOPMENT: IN THE EVENT THE CONTRACTOR FAILS TO PROVIDE AN ACCEPTABLE TURF, RE-SOD OR RE-SEED ALL APPLICABLE AREAS, AT NO ADDITIONAL COST TO THE OWNER, TO THE SATISFACTION OF THE ENGINEER OR LANDSCAPE ARCHITECT.
8. BEGIN TURF ESTABLISHMENT IMMEDIATELY AFTER SODDING OR SEEDING. REFER TO SPECIFICATION FOR PROCEDURE.
9. ALL TREES SHALL BE BALLED AND BURLAPPED.
10. ALL TREES AND SHRUBS SHALL RECEIVE 4" DEPTH OF WOOD MULCH, UNLESS OTHERWISE SPECIFIED.
11. ALL PLANT MATERIALS SHALL BE NO. 1 QUALITY, NURSERY GROWN AND SPECIMENS MUST BE MATCHED.
12. ALL DECIDUOUS TREES ALONG DRIVES OR WITHIN PARKING LOTS SHALL BEGIN BRANCHING NO LOWER THAN 6'.

HORZ. 0 100 200
SCALE FEET

CITY SUBMITTAL - NOT FOR CONSTRUCTION

New Rosemount Middle School

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LAURA J. DETZLER
LIC. NO. 53753 DATE 07/31/2024

Revisions		
Description	Date	Num

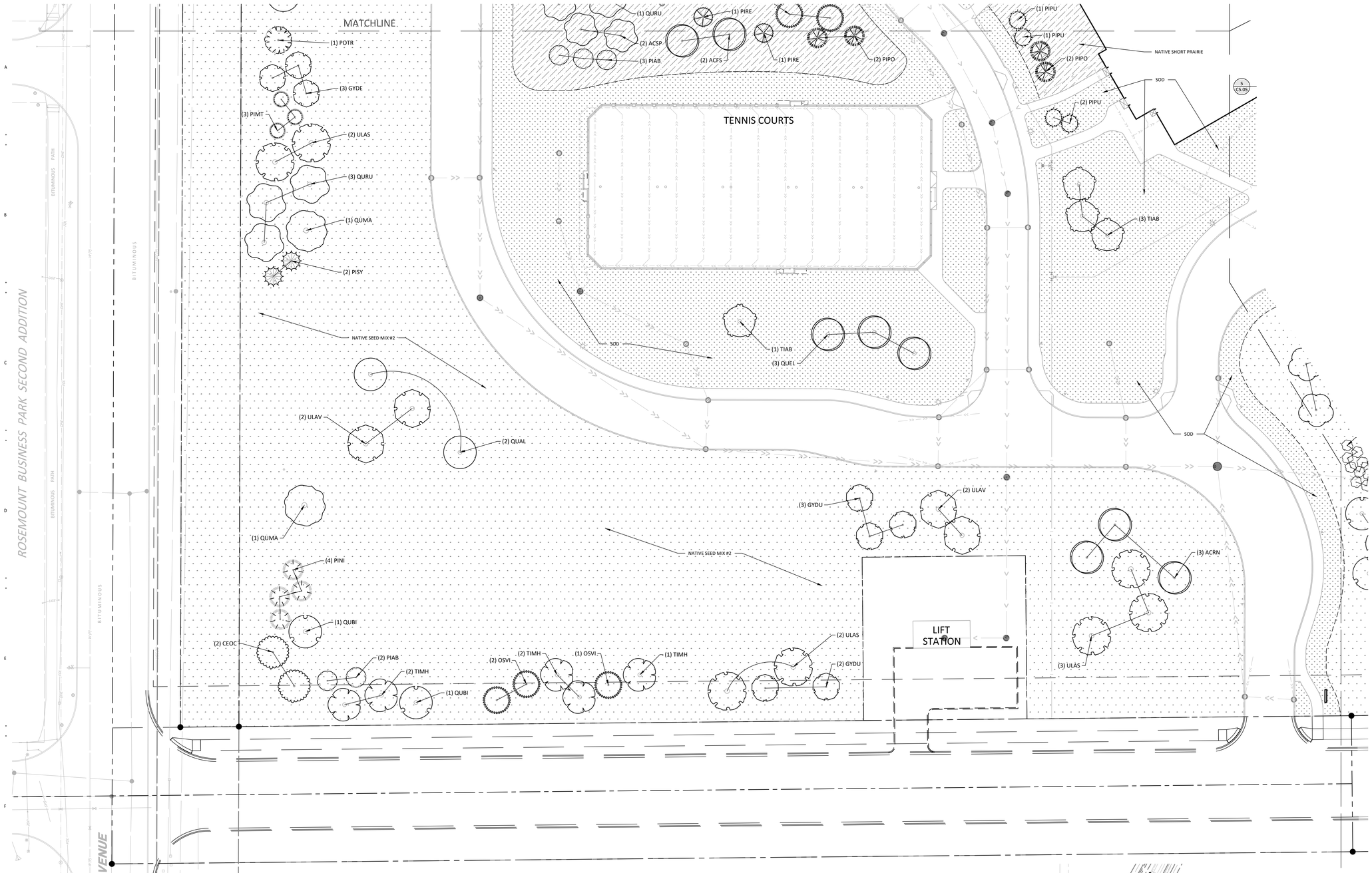
Comm: 232086
Date: 07/31/2024
Drawn: LJD
Check: LJD

North

LANDSCAPING PLAN OVERALL

Scale: 1"=100'

L1.01



MN

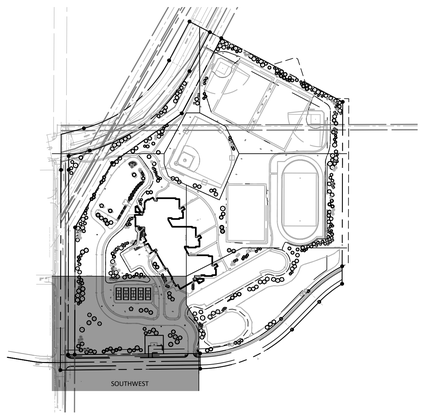
C

LEGEND

1 / C5.03	REFERENCE KEY TO SITE DETAILS DETAIL I.D. NUMBER (TOP) DETAIL SHEET NUMBER (BOTTOM)
	PROPOSED SOD LIMITS
	PROPOSED SEED MIX #1
	PROPOSED SEED MIX #2
	PROPOSED NATIVE SEEDING #1
	PROPOSED NATIVE SEEDING #2
	PROPOSED NATIVE SEEDING #3
	PROPOSED MULCH BED
	PROPOSED LIGHT POLE - REFER TO ELECTRICAL PLANS
	PROPERTY LINE

NOTES

1. REFER TO SHEET C3.01, GRADING AND DRAINAGE PLAN OVERALL, FOR GENERAL NOTES.
2. REFER TO SHEET L1.01, LANDSCAPING PLAN OVERALL, FOR LANDSCAPING NOTES.
3. REFER TO SHEET L1.07, LANDSCAPE PLAN NORTH, FOR PLANT SCHEDULE.



KEYMAP
1"=400'

HORZ. SCALE 0 30 60 FEET

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Description	Date	Num

Comm: 232086
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Drawn: LJD
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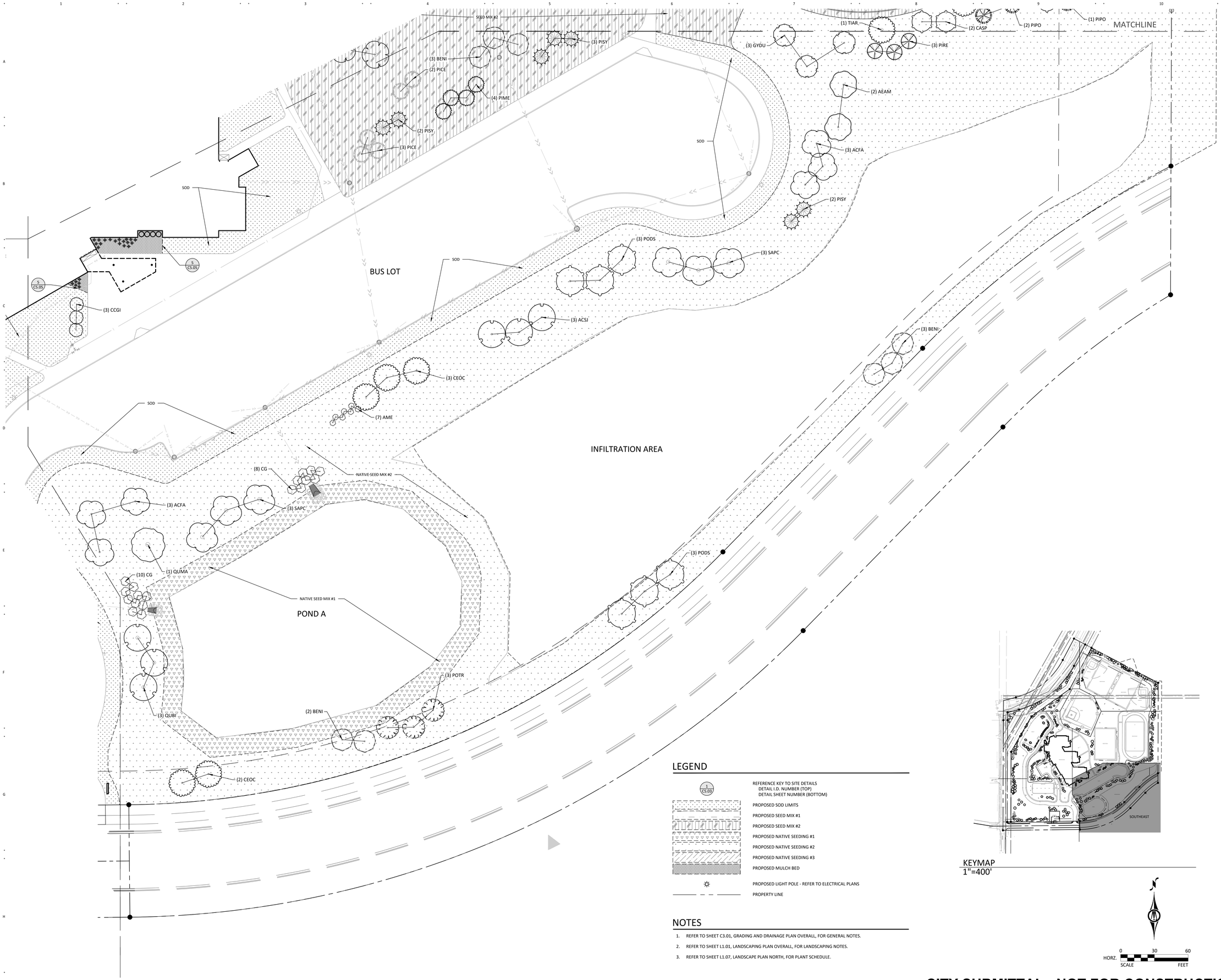
North

LANDSCAPING PLAN
SOUTHWEST

Scale: 1" = 30'

L1.02

MN



C

LEGEND

1 C5.03	REFERENCE KEY TO SITE DETAILS DETAIL I.D. NUMBER (TOP) DETAIL SHEET NUMBER (BOTTOM)
	PROPOSED SOD LIMITS
	PROPOSED SEED MIX #1
	PROPOSED SEED MIX #2
	PROPOSED NATIVE SEEDING #1
	PROPOSED NATIVE SEEDING #2
	PROPOSED NATIVE SEEDING #3
	PROPOSED MULCH BED
	PROPOSED LIGHT POLE - REFER TO ELECTRICAL PLANS
	PROPERTY LINE

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3. REFER TO SHEET L1.07, LANDSCAPE PLAN NORTH, FOR PLANT SCHEDULE.

KEYMAP
1"=400'

HORZ. 0 30 60
SCALE FEET

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Revisions		
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Comm: 232086
Date: 07/31/2024
Drawn: LJD
Check: LJD
North

LANDSCAPING PLAN
SOUTHEAST

Scale: 1" = 30'

L1.03

MN

C

LEGEND

1 / C5.03	REFERENCE KEY TO SITE DETAILS DETAIL I.D. NUMBER (TOP) DETAIL SHEET NUMBER (BOTTOM)
	PROPOSED SOD LIMITS
	PROPOSED SEED MIX #1
	PROPOSED SEED MIX #2
	PROPOSED NATIVE SEEDING #1
	PROPOSED NATIVE SEEDING #2
	PROPOSED NATIVE SEEDING #3
	PROPOSED MULCH BED
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	PROPERTY LINE

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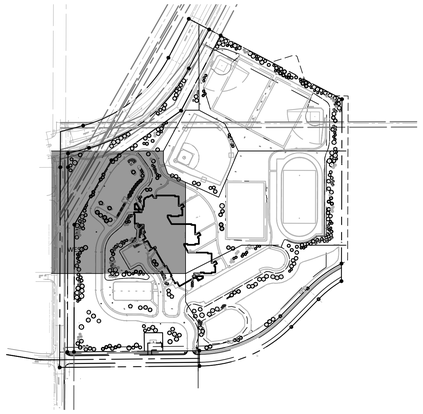

KEYMAP
1"=400'

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Revisions		
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Drawn: LJD
Check: LJD

North

LANDSCAPING PLAN WEST

Scale: 1" = 30'

L1.04

HORZ. SCALE 0 30 60 FEET

CITY SUBMITTAL - NOT FOR CONSTRUCTION

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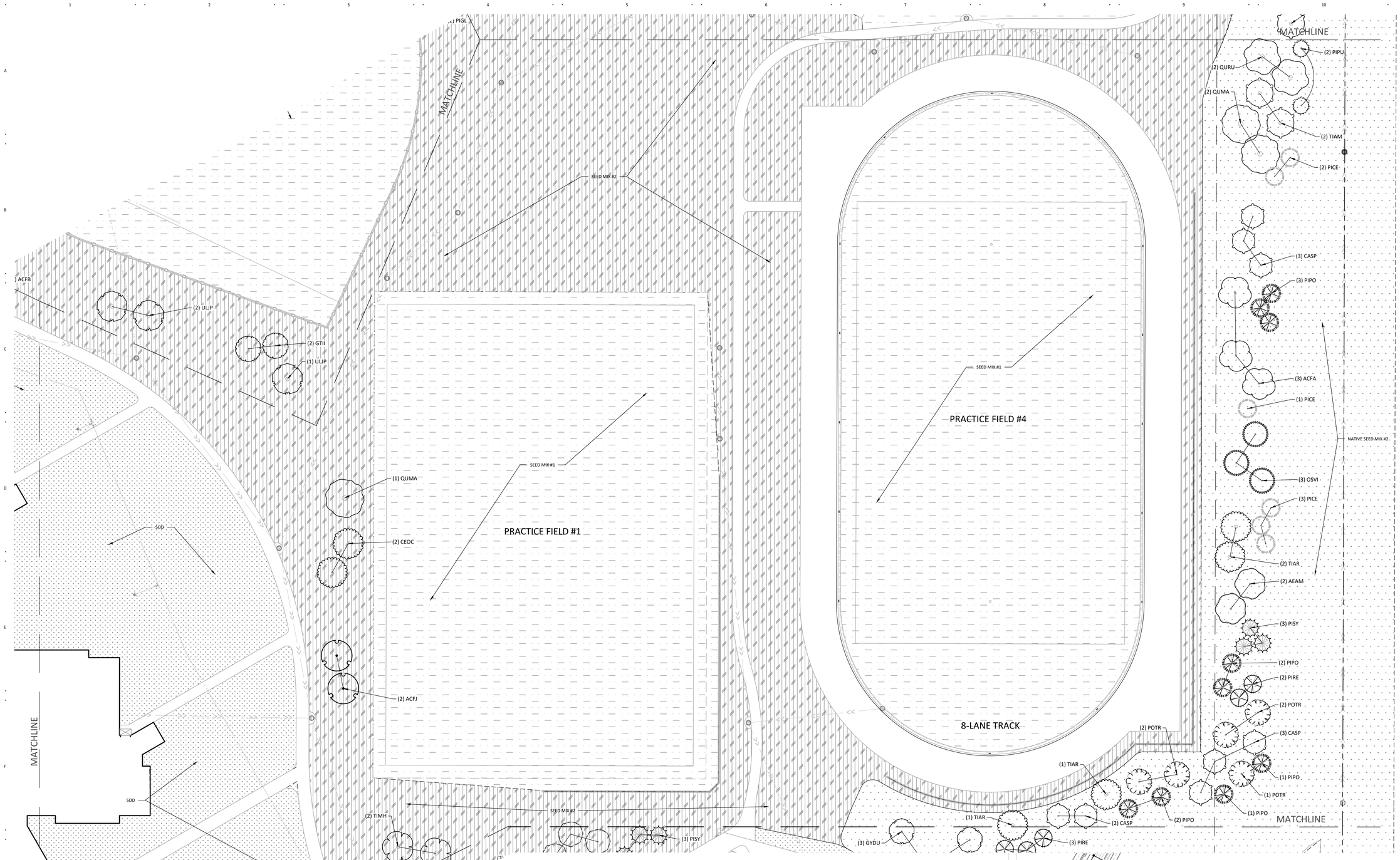

LEGEND

1 / C5.03	REFERENCE KEY TO SITE DETAILS DETAIL I.D. NUMBER (TOP) DETAIL SHEET NUMBER (BOTTOM)
	PROPOSED SOD LIMITS
	PROPOSED SEED MIX #1
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	PROPOSED NATIVE SEEDING #2
	PROPOSED NATIVE SEEDING #3
	PROPOSED MULCH BED
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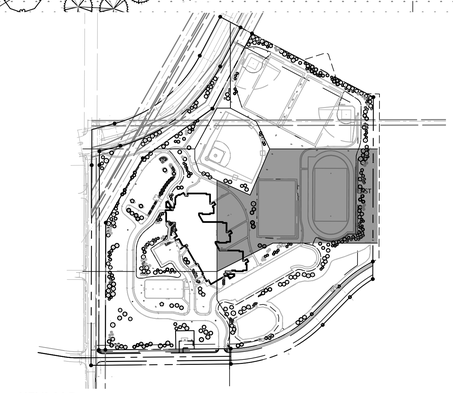
3. REFER TO SHEET L1.07, LANDSCAPE PLAN NORTH, FOR PLANT SCHEDULE.



KEYMAP
1"=400'

HORZ. 0 30 60
SCALE FEET

C

CITY SUBMITTAL - NOT FOR CONSTRUCTION

New Rosemount Middle School

Rosemount, Minnesota 55088

Independent School District #196
3455 153RD STREET WEST
ROSEMOUNT, MINNESOTA 55068

WOLD ARCHITECTS AND ENGINEERS
332 Minnesota Street, Suite W2000
Saint Paul, MN 55101

woldae.com | 651 227 7773

BOLTON & MENK
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LAURA J. DETZLER
LIC. NO. 53753 DATE 07/31/2024

Revisions		
Description	Date	Num

Comm: 232086
Date: 07/31/2024
Drawn: LJD
Check: LJD

North

LANDSCAPING PLAN
EAST

Scale: 1" = 30'

L1.05

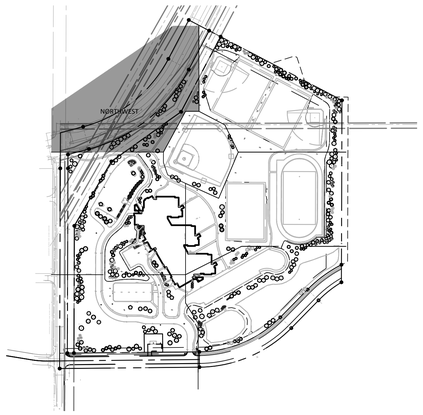
MN

LEGEND

1 / C5.03	REFERENCE KEY TO SITE DETAILS DETAIL I.D. NUMBER (TOP) DETAIL SHEET NUMBER (BOTTOM)
	PROPOSED SOD LIMITS
	PROPOSED SEED MIX #1
	PROPOSED SEED MIX #2
	PROPOSED NATIVE SEEDING #1
	PROPOSED NATIVE SEEDING #2
	PROPOSED NATIVE SEEDING #3
	PROPOSED MULCH BED
	PROPOSED LIGHT POLE - REFER TO ELECTRICAL PLANS
	PROPERTY LINE

NOTES

1. REFER TO SHEET C3.01, GRADING AND DRAINAGE PLAN OVERALL, FOR GENERAL NOTES.
2. REFER TO SHEET L1.01, LANDSCAPING PLAN OVERALL, FOR LANDSCAPING NOTES.
3. REFER TO SHEET L1.07, LANDSCAPE PLAN NORTH, FOR PLANT SCHEDULE.



KEYMAP
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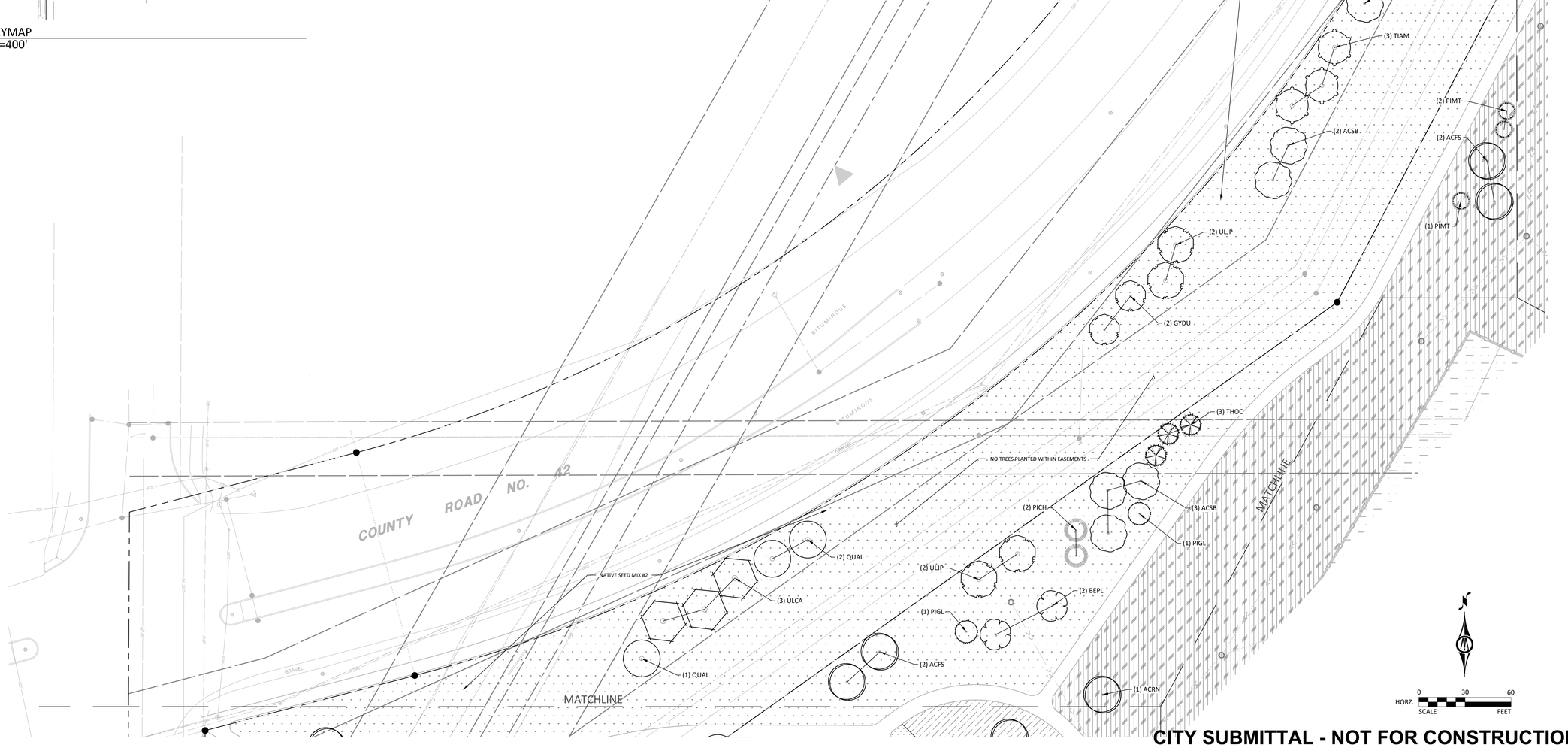

C

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LAURA J. DETZLER
LIC. NO. 53753 DATE 07/31/2024

Revisions		
Description	Date	Num

Comm: 232086
Date: 07/31/2024
Drawn: LJD
Check: LJD
North

LANDSCAPING PLAN
NORTHWEST

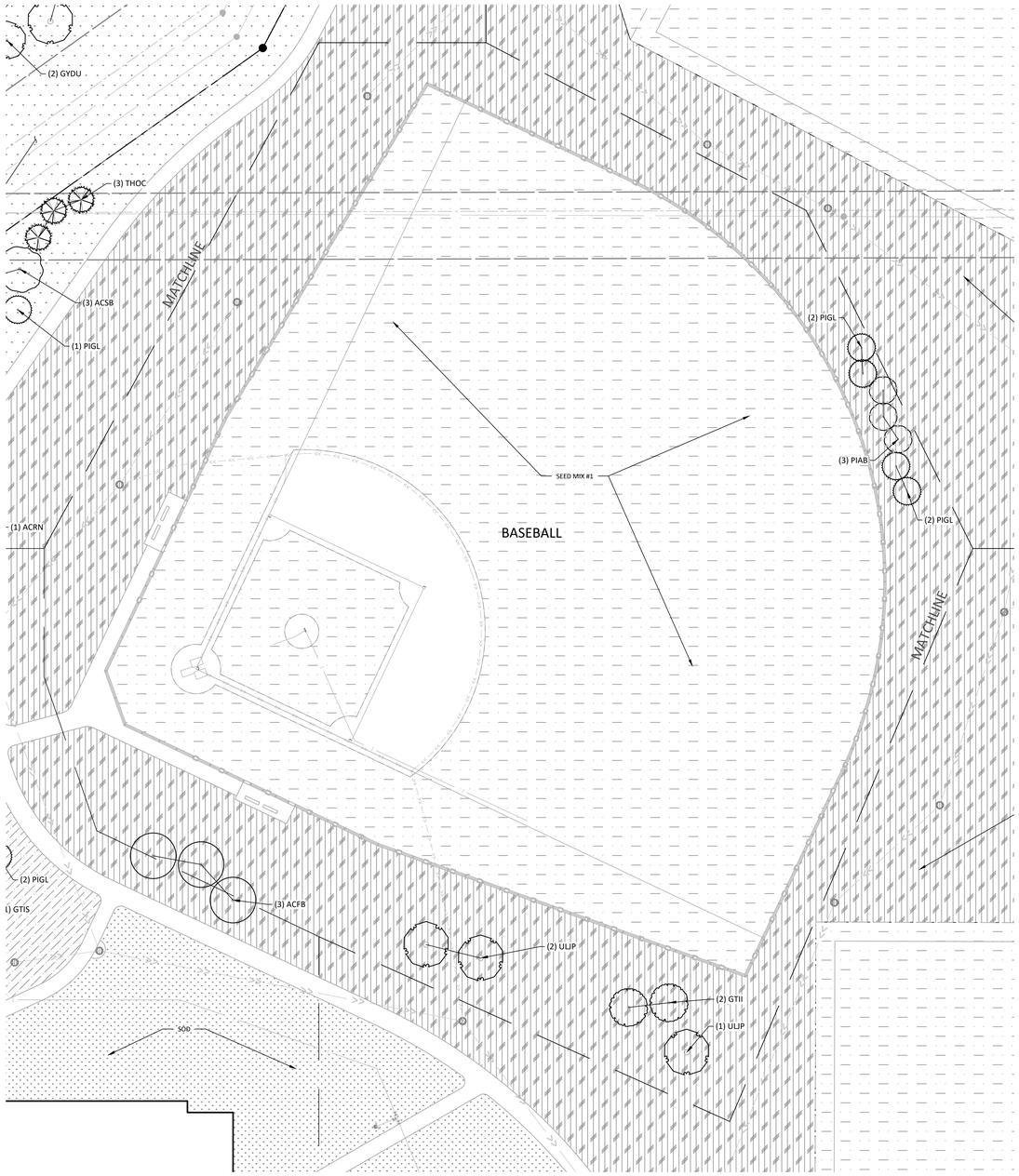
Scale: 1" = 30'

L1.06

MN

PLANT SCHEDULE

SYMBOL	CODE	QTY	BOTANICAL NAME	COMMON NAME	CALIPER	HEIGHT	CONTAINER
TREES							
	ACRF	3	ACER RUBRUM 'FRANKSRED'	RED SUNSET® MAPLE	2.5" CAL.		B&B
	ACRN	7	ACER RUBRUM 'NORTHWOOD'	NORTHWOOD RED MAPLE	2.5" CAL.		B&B
	ACSB	6	ACER SACCHARUM 'BAILSTA'	FALL FIESTA® SUGAR MAPLE	2.5" CAL.		B&B
	ACSJ	5	ACER SACCHARUM 'JEFCAN'	UNITY® SUGAR MAPLE	2.5" CAL.		B&B
	ACSP	3	ACER SACCHARUM 'PNI 0285'	GREEN MOUNTAIN® SUGAR MAPLE	2.5" CAL.		B&B
	ACFA	9	ACER X FREEMANI 'AFIFI'	FIREFALL™ FREEMAN MAPLE	2.5" CAL.		B&B
	ACFB	5	ACER X FREEMANI 'BAILSTON'	MATADOR™ FREEMAN MAPLE	2.5" CAL.		B&B
	ACFJ	5	ACER X FREEMANI 'JEFFERSRED'	AUTUMN BLAZE® FREEMAN MAPLE	2.5" CAL.		B&B
	ACFS	8	ACER X FREEMANI 'SIENNA'	SIENNA GLEN® MAPLE	2.5" CAL.		B&B
	AEAM	4	AESCULUS X ARNOLDIANA 'AUTUMN SPLENDOR'	AUTUMN SPLENDOR ARNOLD BUCKEYE	2.5" CAL.		B&B
	BENI	8	BETULA NIGRA	RIVER BIRCH	2.5" CAL.		B&B
	BEPL	5	BETULA PLATYPHYLLA 'JEFPARK'	PARKLAND PILLAR® ASIAN WHITE BIRCH	2.5" CAL.		B&B
	PEPO	3	BETULA POPULIFOLIA 'WHITESPIRE'	WHITESPIRE GRAY BIRCH	2.5" CAL.		B&B
	CASP	8	CATALPA SPECIOSA	NORTHERN CATALPA	2" CAL.		B&B
	CEOC	11	CELTIS OCCIDENTALIS	COMMON HACKBERRY	2.5" CAL.		B&B
	GIBA	5	GINKGO BILOBA 'AUTUMN GOLD'	AUTUMN GOLD MAIDENHAIR TREE	2.5" CAL.		B&B
	GIBP	3	GINKGO BILOBA 'THE PRESIDENT'	PRESIDENTIAL GOLD® MAIDENHAIR TREE	2.5" CAL.		B&B
	GTII	5	GLEDITSIA TRIACANTHOS INERMIS 'IMPCOLE'	IMPERIAL® HONEY LOCUST	2.5" CAL.		B&B
	GTIS	7	GLEDITSIA TRIACANTHOS INERMIS 'SKYCOLE'	SKYLINE® HONEY LOCUST	2.5" CAL.		B&B
	GYDE	7	GYMNOCLADUS DIOICA 'ESPRESSO'	KENTUCKY COFFEETREE	2.5" CAL.		B&B
	GYDU	12	GYMNOCLADUS DIOICA 'UMNSYNERGY'	TRUE NORTH™ KENTUCKY COFFEETREE	2.5" CAL.		B&B
	OSVI	13	OSTRYA VIRGINIANA	AMERICAN HOPHORNBEAM	2.5" CAL.		B&B
	PODS	8	POPULUS DELTOIDES 'SIOUXLAND'	EASTERN COTTONWOOD SIOUXLAND	2.5" CAL.		B&B
	POTR	11	POPULUS TREMULOIDES	QUAKING ASPEN	2.5" CAL.		B&B
	QUAL	8	QUERCUS ALBA	WHITE OAK	2.5" CAL.		B&B
	QUBI	5	QUERCUS BICOLOR	SWAMP WHITE OAK	2.5" CAL.		B&B
	QUEL	5	QUERCUS ELLIPSOIDALIS	NORTHERN PIN OAK	2.5" CAL.		B&B
	QUMA	7	QUERCUS MACROCARPA	BURR OAK	2.5" CAL.		B&B
	QURU	11	QUERCUS RUBRA	RED OAK	2.5" CAL.		B&B
	SAPC	6	SALIX X 'PRAIRIE CASCADE'	PRAIRIE CASCADE WILLOW	2.5" CAL.		B&B
	TIAB	7	TILIA AMERICANA 'BOULEVARD'	BOULEVARD AMERICAN LINDEN	2.5" CAL.		B&B
	TIAM	11	TILIA AMERICANA 'MCKSENTRY'	AMERICAN SENTRY® LINDEN	2.5" CAL.		B&B
	TIAR	10	TILIA AMERICANA 'REDMOND'	REDMOND AMERICAN LINDEN	2.5" CAL.		B&B
	TICG	5	TILIA CORDATA 'GREENSPIRE'	GREENSPIRE LITTLELEAF LINDEN	2.5" CAL.		B&B
	TIMH	7	TILIA MONGOLICA 'HARVEST GOLD'	HARVEST GOLD LINDEN	2.5" CAL.		B&B
	ULAP	4	ULMUS AMERICANA 'PRINCETON'	PRINCETON ELM	2.5" CAL.		B&B
	ULAS	9	ULMUS AMERICANA 'ST. CROIX'	FIRST EDITIONS® ST CROIX™ AMERICAN ELM	2.5" CAL.		B&B
	ULAV	4	ULMUS AMERICANA 'VALLEY FORGE'	VALLEY FORGE AMERICAN ELM	2.5" CAL.		B&B
	ULJP	7	ULMUS JAPONICA X PUMILA 'NEW HORIZON'	NEW HORIZON ELM	2.5" CAL.		B&B
	ULCA	10	ULMUS X 'CATHEDRAL'	CATHEDRAL ELM	2.5" CAL.		B&B
ORNAMENTAL TREES							
	AGAB	6	AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE'	AUTUMN BRILLIANCE APPLE SERVICEBERRY	1.5" CAL.		B&B
	CCGI	6	CRATAEGUS CRUS-GALLI INERMIS	THORNLESS COCKSPUR HAWTHORN	1.5" CAL.		B&B
CONIFERS							
	PIAB	11	PICEA ABIES	NORWAY SPRUCE	6' HT.	B&B	
	PIGL	14	PICEA GLAUCA	WHITE SPRUCE	6' HT.	B&B	
	PIME	12	PICEA MEYERI	MEYER SPRUCE	6' HT.	B&B	
	PIPU	12	PICEA PUNGENS	COLORADO SPRUCE	6' HT.	B&B	
	PICE	11	PINUS CEMBRA	SWISS STONE PINE	6' HT.	B&B	
	PICH	11	PINUS CEMBRA 'HERMAN'	PRAIRIE STATESMAN® SWISS STONE PINE	6' HT.	B&B	
	PIMT	12	PINUS MUGO 'TANNENBAUM'	TANNENBAUM MUGO PINE	6' HT.	B&B	
	PINI	13	PINUS NIGRA	AUSTRIAN PINE	6' HT.	B&B	
	PIPO	19	PINUS PONDEROSA	PONDEROSA PINE	6' HT.	B&B	
	PIRE	14	PINUS RESINOSA	RED PINE	6' HT.	B&B	
	PISY	18	PINUS SYLVESTRIS	SCOTCH PINE	6' HT.	B&B	
	THOC	13	THUJA OCCIDENTALIS	AMERICAN ARBORVITAE	6' HT.	B&B	
SYMBOL	CODE	QTY	BOTANICAL NAME	COMMON NAME	SPREAD	HEIGHT	CONTAINER
SHRUBS							
	AME	7	ARONIA MELANOCARPA ELATA	GLOSSY BLACK CHOKEBERRY	N.A.		#5 CONT.
	CG	32	CORNUS RACEMOSA	GRAY DOGWOOD	N.A.		#5 CONT.
	CS	16	CORNUS SERICEA 'CARDINAL'	CARDINAL RED TWIG DOGWOOD	N.A.		#5 CONT.
	DL	19	DIERVILLA LONICERA	BUSH HONEYSUCKLE	N.A.		#5 CONT.
	RG	72	RHUS AROMATICA 'GRO-LOW'	GRO-LOW FRAGRANT SUMAC	N.A.		#5 CONT.
CONIFEROUS SHRUBS							
	JB	4	JUNIPERUS SABINA 'BROADMOOR'	BROADMOOR JUNIPER	N.A.		#5 CONT.
	PAC	3	PICEA ABIES 'CUPRESSINA'	CUPRESSINA NORWAY SPRUCE	N.A.	6' HT.	B&B
	TT	11	THUJA OCCIDENTALIS 'TECHNY'	TECHNY ARBORVITAE	N.A.	6' HT.	B&B
PERENNIALS / ORNAMENTAL GRASSES							
	BA	6	BAPTISIA AUSTRALIS	BLUE WILD INDIGO	N.A.		#1 CONT.
	CE	66	CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER'	KARL FOERSTER GRASS	N.A.		#1 CONT.
	CL	42	COREOPSIS LANCEOLATA	LANCELEAF TICKSEED	N.A.		4" CONT.
	EP	36	ECHINACEA PURPUREA	PURPLE CONEFLOWER	N.A.		#1 CONT.
	SL	61	SCHIZACHYRIUM SCOPARIUM	LITTLE BLUESTEM	N.A.		#1 CONT.
	SX	35	SEDUM X 'NIGHT EMBERS'	NIGHT EMBERS SEDUM	N.A.		#1 CONT.
	SH	97	SPOROBOLUS HETEROLEPIS	PRAIRIE DROPSEED	N.A.		#1 CONT.

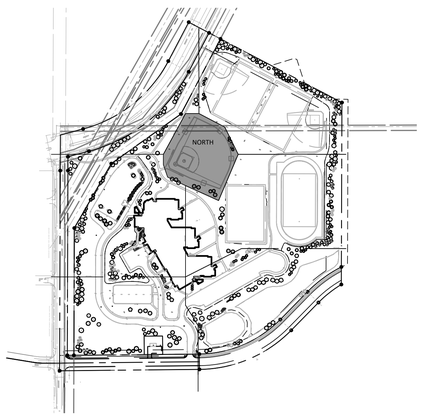


LEGEND

- 1 / CS.03 — REFERENCE KEY TO SITE DETAILS (DETAIL I.D. NUMBER (TOP), DETAIL SHEET NUMBER (BOTTOM))
- PROPOSED SOD LIMITS
- PROPOSED SEED MIX #1
- PROPOSED SEED MIX #2
- PROPOSED NATIVE SEEDING #1
- PROPOSED NATIVE SEEDING #2
- PROPOSED NATIVE SEEDING #3
- PROPOSED MULCH BED
- PROPOSED LIGHT POLE - REFER TO ELECTRICAL PLANS
- PROPERTY LINE

NOTES

1. REFER TO SHEET C3.01, GRADING AND DRAINAGE PLAN OVERALL, FOR GENERAL NOTES.
2. REFER TO SHEET L1.01, LANDSCAPING PLAN OVERALL, FOR LANDSCAPING NOTES.



KEYMAP
1"=400'

HORZ. 0 30 60
SCALE FEET

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New Rosemount Middle School

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LAURA J. DETZLER
LIC. NO. 53753 DATE 07/31/2024

Revisions		
Description	Date	Num

Comm: 232086
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Drawn: LJD
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North

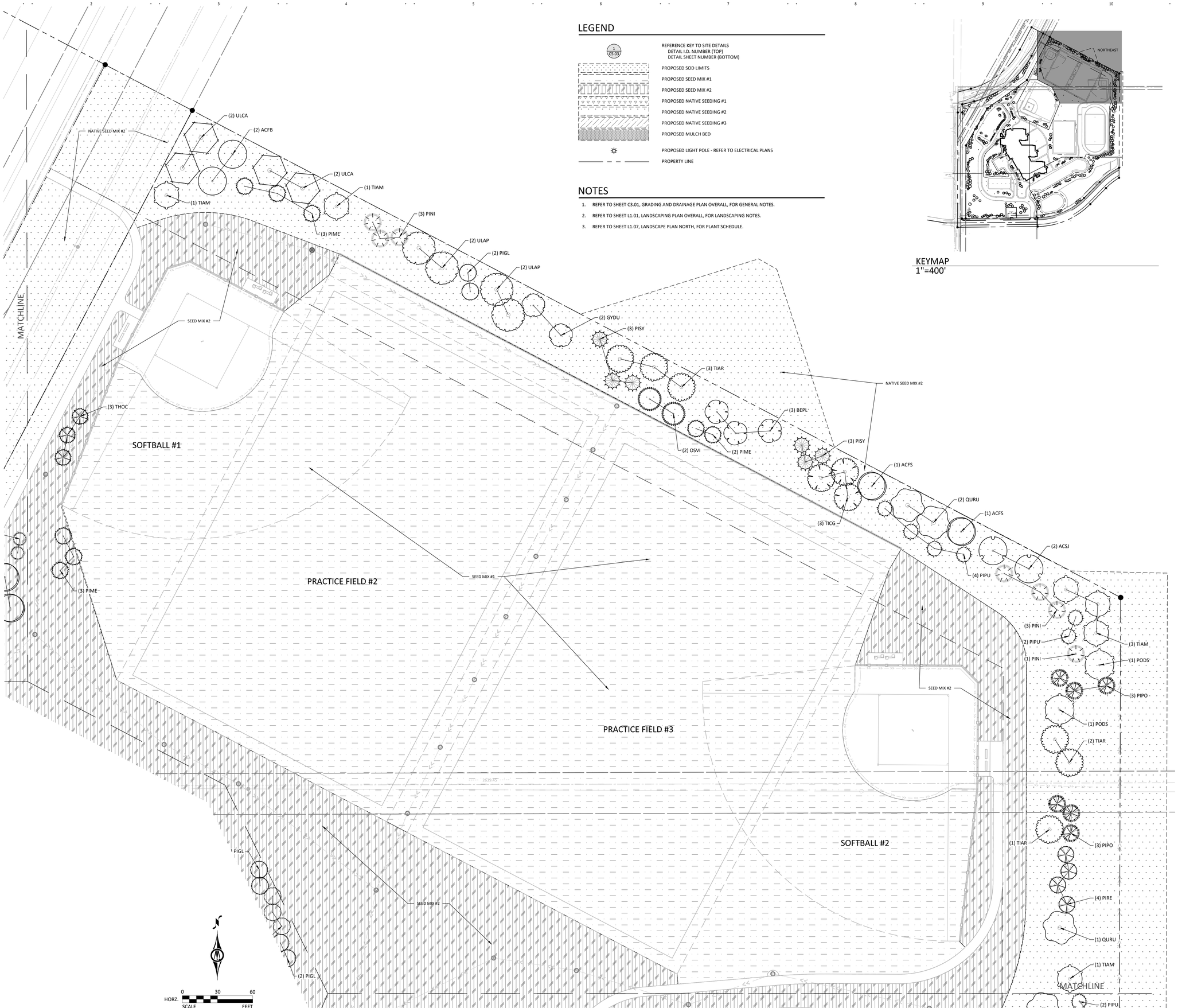
LANDSCAPING PLAN NORTH

Scale: 1" = 30'

L1.07

MN

C



LEGEND

1 / C3.03	REFERENCE KEY TO SITE DETAILS DETAIL I.D. NUMBER (TOP) DETAIL SHEET NUMBER (BOTTOM)
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North

LANDSCAPING PLAN
NORTHEAST

Scale: 1" = 30'

L1.08

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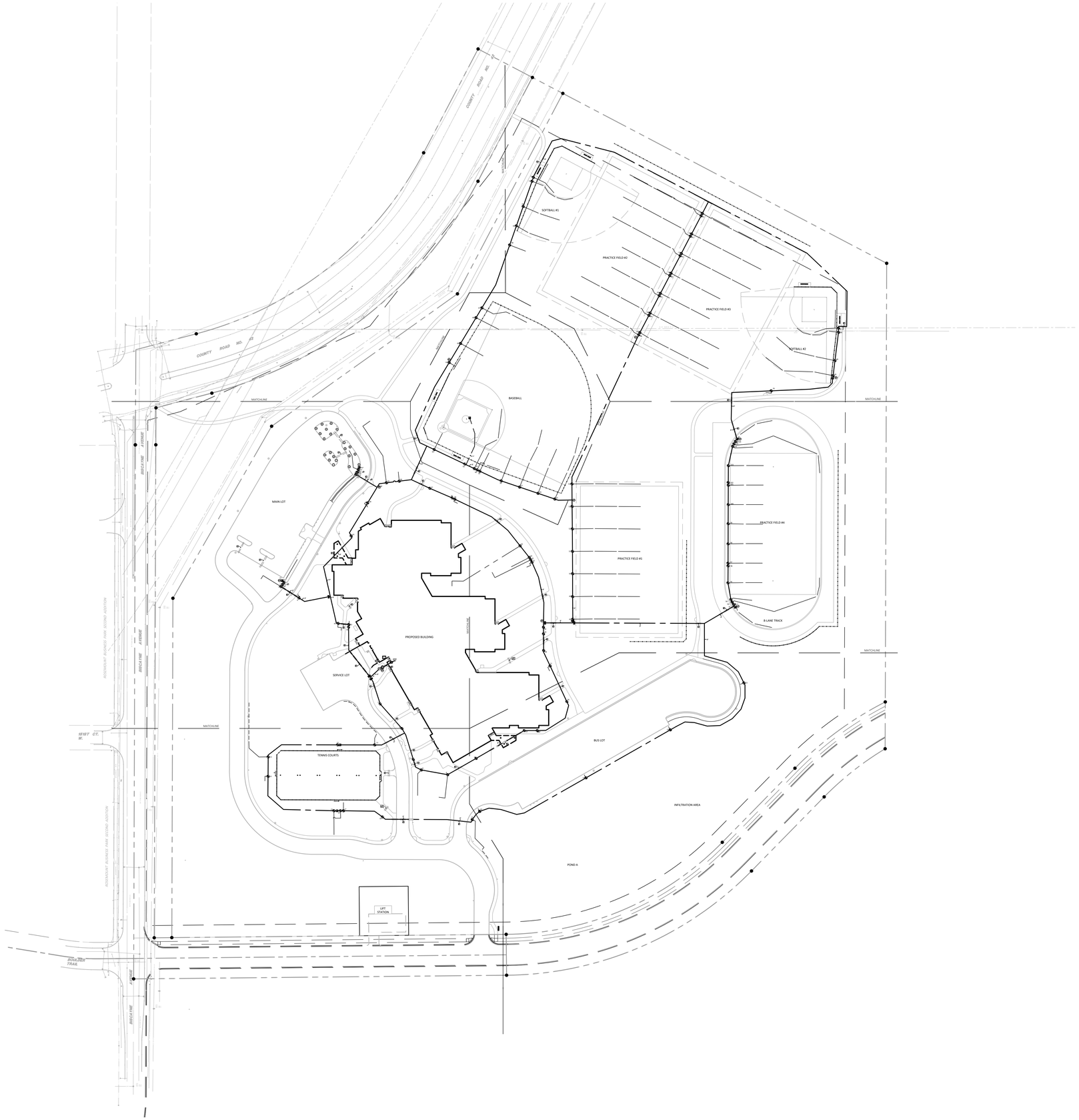

C

LEGEND

G T H TG F	RAIN BIRD 1806 - TURF SPRAY SPRINKLER 6.0IN.
Q T H TG F	RAIN BIRD 1812 - SHRUB SPRAY SPRINKLER 12IN.
2000 3000 3500	HUNTER MP2000, MP3000, OR MP3500 - TURF ROTATOR SPRINKLER 6IN.
2000 3000 3500	HUNTER MP2000, MP3000, OR MP3500 - SHRUB ROTATOR SPRINKLER 12IN.
5006 5006 5006 5006 5006 5006	RAIN BIRD 5006-PC - TURF ROTOR SPRINKLER 6IN.
	RAIN BIRD 6504-PC - TURF ROTOR SPRINKLER 4.0IN.
	RAIN BIRD 8005 - TURF ROTOR SPRINKLER 5.0IN.
	RAIN BIRD PEB-IVM - ELECTRONIC CONTROL VALVE
	RAIN BIRD 3-RC - 3/4IN. BRASS QUICK-COUPLING VALVE
	LEEMCO LBT-SS - STAINLESS STEEL BALL VALVE
MV	RAIN BIRD 300-BPES-PRS-D - 3IN. BRASS MASTER VALVE
C	RAIN BIRD ESPLXIVM - 2-WIRE CONTROLLER
SP	RAIN BIRD LSP-1TURF - LINE SURGE PROTECTION
RS	RAIN BIRD RSD-BEX - RAIN SENSOR
FS	RAIN BIRD FS-400-P - 4IN. FLOW SENSOR
BP	BOOSTER PUMP
	IRRIGATION LATERAL LINE: POLYETHYLENE PIPE SDR-7
	IRRIGATION LATERAL LINE: PVC CLASS 200 SDR 21
	IRRIGATION MAINLINE: POLYETHYLENE PIPE SDR-7
	IRRIGATION MAINLINE: PVC CLASS 200 SDR 21
	PIPE SLEEVE: PVC SCHEDULE 40

NOTES

1. REFER TO SHEET C3.01, GRADING AND DRAINAGE PLAN OVERALL, FOR GENERAL NOTES.
2. IRRIGATION SYSTEM IS DESIGNED WITH A BOOSTER PUMP ADDING 40 PSI TO AN EXISTING 60(+/-) PSI AT THE POINT OF CONNECTION. NOTIFY ENGINEER/LANDSCAPE ARCHITECT IF EXISTING PRESSURE DIFFERS.
3. WATER SOURCE: WATER WILL BE AVAILABLE FROM PROPOSED 4" CAPPED FLANGE OUTSIDE THE MECHANICAL ROOM ON THE WEST SIDE OF THE BUILDING SOUTH OF THE LOADING DOCKS.
4. LAYOUT WORK AS ACCURATELY AS POSSIBLE. THE CONTRACTOR MAY MAKE MINOR ADJUSTMENTS TO THE LOCATION AND SPACING AS NECESSARY TO ACCOMMODATE ACTUAL FIELD CONDITIONS. HEAD LOCATIONS SHALL BE FLAGGED AND REVIEWED BY THE ENGINEER PRIOR TO INSTALLATION.
5. COORDINATE INSTALLATION WITH THE WORK OF OTHERS.
6. ALL MATERIALS SHALL BE INSTALLED AS DETAILED ON DRAWINGS, HOWEVER, IF THE CONTRACT DRAWINGS AND/OR SPECIFICATIONS DO NOT THOROUGHLY DESCRIBE THE METHOD OR TECHNIQUES TO BE USED, THE CONTRACTOR SHALL FOLLOW THE INSTALLATION METHODS ISSUED BY THE MANUFACTURER . ALL SUCH LITERATURE MUST BE SUBMITTED 48 HOURS PRIOR TO INSTALLATION FOR REVIEW AND APPROVAL BY THE ENGINEER.
7. CHECK AND VERIFY ALL EXISTING AND PROPOSED SITE CONDITIONS, UTILITIES AND SERVICES PRIOR TO TRENCHING.
8. LATERAL PIPING SHALL BE A MINIMUM OF 12 INCHES DEEP AND MAINLINE PIPING A MINIMUM OF 18 INCHES DEEP. ENGINEER SHALL BE NOTIFIED TO VERIFY TRENCH DEPTHS BEFORE BACKFILLING.
9. ALL MAIN LINE PIPING AND LATERAL PIPE of 1-1/2" AND LARGER AT AREAS OUTSIDE OF BALL FIELDS SHALL BE PVC (SDR 21 / CLASS 200). MAIN LINE PIPING AND LATERAL PIPING 1" AND 1 1/4" SHALL BE POLYETHYLENE SDR-7.
10. ALL SPRINKLERS SHALL BE AS NOTED ON LEGEND.
11. ADJUST HEADS FOR GRADE, AS NECESSARY, AFTER GRASS HAS BEEN ESTABLISHED AND ALL SETTLEMENT AT HEADS HAS OCCURRED.
12. ALL RISERS, BACKFLOW PREVENTORS AND HOSE BIBBS SHALL BE SET PLUMB. SPRINKLER HEAD RISERS, QUICK COUPLER VALVES AND ALL VALVES WITH STEMS SHALL BE SET PERPENDICULAR TO FINISHED GRADE.
13. CONTROL VALVE WIRES SHALL BE #14 GAUGE U.F.U.L. JACKETED DECODER CABLE APPROVED DIRECT BURIAL. UNDERGROUND CONNECTIONS SHALL BE MADE WITH 3-M WIRE CONNECTORS (DBY), OR APPROVED EQUAL.
14. PLACE ALL VALVES IN APPROVED VALVE BOXES.
15. USE TEFLON TAPE ON ALL THREADED JOINTS.
16. CONDUCT PERFORMANCE TEST IN THE PRESENCE OF OWNER AND LANDSCAPE ARCHITECT FOLLOWING COMPLETION OF SYSTEM INSTALLATION.
17. CONDUCT AND DEMONSTRATE TO OWNER THE WINTERIZATION AND SPRING START-UP PROCESS IN THE FALL OF COMPLETION.
18. ZONES PROVIDING OVER 50 GPM SHALL BE 2" PLASTIC GLOBE VALVES. ZONES PROVIDING 20 TO 49 GPM SHALL BE 1-1/2" PLASTIC GLOBE VALVES. ZONES PROVIDING LESS THAN 20 GPM SHALL BE 1" PLASTIC GLOBE VALVES.
19. IRRIGATION CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL EQUIPMENT NECESSARY TO MAKE THE SYSTEM FULLY FUNCTIONAL.
20. IRRIGATION CONTRACTOR TO COORDINATE WITH THE UTILITY CONTRACTOR TO PROTECT EXISTING UTILITIES.
21. CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE EXACT LOCATION AND DEPTH OF ELECTRIC LINES PRIOR TO INSTALLATION OF IRRIGATION.

HORZ: 0 100 200
SCALE FEET

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RICHARD W. KOECHLEIN
LIC. NO. 26678 DATE 07/31/2024

Revisions		
Description	Date	Num

Comm: 232086
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Check: RWK

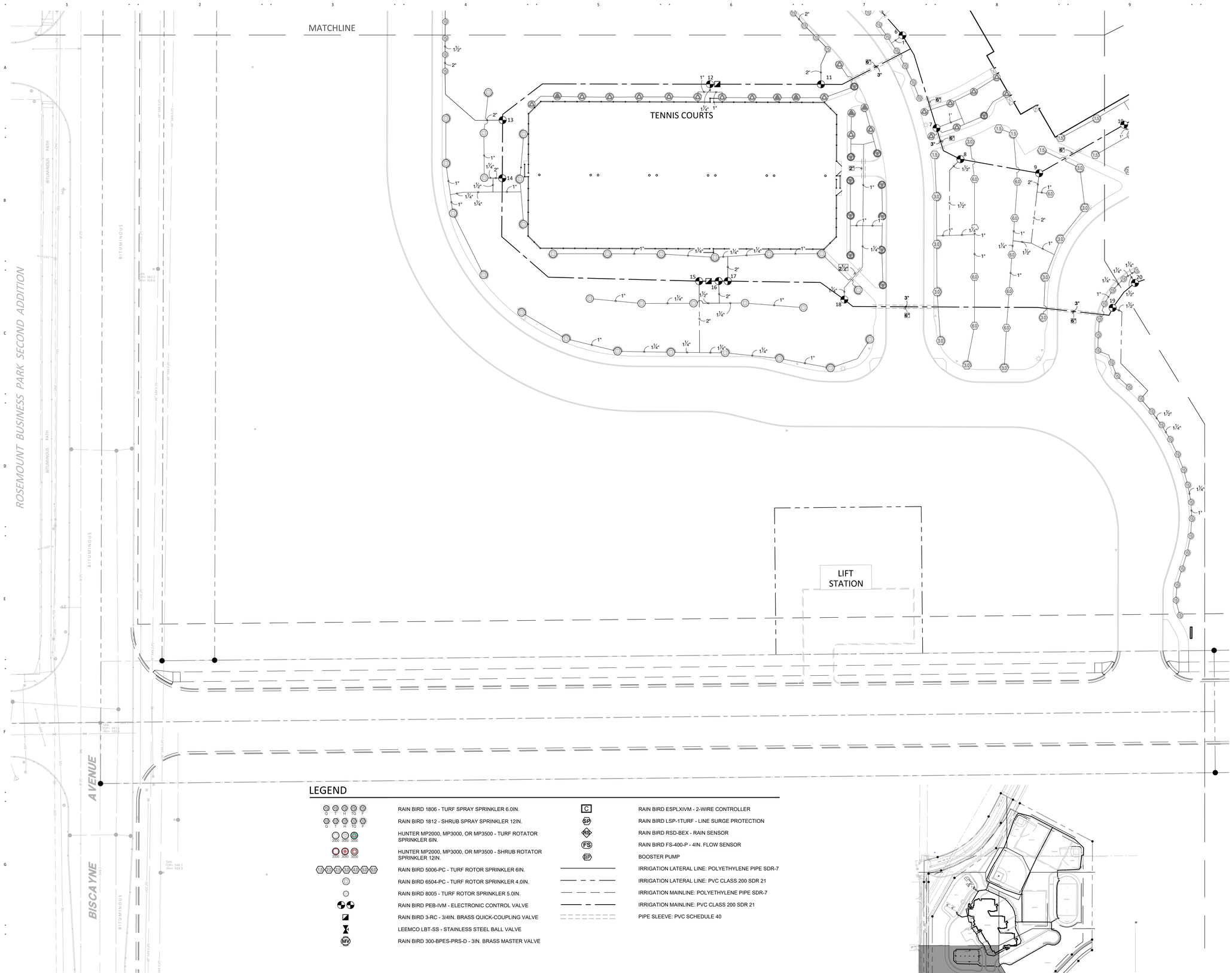
North

IRRIGATION PLAN OVERALL

Scale: 1" = 300'

I1.01

MN

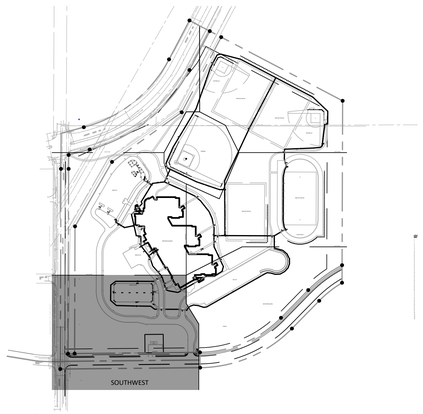


LEGEND

Q T H TQ F	RAIN BIRD 1806 - TURF SPRAY SPRINKLER 6.0IN.
Q T H TQ F	RAIN BIRD 1812 - SHRUB SPRAY SPRINKLER 12IN.
2000 2000 3000	HUNTER MP2000, MP3000, OR MP3500 - TURF ROTATOR SPRINKLER 6IN.
2000 2000 3000	HUNTER MP2000, MP3000, OR MP3500 - SHRUB ROTATOR SPRINKLER 12IN.
6.0 6.0 6.0 6.0 6.0 6.0	RAIN BIRD 5006-PC - TURF ROTOR SPRINKLER 6IN.
	RAIN BIRD 6504-PC - TURF ROTOR SPRINKLER 4.0IN.
	RAIN BIRD 8005 - TURF ROTOR SPRINKLER 5.0IN.
	RAIN BIRD PEB-IVM - ELECTRONIC CONTROL VALVE
	RAIN BIRD 3-RC - 3/4IN. BRASS QUICK-COUPLING VALVE
	LEEMCO LBT-SS - STAINLESS STEEL BALL VALVE
MV	RAIN BIRD 300-BPES-PRS-D - 3IN. BRASS MASTER VALVE
C	RAIN BIRD ESPLXIVM - 2-WIRE CONTROLLER
SP	RAIN BIRD LSP-1TURF - LINE SURGE PROTECTION
RS	RAIN BIRD RSD-BEX - RAIN SENSOR
FS	RAIN BIRD FS-400-P - 4IN. FLOW SENSOR
BP	BOOSTER PUMP
	IRRIGATION LATERAL LINE: POLYETHYLENE PIPE SDR-7
	IRRIGATION LATERAL LINE: PVC CLASS 200 SDR 21
	IRRIGATION MAINLINE: POLYETHYLENE PIPE SDR-7
	IRRIGATION MAINLINE: PVC CLASS 200 SDR 21
	PIPE SLEEVE: PVC SCHEDULE 40

NOTES

1. REFER TO SHEET C3.01, GRADING AND DRAINAGE PLAN OVERALL, FOR GENERAL NOTES.
2. REFER TO SHEET I1.01, IRRIGATION PLAN OVERALL, FOR IRRIGATION NOTES



KEYMAP
1"=400'

HORZ: 0 30 60
SCALE FEET

C

CITY SUBMITTAL - NOT FOR CONSTRUCTION

New Rosemount Middle School

Rosemount, Minnesota 55088

Independent School District #196
3455 153RD STREET WEST
ROSEMOUNT, MINNESOTA 55068

Wold

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RICHARD W. KOECHLEIN
LIC. NO. 26678 DATE 07/31/2024

Revisions

Description	Date	Num

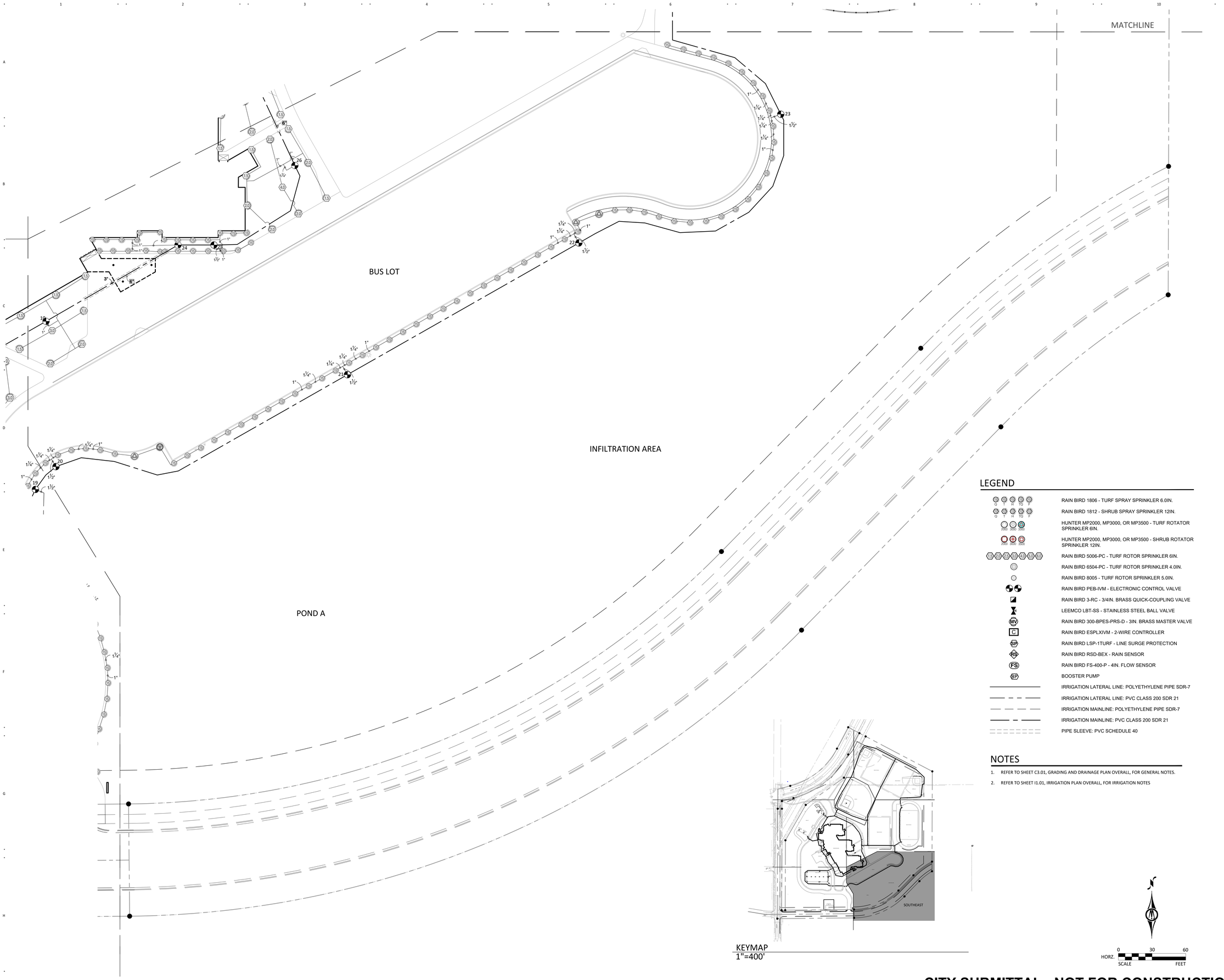
Comm: 232086
Date: 07/31/2024
Drawn: RWK
Check: RWK

North

IRRIGATION PLAN SOUTHWEST

Scale: 1" = 30'

I1.02



LEGEND

Q T H TQ F	RAIN BIRD 1806 - TURF SPRAY SPRINKLER 6.0IN.
Q T H TQ F	RAIN BIRD 1812 - SHRUB SPRAY SPRINKLER 12IN.
2000 3000 3500	HUNTER MP2000, MP3000, OR MP3500 - TURF ROTATOR SPRINKLER 6IN.
2000 3000 3500	HUNTER MP2000, MP3000, OR MP3500 - SHRUB ROTATOR SPRINKLER 12IN.
5.0 6.0 7.5 8.0 9.0 10.0	RAIN BIRD 5006-PC - TURF ROTOR SPRINKLER 6IN.
	RAIN BIRD 6504-PC - TURF ROTOR SPRINKLER 4.0IN.
	RAIN BIRD 8005 - TURF ROTOR SPRINKLER 5.0IN.
	RAIN BIRD PEB-IVM - ELECTRONIC CONTROL VALVE
	RAIN BIRD 3-RC - 3/4IN. BRASS QUICK-COUPLING VALVE
	LEEMCO LBT-SS - STAINLESS STEEL BALL VALVE
MV	RAIN BIRD 300-BPES-PRS-D - 3IN. BRASS MASTER VALVE
C	RAIN BIRD ESPLXIVM - 2-WIRE CONTROLLER
SP	RAIN BIRD LSP-1TURF - LINE SURGE PROTECTION
RS	RAIN BIRD RSD-BEX - RAIN SENSOR
FS	RAIN BIRD FS-400-P - 4IN. FLOW SENSOR
BP	BOOSTER PUMP
	IRRIGATION LATERAL LINE: POLYETHYLENE PIPE SDR-7
	IRRIGATION LATERAL LINE: PVC CLASS 200 SDR 21
	IRRIGATION MAINLINE: POLYETHYLENE PIPE SDR-7
	IRRIGATION MAINLINE: PVC CLASS 200 SDR 21
	PIPE SLEEVE: PVC SCHEDULE 40

NOTES

1. REFER TO SHEET C3.01, GRADING AND DRAINAGE PLAN OVERALL, FOR GENERAL NOTES.
2. REFER TO SHEET I1.01, IRRIGATION PLAN OVERALL, FOR IRRIGATION NOTES

KEYMAP
1"=400'

HORZ. 0 30 60
SCALE FEET

CITY SUBMITTAL - NOT FOR CONSTRUCTION

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RICHARD W. KOECHLEIN
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Revisions		
Description	Date	Num

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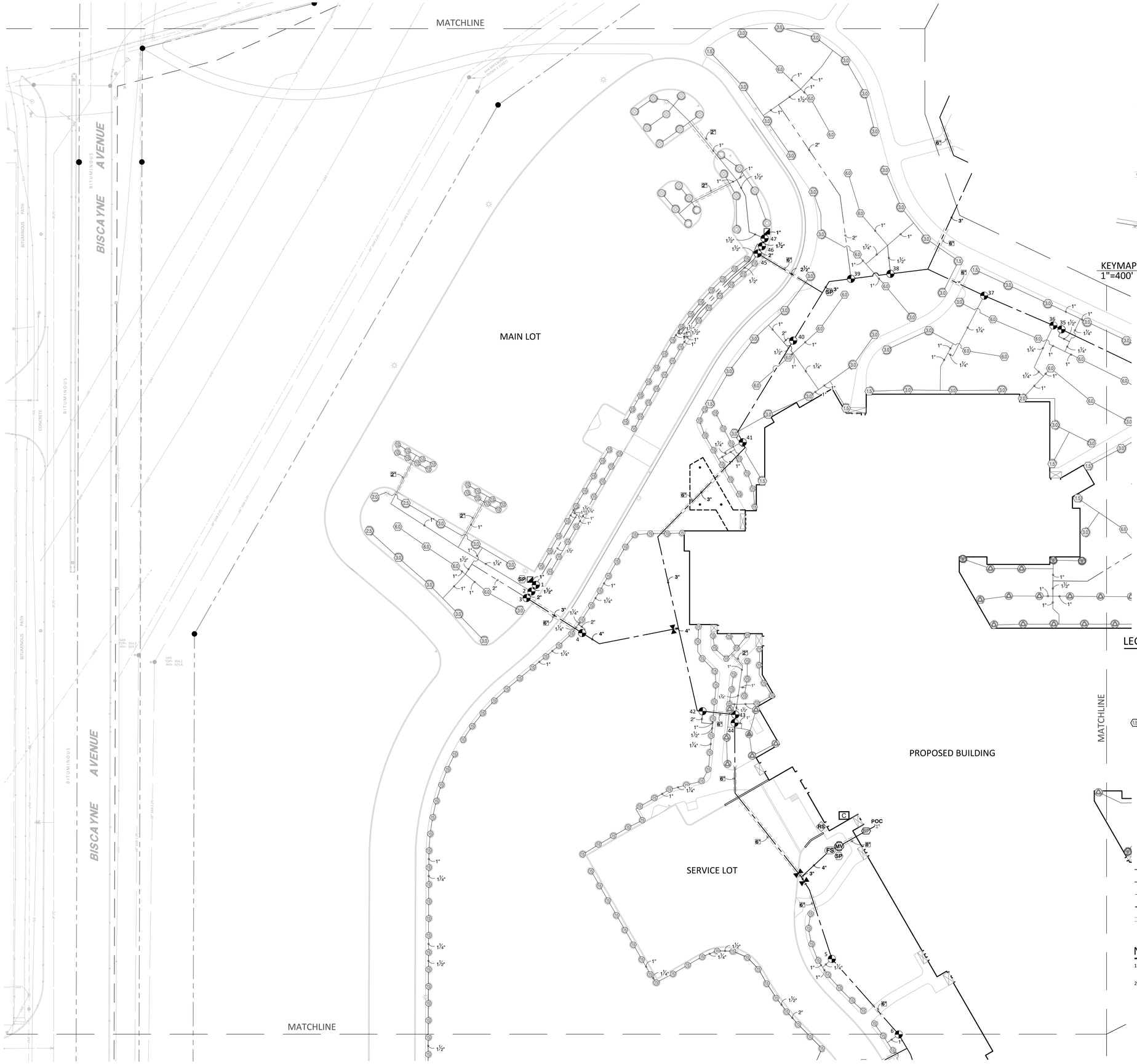
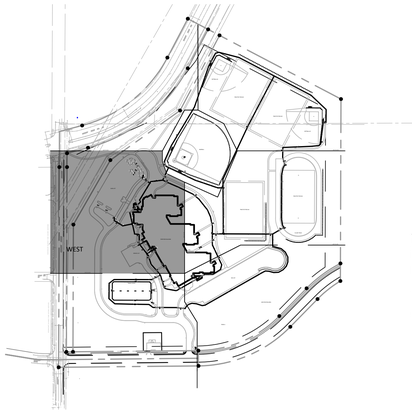
North

IRRIGATION PLAN SOUTHEAST

Scale: 1" = 30'

I1.03





KEYMAP
1"=400'

LEGEND

- RAIN BIRD 1806 - TURF SPRAY SPRINKLER 6.0IN.
- RAIN BIRD 1812 - SHRUB SPRAY SPRINKLER 12IN.
- HUNTER MP2000, MP3000, OR MP3500 - TURF ROTATOR SPRINKLER 6IN.
- HUNTER MP2000, MP3000, OR MP3500 - SHRUB ROTATOR SPRINKLER 12IN.
- RAIN BIRD 5006-PC - TURF ROTOR SPRINKLER 6IN.
- RAIN BIRD 6504-PC - TURF ROTOR SPRINKLER 4.0IN.
- RAIN BIRD 8005 - TURF ROTOR SPRINKLER 5.0IN.
- RAIN BIRD PEB-IVM - ELECTRONIC CONTROL VALVE
- RAIN BIRD 3-RC - 3/4IN. BRASS QUICK-COUPLING VALVE
- LEEMCO LBT-SS - STAINLESS STEEL BALL VALVE
- RAIN BIRD 300-BPES-PRS-D - 3IN. BRASS MASTER VALVE
- RAIN BIRD ESPLXIVM - 2-WIRE CONTROLLER
- RAIN BIRD LSP-1TURF - LINE SURGE PROTECTION
- RAIN BIRD RSD-BEX - RAIN SENSOR
- RAIN BIRD FS-400-P - 4IN. FLOW SENSOR
- BOOSTER PUMP
- IRRIGATION LATERAL LINE: POLYETHYLENE PIPE SDR-7
- IRRIGATION LATERAL LINE: PVC CLASS 200 SDR 21
- IRRIGATION MAINLINE: POLYETHYLENE PIPE SDR-7
- IRRIGATION MAINLINE: PVC CLASS 200 SDR 21
- PIPE SLEEVE: PVC SCHEDULE 40

NOTES

1. REFER TO SHEET C3.01, GRADING AND DRAINAGE PLAN OVERALL, FOR GENERAL NOTES.
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HORZ. SCALE 0 30 60 FEET

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LIC. NO. 26678 DATE 07/31/2024

Revisions		
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Comm: 232086
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North

IRRIGATION PLAN WEST

Scale: 1" = 30'

I1.04

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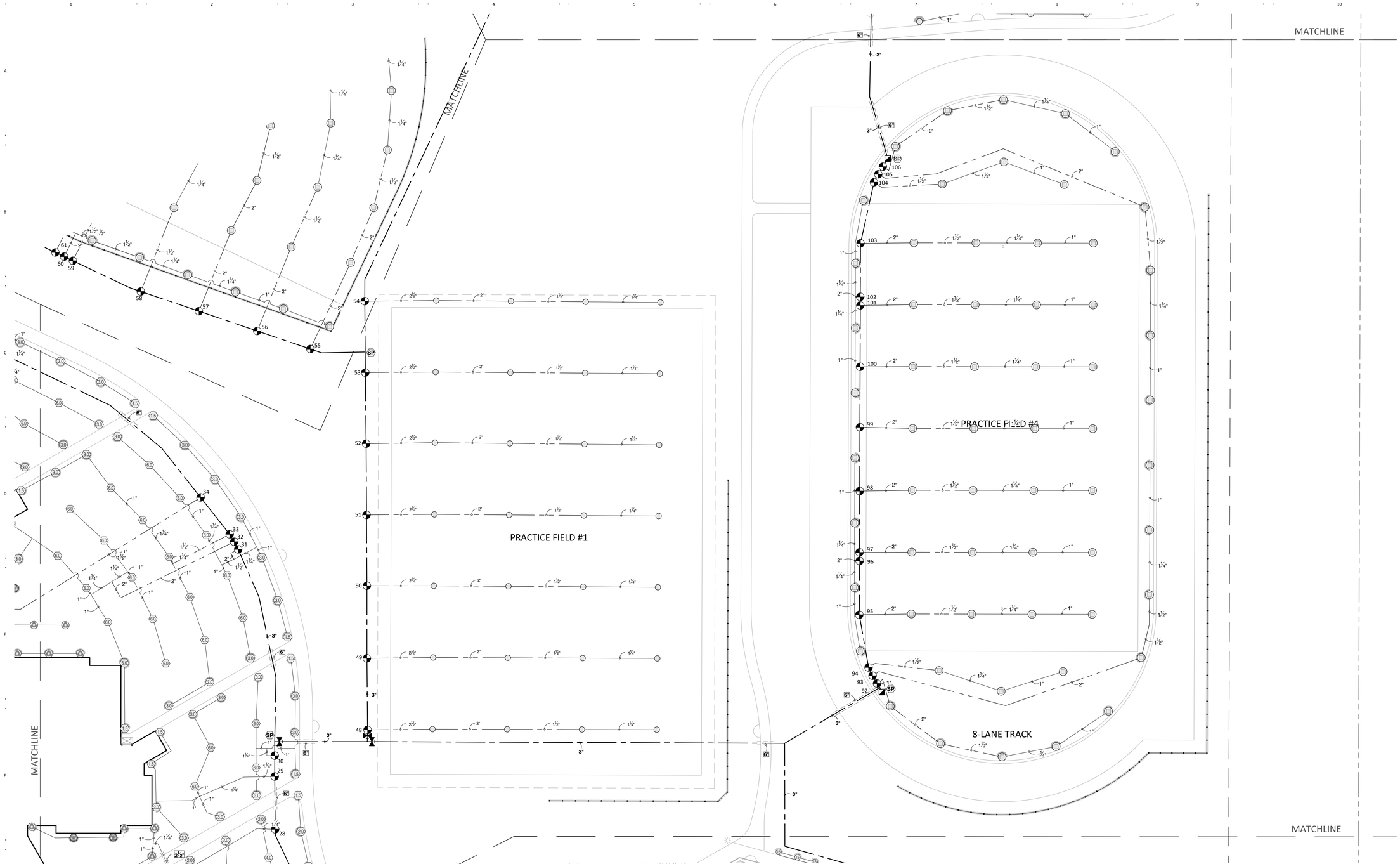
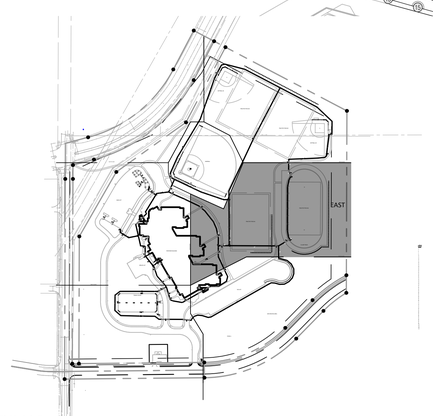


C

NOTES

1. REFER TO SHEET C3.01, GRADING AND DRAINAGE PLAN OVERALL, FOR GENERAL NOTES.
2. REFER TO SHEET I1.01, IRRIGATION PLAN OVERALL, FOR IRRIGATION NOTES



KEYMAP
1"=400'

LEGEND

RAIN BIRD 1806 - TURF SPRAY SPRINKLER 6.0IN.	RAIN BIRD ESPLXIVM - 2-WIRE CONTROLLER
RAIN BIRD 1812 - SHRUB SPRAY SPRINKLER 12IN.	RAIN BIRD LSP-1TURF - LINE SURGE PROTECTION
HUNTER MP2000, MP3000, OR MP3500 - TURF ROTATOR SPRINKLER 6IN.	RAIN BIRD RSD-BEX - RAIN SENSOR
HUNTER MP2000, MP3000, OR MP3500 - SHRUB ROTATOR SPRINKLER 12IN.	RAIN BIRD FS-400-P - 4IN. FLOW SENSOR
RAIN BIRD 5006-PC - TURF ROTOR SPRINKLER 6IN.	BOOSTER PUMP
RAIN BIRD 6504-PC - TURF ROTOR SPRINKLER 4.0IN.	IRRIGATION LATERAL LINE: POLYETHYLENE PIPE SDR-7
RAIN BIRD 8005 - TURF ROTOR SPRINKLER 5.0IN.	IRRIGATION LATERAL LINE: PVC CLASS 200 SDR 21
RAIN BIRD PEB-IVM - ELECTRONIC CONTROL VALVE	IRRIGATION MAINLINE: POLYETHYLENE PIPE SDR-7
RAIN BIRD 3-RC - 3/4IN. BRASS QUICK-COUPLING VALVE	IRRIGATION MAINLINE: PVC CLASS 200 SDR 21
LEEMCO LBT-SS - STAINLESS STEEL BALL VALVE	PIPE SLEEVE: PVC SCHEDULE 40
RAIN BIRD 300-BPES-PRS-D - 3IN. BRASS MASTER VALVE	

HORZ. SCALE 0 30 60 FEET

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Rosemount, Minnesota 55088

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Revisions		
Description	Date	Num

Comm: 232086
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Check: RWK

North

IRRIGATION PLAN EAST

Scale: 1" = 30'

I1.05

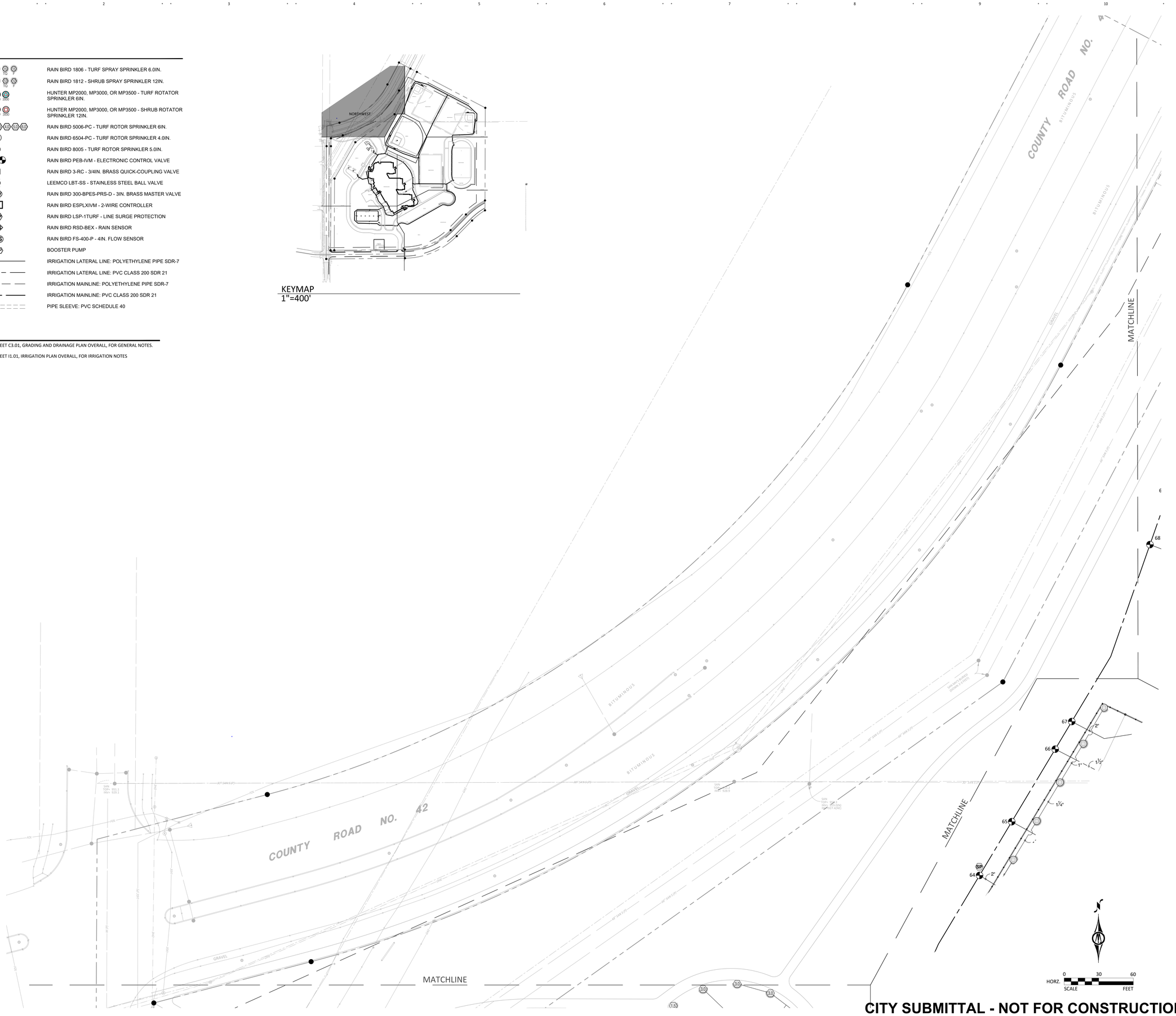
LEGEND

Q T H TQ F	RAIN BIRD 1806 - TURF SPRAY SPRINKLER 6.0IN.
Q T H TQ F	RAIN BIRD 1812 - SHRUB SPRAY SPRINKLER 12IN.
2000 3000 3500	HUNTER MP2000, MP3000, OR MP3500 - TURF ROTATOR SPRINKLER 6IN.
2000 3000 3500	HUNTER MP2000, MP3000, OR MP3500 - SHRUB ROTATOR SPRINKLER 12IN.
5.0 7.0 8.0 10.0 12.0 15.0	RAIN BIRD 5006-PC - TURF ROTOR SPRINKLER 6IN.
	RAIN BIRD 6504-PC - TURF ROTOR SPRINKLER 4.0IN.
	RAIN BIRD 8005 - TURF ROTOR SPRINKLER 5.0IN.
	RAIN BIRD PEB-IVM - ELECTRONIC CONTROL VALVE
	RAIN BIRD 3-RC - 3/4IN. BRASS QUICK-COUPLING VALVE
	LEEMCO LBT-SS - STAINLESS STEEL BALL VALVE
MV	RAIN BIRD 300-BPES-PRS-D - 3IN. BRASS MASTER VALVE
C	RAIN BIRD ESPLXIVM - 2-WIRE CONTROLLER
SP	RAIN BIRD LSP-1TURF - LINE SURGE PROTECTION
RS	RAIN BIRD RSD-BEX - RAIN SENSOR
FS	RAIN BIRD FS-400-P - 4IN. FLOW SENSOR
BP	BOOSTER PUMP
	IRRIGATION LATERAL LINE: POLYETHYLENE PIPE SDR-7
	IRRIGATION LATERAL LINE: PVC CLASS 200 SDR 21
	IRRIGATION MAINLINE: POLYETHYLENE PIPE SDR-7
	IRRIGATION MAINLINE: PVC CLASS 200 SDR 21
	PIPE SLEEVE: PVC SCHEDULE 40

NOTES

1. REFER TO SHEET C3.01, GRADING AND DRAINAGE PLAN OVERALL, FOR GENERAL NOTES.
2. REFER TO SHEET I1.01, IRRIGATION PLAN OVERALL, FOR IRRIGATION NOTES

KEYMAP
1"=400'



MN

C

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New Rosemount Middle School

Rosemount, Minnesota 55088

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LIC. NO. 26678 DATE 07/31/2024

Revisions		
Description	Date	Num

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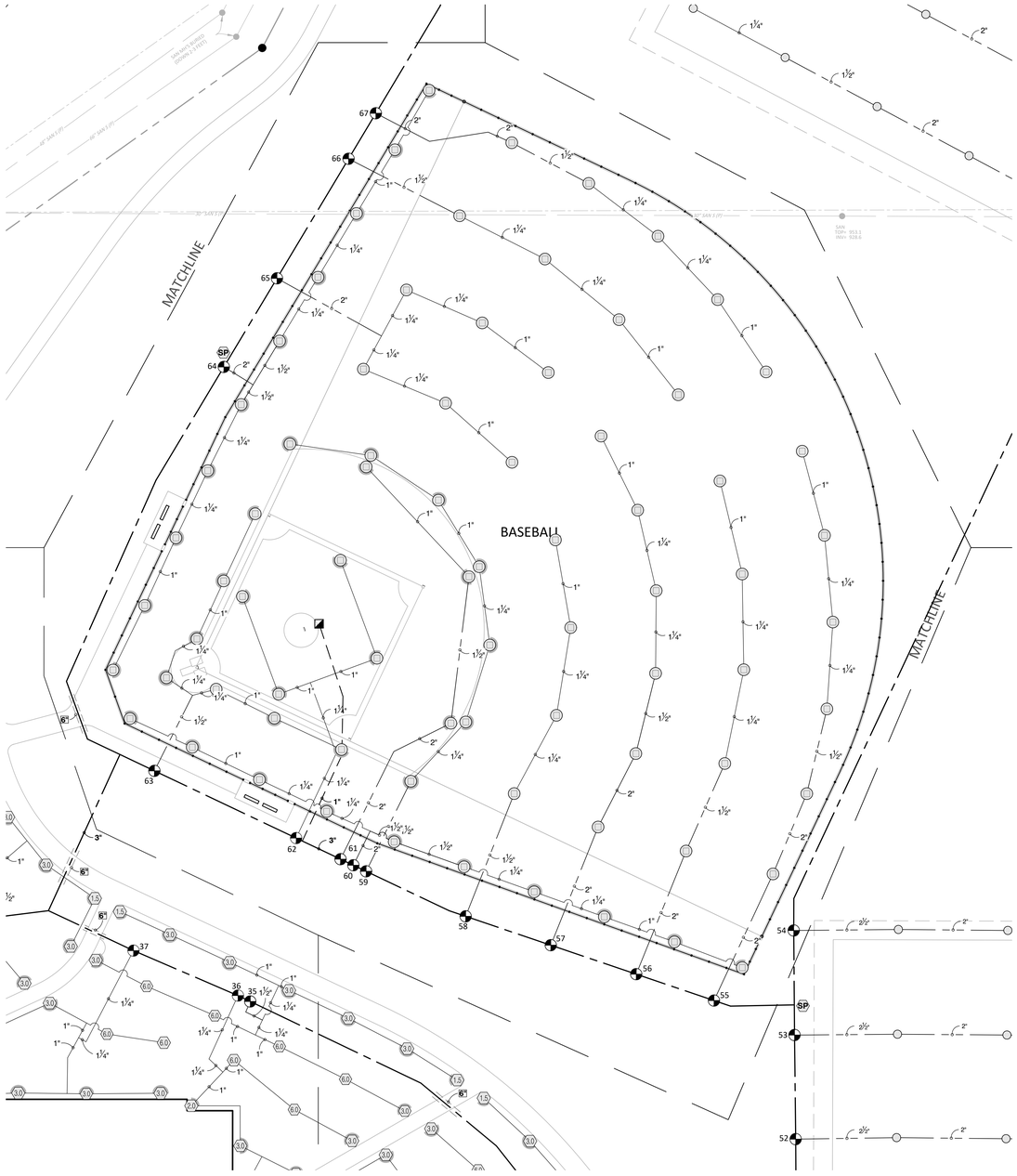
North

IRRIGATION PLAN NORTHWEST

Scale: 1" = 30'

I1.06



LEGEND

G T H TD F	RAIN BIRD 1806 - TURF SPRAY SPRINKLER 6.0IN.
G T H TD F	RAIN BIRD 1812 - SHRUB SPRAY SPRINKLER 12IN.
0000 0000 0000	HUNTER MP2000, MP3000, OR MP3500 - TURF ROTATOR SPRINKLER 6IN.
0000 0000 0000	HUNTER MP2000, MP3000, OR MP3500 - SHRUB ROTATOR SPRINKLER 12IN.
1.0 2.0 3.0 4.0 5.0 6.0	RAIN BIRD 5006-PC - TURF ROTOR SPRINKLER 6IN.
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	IRRIGATION LATERAL LINE: POLYETHYLENE PIPE SDR-7
	IRRIGATION LATERAL LINE: PVC CLASS 200 SDR 21
	IRRIGATION MAINLINE: POLYETHYLENE PIPE SDR-7
	IRRIGATION MAINLINE: PVC CLASS 200 SDR 21
	PIPE SLEEVE: PVC SCHEDULE 40

NOTES

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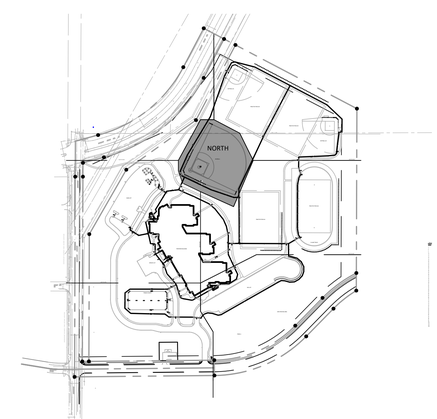

KEYMAP
1"=400'

HORZ. 0 30 60
SCALE FEET

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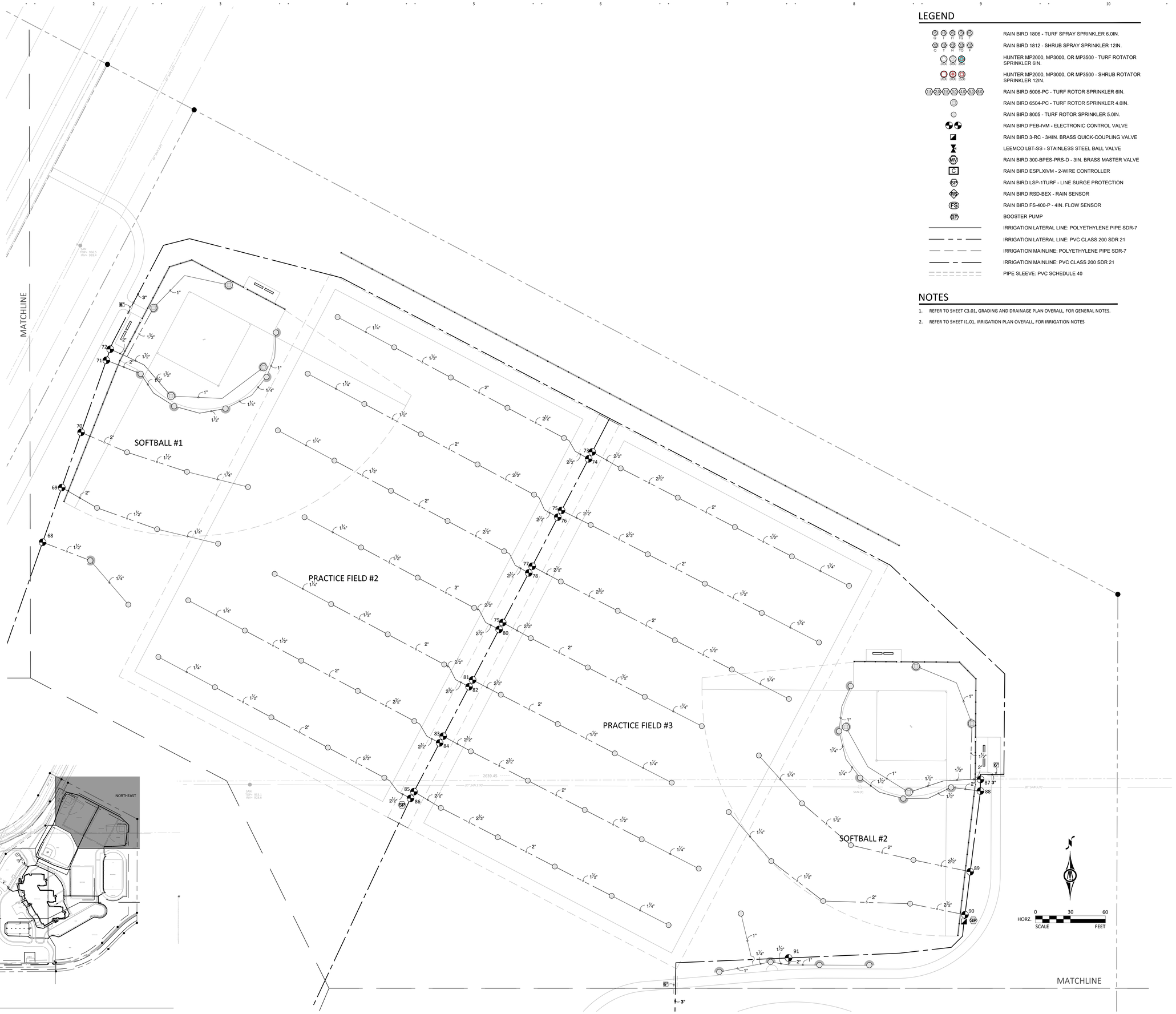
North

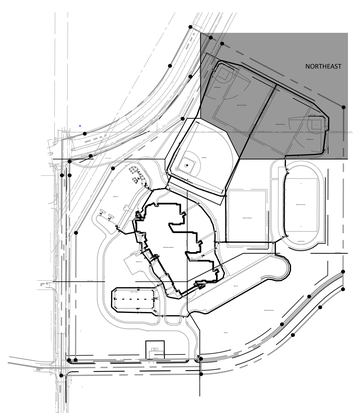
IRRIGATION PLAN
NORTH

Scale: 1" = 30'

I1.07

MN





KEYMAP
1"=400'

C

LEGEND

G J H T2 F	RAIN BIRD 1806 - TURF SPRAY SPRINKLER 6.0IN.
G J H T2 F	RAIN BIRD 1812 - SHRUB SPRAY SPRINKLER 12IN.
2000 3000 3500	HUNTER MP2000, MP3000, OR MP3500 - TURF ROTATOR SPRINKLER 6IN.
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	RAIN BIRD 6504-PC - TURF ROTOR SPRINKLER 4.0IN.
	RAIN BIRD 8005 - TURF ROTOR SPRINKLER 5.0IN.
	RAIN BIRD PEB-IVM - ELECTRONIC CONTROL VALVE
	RAIN BIRD 3-RC - 3/4IN. BRASS QUICK-COUPLING VALVE
	LEEMCO LBT-SS - STAINLESS STEEL BALL VALVE
MV	RAIN BIRD 300-BPES-PRS-D - 3IN. BRASS MASTER VALVE
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BP	BOOSTER PUMP
	IRRIGATION LATERAL LINE: POLYETHYLENE PIPE SDR-7
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	PIPE SLEEVE: PVC SCHEDULE 40

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North

IRRIGATION PLAN
NORTHEAST

Scale: 1" = 30'

I1.08

CITY SUBMITTAL - NOT FOR CONSTRUCTION

IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	PSI		
Q T H TQ F	RAIN BIRD 1806-SAM-PRS 15 SERIES MPR TURF SPRAY 6.0IN. POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL. 1/2IN. NPT FEMALE THREADED INLET. WITH SEAL-A-MATIC CHECK VALVE, AND PRESSURE REGULATING.	194	30		
Q T H TQ F	RAIN BIRD 1812-SAM-PRS 12 SERIES MPR SHRUB SPRAY 12IN. POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL. 1/2IN. NPT FEMALE THREADED INLET. WITH SEAL-A-MATIC CHECK VALVE, AND PRESSURE REGULATING DEVICE.	16	30		
Q T H TQ F	RAIN BIRD 1812-SAM-PRS 15 SERIES MPR SHRUB SPRAY 12IN. POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL. 1/2IN. NPT FEMALE THREADED INLET. WITH SEAL-A-MATIC CHECK VALVE, AND PRESSURE REGULATING DEVICE.	88	30		
2000	HUNTER MP2000 PROS-06-PRS30-CV TURF ROTATOR, 6IN. POP-UP WITH FACTORY INSTALLED CHECK VALVE, PRESSURE REGULATED TO 30 PSI, MP ROTATOR NOZZLE ON PRS30 BODY. K=BLACK ADJ ARC 90-210, G=GREEN ADJ ARC 210-270, R=RED 360 ARC.	6	30		
3000	HUNTER MP3000 PROS-06-PRS30-CV TURF ROTATOR, 6IN. POP-UP WITH FACTORY INSTALLED CHECK VALVE, PRESSURE REGULATED TO 30 PSI, MP ROTATOR NOZZLE ON PRS30 BODY. B=BLUE ADJ ARC 90-210, Y=YELLOW ADJ ARC 210-270, A=GRAY 360 ARC.	48	30		
3500	HUNTER MP3500 PROS-06-PRS30-CV TURF ROTATOR, 6IN. POP-UP WITH FACTORY INSTALLED CHECK VALVE, PRESSURE REGULATED TO 30 PSI, MP ROTATOR NOZZLE ON PRS30 BODY. LB=LIGHT BROWN ADJUSTABLE ARC, 90-210.	21	30		
2000	HUNTER MP2000 PROS-12-PRS30-CV SHRUB ROTATOR, 12IN. POP-UP WITH FACTORY INSTALLED CHECK VALVE, PRESSURE REGULATED TO 30 PSI, MP ROTATOR NOZZLE ON PRS30 BODY. K=BLACK ADJ ARC 90-210, G=GREEN ADJ ARC 210-270, R=RED 360 ARC.	3	30		
3000	HUNTER MP3000 PROS-12-PRS30-CV SHRUB ROTATOR, 12IN. POP-UP WITH FACTORY INSTALLED CHECK VALVE, PRESSURE REGULATED TO 30 PSI, MP ROTATOR NOZZLE ON PRS30 BODY. B=BLUE ADJ ARC 90-210, Y=YELLOW ADJ ARC 210-270, A=GRAY 360 ARC.	16	30		
3500	HUNTER MP3500 PROS-12-PRS30-CV SHRUB ROTATOR, 12IN. POP-UP WITH FACTORY INSTALLED CHECK VALVE, PRESSURE REGULATED TO 30 PSI, MP ROTATOR NOZZLE ON PRS30 BODY. LB=LIGHT BROWN ADJUSTABLE ARC, 90-210.	2	30		

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	PSI	GPM	RADIUS
1.5	RAIN BIRD 5006-PC 1.5 TURF ROTOR, 6IN. POP-UP, PLASTIC RISER. ADJUSTABLE TO FULL CIRCLE. STANDARD ANGLE NOZZLE.	36	25	1.12	30'
2.0	RAIN BIRD 5006-PC 2.0 TURF ROTOR, 6IN. POP-UP, PLASTIC RISER. ADJUSTABLE TO FULL CIRCLE. STANDARD ANGLE NOZZLE.	19	25	1.5	32'
2.5	RAIN BIRD 5006-PC 2.5 TURF ROTOR, 6IN. POP-UP, PLASTIC RISER. ADJUSTABLE TO FULL CIRCLE. STANDARD ANGLE NOZZLE.	2	25	1.81	32'
3.0	RAIN BIRD 5006-PC 3.0 TURF ROTOR, 6IN. POP-UP, PLASTIC RISER. ADJUSTABLE TO FULL CIRCLE. STANDARD ANGLE NOZZLE.	83	25	2.26	32'
4.0	RAIN BIRD 5006-PC 4.0 TURF ROTOR, 6IN. POP-UP, PLASTIC RISER. ADJUSTABLE TO FULL CIRCLE. STANDARD ANGLE NOZZLE.	3	25	2.91	32'
5.0	RAIN BIRD 5006-PC 5.0 TURF ROTOR, 6IN. POP-UP, PLASTIC RISER. ADJUSTABLE TO FULL CIRCLE. STANDARD ANGLE NOZZLE.	1	25	3.72	33'
6.0	RAIN BIRD 5006-PC 6.0 TURF ROTOR, 6IN. POP-UP, PLASTIC RISER. ADJUSTABLE TO FULL CIRCLE. STANDARD ANGLE NOZZLE.	55	25	4.25	33'
01	RAIN BIRD 6504-PC, FC 06 TURF ROTOR, 4.0IN. POP-UP, PLASTIC RISER, ADJUSTABLE AND FULL CIRCLE. WITH REMOVABLE SEAL-A-MATIC CHECK VALVE, 1IN. FEMALE THREADED INLET.	4	30	4.2	39'
01	RAIN BIRD 6504-PC, FC (2) 04 TURF ROTOR, 4.0IN. POP-UP, PLASTIC RISER, ADJUSTABLE AND FULL CIRCLE. WITH REMOVABLE SEAL-A-MATIC CHECK VALVE, 1IN. FEMALE THREADED INLET.	20	50	3.7	37'
01	RAIN BIRD 6504-PC, FC (2) 06 TURF ROTOR, 4.0IN. POP-UP, PLASTIC RISER, ADJUSTABLE AND FULL CIRCLE. WITH REMOVABLE SEAL-A-MATIC CHECK VALVE, 1IN. FEMALE THREADED INLET.	38	50	5.5	44'
01	RAIN BIRD 6504-PC, FC (2) 08 TURF ROTOR, 4.0IN. POP-UP, PLASTIC RISER, ADJUSTABLE AND FULL CIRCLE. WITH REMOVABLE SEAL-A-MATIC CHECK VALVE, 1IN. FEMALE THREADED INLET.	37	50	7.4	46'
01	RAIN BIRD 6504-PC, FC (2) 10 TURF ROTOR, 4.0IN. POP-UP, PLASTIC RISER, ADJUSTABLE AND FULL CIRCLE. WITH REMOVABLE SEAL-A-MATIC CHECK VALVE, 1IN. FEMALE THREADED INLET.	59	50	9.1	48'
01	RAIN BIRD 6504-PC, FC (2) 12 TURF ROTOR, 4.0IN. POP-UP, PLASTIC RISER, ADJUSTABLE AND FULL CIRCLE. WITH REMOVABLE SEAL-A-MATIC CHECK VALVE, 1IN. FEMALE THREADED INLET.	6	50	11	50'
01	RAIN BIRD 6504-PC, FC (2) 14 TURF ROTOR, 4.0IN. POP-UP, PLASTIC RISER, ADJUSTABLE AND FULL CIRCLE. WITH REMOVABLE SEAL-A-MATIC CHECK VALVE, 1IN. FEMALE THREADED INLET.	11	50	12.7	53'
	RAIN BIRD 8005 06 TURF ROTOR, 5.0IN. POP-UP, PLASTIC RISER, STANDARD NOZZLE. WITH SEAL-A-MATIC CHECK VALVE, ADJUSTABLE 50-330 ARC, AND 360 NON-REVERSING FULL-CIRCLE. 1IN. (26/34) NPT FEMALE THREADED INLET. EXTENDED RADIUS IS IDEAL FOR LARGE TURF APPLICATIONS.	4	60	6.1	41'
	RAIN BIRD 8005 08 TURF ROTOR, 5.0IN. POP-UP, PLASTIC RISER, STANDARD NOZZLE. WITH SEAL-A-MATIC CHECK VALVE, ADJUSTABLE 50-330 ARC, AND 360 NON-REVERSING FULL-CIRCLE. 1IN. (26/34) NPT FEMALE THREADED INLET. EXTENDED RADIUS IS IDEAL FOR LARGE TURF APPLICATIONS.	10	60	8.4	44'
	RAIN BIRD 8005 10 TURF ROTOR, 5.0IN. POP-UP, PLASTIC RISER, STANDARD NOZZLE. WITH SEAL-A-MATIC CHECK VALVE, ADJUSTABLE 50-330 ARC, AND 360 NON-REVERSING FULL-CIRCLE. 1IN. (26/34) NPT FEMALE THREADED INLET. EXTENDED RADIUS IS IDEAL FOR LARGE TURF APPLICATIONS.	1	60	10.1	48'
	RAIN BIRD 8005 12 TURF ROTOR, 5.0IN. POP-UP, PLASTIC RISER, STANDARD NOZZLE. WITH SEAL-A-MATIC CHECK VALVE, ADJUSTABLE 50-330 ARC, AND 360 NON-REVERSING FULL-CIRCLE. 1IN. (26/34) NPT FEMALE THREADED INLET. EXTENDED RADIUS IS IDEAL FOR LARGE TURF APPLICATIONS.	1	60	12	53'
	RAIN BIRD 8005 14 TURF ROTOR, 5.0IN. POP-UP, PLASTIC RISER, STANDARD NOZZLE. WITH SEAL-A-MATIC CHECK VALVE, ADJUSTABLE 50-330 ARC, AND 360 NON-REVERSING FULL-CIRCLE. 1IN. (26/34) NPT FEMALE THREADED INLET. EXTENDED RADIUS IS IDEAL FOR LARGE TURF APPLICATIONS.	109	60	14.3	55'

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	PSI		
	RAIN BIRD PEB-IVM 1-1/2" 1-1/2IN. PLASTIC INDUSTRIAL SMART VALVES W/ FACTORY INSTALLED IVM-SOL. LOW FLOW OPERATING CAPABILITY, GLOBE CONFIGURATION.	68			
	RAIN BIRD PEB-IVM 1" 1IN. PLASTIC INDUSTRIAL SMART VALVES W/ FACTORY INSTALLED IVM-SOL. LOW FLOW OPERATING CAPABILITY, GLOBE CONFIGURATION.	13			
	RAIN BIRD PEB-IVM 2" 2IN. PLASTIC INDUSTRIAL SMART VALVES W/ FACTORY INSTALLED IVM-SOL. LOW FLOW OPERATING CAPABILITY, GLOBE CONFIGURATION.	25			
	RAIN BIRD 3-RC 3/4" 3/4IN. BRASS QUICK-COUPLING VALVE, WITH CORROSION-RESISTANT STAINLESS STEEL SPRING, THERMOPLASTIC RUBBER COVER, AND 1-PIECE BODY.	8			
	LEEMCO LBT-SS 3IN.-4IN. (FPT X FPT) STAINLESS STEEL BALL VALVE	6			
MV	RAIN BIRD 300-BPES-PRS-D GLOBE W/ RAIN BIRD FD-101 3" 3IN. BRASS MASTER VALVE, WITH GLOBE CONFIGURATION, AND PRESSURE REGULATOR MODULE. WITH A PATENTED NYLON SCRUBBER THAT SCRAPES A STAINLESS STEEL SCREEN TO PREVENT DEBRIS BUILD-UP AND CLOGGING.	1			
C	RAIN BIRD ESPLXIVMP-LXMM 240 STATION, 2-WIRE CONTROLLER W/ SMART VALVE TECHNOLOGY. (1) ESPLXIVMP 240-STATION, INDOOR/OUTDOOR, INSTALLED IN LXMM POWDER COATED, METAL WALL-MOUNTED CABINET. SYSTEM REQUIREMENTS: RAIN BIRD LXIVM-XXX INTEGRATED VALVE MODULES & 2-WIRE DEVICES. USE PAIGE ELECTRIC CABLE P7072D. GROUND SYSTEM W/ (11) LXIVMSD SURGE DEVICES IN ROUND VALVE BOXES. INSTALL PER MANUFACTURERS RECOMMENDATIONS.	1			
SP	RAIN BIRD LXIVMSD SURGE DEVICE PROVIDES NECESSARY PROTECTION ON THE ESPLXIVM(P) CONTROLLER, 2 WIRE PATH. INSTALL (1) LXIVMSD EVERY 500FT OR 15 FIELD DEVICES (WHICHEVER IS SMALLER).	11			
RS	RAIN BIRD WR2-RFC WIRELESS RAIN AND FREEZE SENSOR COMBO, INCLUDES 1 RECEIVER AND 1 RAIN/FREEZE SENSOR TRANSMITTER.	1			
FS	RAIN BIRD FS-400-P 4IN. FLOW SENSOR, PLASTIC PVC MODEL. SUGGESTED OPERATING RANGE 40.0 GPM TO 500.0 GPM. SIZE FOR FLOW NOT ACCORDING TO PIPE SIZE.	1			
BP	WATERTRONICS WATERMAX 5000 SINGLE PUMP CENTRIFUGAL SELF-ENCLOSED VFD PUMP STATION, 15HP, FLOWS UP TO 200 GPM, PRESSURES UP TO 100 PSI. UL LISTED PACKAGED PUMP STATION, PRESSURE DROP, FLOW BASED AND 24 VAC REMOTE START RELAY STARTING OPTIONS, FLOW SENSOR, TEMP VOLUTE SENSOR	1			
POC	POINT OF CONNECTION 4"	1			
	IRRIGATION LATERAL LINE: POLYETHYLENE PIPE SDR-7 1"	14,608 L.F.			
	IRRIGATION LATERAL LINE: POLYETHYLENE PIPE SDR-7 1 1/4"	5,162 L.F.			
	IRRIGATION LATERAL LINE: PVC CLASS 200 SDR 21 1 1/2"	4,188 L.F.			
	IRRIGATION LATERAL LINE: PVC CLASS 200 SDR 21 2"	3,623 L.F.			
	IRRIGATION LATERAL LINE: PVC CLASS 200 SDR 21 2 1/2"	1,414 L.F.			
	IRRIGATION MAINLINE: POLYETHYLENE PIPE SDR-7 1"	136.9 L.F.			
	IRRIGATION MAINLINE: PVC CLASS 200 SDR 21 1 1/2"	12.9 L.F.			
	IRRIGATION MAINLINE: PVC CLASS 200 SDR 21 2"	13.1 L.F.			
	IRRIGATION MAINLINE: PVC CLASS 200 SDR 21 2 1/2"	60.1 L.F.			
	IRRIGATION MAINLINE: PVC CLASS 200 SDR 21 3"	8,858 L.F.			
	IRRIGATION MAINLINE: PVC CLASS 200 SDR 21 4"	153.7 L.F.			
	PIPE SLEEVE: PVC SCHEDULE 40 2"	152.5 L.F.			
	PIPE SLEEVE: PVC SCHEDULE 40 2 1/2"	27.9 L.F.			
	PIPE SLEEVE: PVC SCHEDULE 40 6"	831.0 L.F.			
	PIPE SLEEVE: PVC SCHEDULE 40 8"	11.6 L.F.			

VALVE SCHEDULE

NUMBER	MODEL	SIZE	TYPE	GPM	PSI	PSI @ POC	PRECIP
1	RAIN BIRD PEB-IVM	1-1/2"	SHRUB SPRAY	31.44	35.5	43.8	1.82 in/h
2	RAIN BIRD PEB-IVM	1"	SHRUB SPRAY	16.48	37.4	45.7	1.93 in/h
3	RAIN BIRD PEB-IVM	1-1/2"	TURF ROTOR	40.2	30.6	38.7	0.48 in/h
4	RAIN BIRD PEB-IVM	1-1/2"	TURF SPRAY	36.07	36.3	44.2	0.99 in/h
5	RAIN BIRD PEB-IVM	1"	TURF SPRAY	13.56	34.4	38.9	0.97 in/h
6	RAIN BIRD PEB-IVM	1"	TURF SPRAY	9.55	32.4	38.6	0.92 in/h
7	RAIN BIRD PEB-IVM	1"	TURF ROTARY	9.95	32.6	40.3	0.51 in/h
8	RAIN BIRD PEB-IVM	1-1/2"	TURF ROTOR	31.68	32.4	40.6	0.41 in/h
9	RAIN BIRD PEB-IVM	1-1/2"	TURF ROTOR	42.42	31.0	40.1	0.44 in/h
10	RAIN BIRD PEB-IVM	1"	TURF ROTOR	11.98	29.7	39.7	0.39 in/h
11	RAIN BIRD PEB-IVM	1-1/2"	TURF SPRAY	41.63	39.5	47.4	1.0 in/h
12	RAIN BIRD PEB-IVM	1"	TURF ROTARY	18.1	35.9	45.3	0.28 in/h
13	RAIN BIRD PEB-IVM	1-1/2"	TURF SPRAY	37	39.4	51.6	0.98 in/h
14	RAIN BIRD PEB-IVM	1-1/2"	TURF ROTOR	44.3	56.3	69.1	0.54 in/h
15	RAIN BIRD PEB-IVM	1-1/2"	TURF ROTOR	44	66.7	82.2	0.63 in/h
16	RAIN BIRD PEB-IVM	1-1/2"	TURF ROTOR	45.5	56.2	71.9	0.46 in/h
17	RAIN BIRD PEB-IVM	1-1/2"	TURF ROTOR	38.5	57.0	72.7	0.64 in/h
18	RAIN BIRD PEB-IVM	1"	TURF ROTARY	18.1	36.4	53.0	0.45 in/h
19	RAIN BIRD PEB-IVM	1-1/2"	TURF SPRAY	27.75	39.2	56.5	0.92 in/h
20	RAIN BIRD PEB-IVM	1-1/2"	TURF SPRAY	33.84	36.5	53.8	0.78 in/h
21	RAIN BIRD PEB-IVM	1-1/2"	TURF SPRAY	35.15	36.4	53.5	0.96 in/h
22	RAIN BIRD PEB-IVM	1-1/2"	TURF SPRAY	30.04	37.0	53.1	0.82 in/h
23	RAIN BIRD PEB-IVM	1-1/2"	TURF SPRAY	33.3	36.1	52.0	0.91 in/h
24	RAIN BIRD PEB-IVM	1"	SHRUB SPRAY	16.01	33.3	44.2	1.44 in/h
25	RAIN BIRD PEB-IVM	1-1/2"	TURF SPRAY	24.04	34.7	45.9	1.46 in/h
26	RAIN BIRD PEB-IVM	1"	TURF ROTOR	14.89	29.7	41.2	0.45 in/h
27	RAIN BIRD PEB-IVM	1-1/2"	TURF ROTOR	27.56	30.6	42.1	0.4 in/h
28	RAIN BIRD PEB-IVM	1-1/2"	TURF ROTARY	18.48	37.4	48.9	0.33 in/h
29	RAIN BIRD PEB-IVM	1-1/2"	TURF ROTOR	22.04	32.4	43.7	0.47 in/h
30	RAIN BIRD PEB-IVM	1-1/2"	TURF ROTOR	19.78	30.0	41.3	0.43 in/h
31	RAIN BIRD PEB-IVM	1-1/2"	TURF ROTOR	39.31	30.9	41.7	0.37 in/h
32	RAIN BIRD PEB-IVM	1-1/2"	TURF ROTOR	42.22	31.6	42.4	0.42 in/h
33	RAIN BIRD PEB-IVM	1-1/2"	TURF ROTOR	31.41	32.2	43.0	0.39 in/h
34	RAIN BIRD PEB-IVM	1-1/2"	TURF ROTARY	34.24	43.2	54.2	0.39 in/h
35	RAIN BIRD PEB-IVM	1-1/2"	TURF ROTOR	35.06	30.6	42.2	0.41 in/h
36	RAIN BIRD PEB-IVM	1"	TURF ROTOR	17.9	31.0	42.6	0.52 in/h
37	RAIN BIRD PEB-IVM	1"	TURF ROTOR	20.92	31.6	43.1	0.44 in/h
38	RAIN BIRD PEB-IVM	1-1/2"	TURF ROTOR	33.94	30.3	41.6	0.4 in/h
39	RAIN BIRD PEB-IVM	1-1/2"	TURF ROTOR	34.21	32.1	43.3	0.44 in/h
40	RAIN BIRD PEB-IVM	1-1/2"	TURF ROTOR	40.7	30.1	40.9	0.48 in/h
41	RAIN BIRD PEB-IVM	1-1/2"	SHRUB SPRAY	22.18	34.9	45.0	1.32 in/h
42	RAIN BIRD PEB-IVM	1-1/2"	TURF SPRAY	36.07	37.7	44.3	0.97 in/h
43	RAIN BIRD PEB-IVM	1-1/2"	SHRUB SPRAY	28.33	34.7	40.9	1.5 in/h
44	RAIN BIRD PEB-IVM	1"	TURF ROTARY	7.88	32.1	38.1	0.47 in/h
45	RAIN BIRD PEB-IVM	1-1/2"	SHRUB SPRAY	24.97	37.0	48.7	1.11 in/h
46	RAIN BIRD PEB-IVM	1-1/2"	SHRUB SPRAY	25.28	37.2	49.1	1.12 in/h
47	RAIN BIRD PEB-IVM	1-1/2"	SHRUB ROTARY	27.37	37.4	49.3	0.58 in/h
48	RAIN BIRD PEB-IVM	2"	TURF ROTOR	57.2	67.2	79.1	0.43 in/h
49	RAIN BIRD PEB-IVM	2"	TURF ROTOR	57.2	67.2	79.5	0.44 in/h
50	RAIN BIRD PEB-IVM	2"	TURF ROTOR	57.2	67.2	79.6	0.44 in/h
51	RAIN BIRD PEB-IVM	2"	TURF ROTOR	57.2	67.2	79.3	0.44 in/h
52	RAIN BIRD PEB-IVM	2"	TURF ROTOR	57.2	67.2	79.1	0.44 in/h
53	RAIN BIRD PEB-IVM	2"	TURF ROTOR	57.2	67.2	79.4	0.44 in/h
54	RAIN BIRD PEB-IVM	2"	TURF ROTOR	57.2	67.2	79.8	0.43 in/h
55	RAIN BIRD PEB-IVM	1-1/2"	TURF ROTOR	44.4	58.9	71.4	0.37 in/h
56	RAIN BIRD PEB-IVM	1-1/2"	TURF ROTOR	37	58.6	71.2	0.31 in/h
57	RAIN BIRD PEB-IVM	1-1/2"	TURF ROTOR	44.4	58.6	71.4	0.34 in/h
58	RAIN BIRD PEB-IVM	1-1/2"	TURF ROTOR	29.6	58.1	71.0	0.32 in/h
59	RAIN BIRD PEB-IVM	1-1/2"	TURF ROTOR	25.9	59.9	72.8	0.42 in/h
60	RAIN BIRD PEB-IVM	2"	TURF ROTOR	51.4	57.9	70.8	0.82 in/h
61	RAIN BIRD PEB-IVM	1-1/2"	TURF ROTOR	38.1	59.4	72.4	1.49 in/h
62	RAIN BIRD PEB-IVM	1"	TURF ROTOR	16.8	36.9	49.9	0.54 in/h
63	RAIN BIRD PEB-IVM	1-1/2"	TURF ROTOR	34.9	57.2	69.6	0.79 in/h
64	RAIN BIRD PEB-IVM	2"	TURF ROTOR	51.4	57.4	71.7	0.82 in/h
65	RAIN BIRD PEB-IVM	1-1/2"	TURF ROTOR	44.4	56.8	71.6	0.32 in/h
66	RAIN BIRD PEB-IVM	1-1/2"	TURF ROTOR	29.6	58.3	73.7	0.31 in/h
67	RAIN BIRD PEB-IVM	1-1/2"	TURF ROTOR	37	58.2	73.9	0.37 in/h
68	RAIN BIRD PEB-IVM	1-1/2"	TURF ROTOR	24.4	65.1	82.1	0.6 in/h
69	RAIN BIRD PEB-IVM	1-1/2"	TURF ROTOR	42.9	65.8	83.2	0.45 in/h
70	RAIN BIRD PEB-IVM	1-1/2"	TURF ROTOR	42.9	65.8	83.7	0.45 in/h
71	RAIN BIRD PEB-IVM	1-1/2"	TURF ROTOR	42	67.3	85.7	1.07 in/h
72	RAIN BIRD PEB-IVM	1-1/2"	TURF ROTOR	50.8	60.0	78.5	1.1 in/h
73	RAIN BIRD PEB-IVM	2"	TURF ROTOR	71.5	67.9	85.9	0.46 in/h
74	RAIN BIRD PEB-IVM	2"	TURF ROTOR	71.5	67.9	85.9	0.46 in/h
75	RAIN BIRD PEB-IVM	2"	TURF ROTOR	71.5	67.9	85.6	0.46 in/h
76	RAIN BIRD PEB-IVM	2"	TURF ROTOR	71.5	67.9	85.6	0.46 in/h
77	RAIN BIRD PEB-IVM	2"	TURF ROTOR	71.5	67.9	85.2	0.46 in/h
78	RAIN BIRD PEB-IVM	2"	TURF ROTOR	71.5	67.9	85.2	0.46 in/h
79	RAIN BIRD PEB-IVM	2"	TURF ROTOR	57.2	67.4	84.4	0.46 in/h
80	RAIN BIRD PEB-IVM	2"	TURF ROTOR	57.2	67.5	84.3	0.46 in/h
81	RAIN BIRD PEB-IVM	2"	TURF ROTOR	57.2	67.4	84.0	0.46 in/h
82	RAIN BIRD PEB-IVM	2"	TURF ROTOR	57.2	67.5	83.9	0.46 in/h
83	RAIN BIRD PEB-IVM	2"	TURF ROTOR	71.5	67.8	83.9	0.46 in/h
84	RAIN BIRD PEB-IVM	2"	TURF ROTOR	71.5	67.9	83.9	0.46 in/h
85	RAIN BIRD PEB-IVM	2"	TURF ROTOR	71.5	67.8	83.5	0.46 in/h
86	RAIN BIRD PEB-IVM	2"	TURF ROTOR	71.5	67.9	83.5	0.46 in/h
87	RAIN BIRD PEB-IVM	1-1/2"	TURF ROTOR	50.8	58.5	79.7	0.97 in/h
88	RAIN BIRD PEB-IVM	1-1/2"	TURF ROTOR	42	67.2	88.5	1.0 in/h
89	RAIN BIRD PEB-IVM	2"	TURF ROTOR	57.2	67.0	88.4	0.48 in/h
90	RAIN BIRD PEB-IVM	2"	TURF ROTOR	57.2	67.3	88.3	0.58 in/h
91	RAIN BIRD PEB-IVM	1-1/2"	TURF ROTOR	36.4	66.1	85.8	0.63 in/h
92	RAIN BIRD PEB-IVM	1-1/2"	TURF ROTOR	45.5	57.5	72.5	0.89 in/h
93	RAIN BIRD PEB-IVM	1-1/2"	TURF ROTOR	36.4	58.8	73.9	0.78 in/h
94	RAIN BIRD PEB-IVM	1-1/2"	TURF ROTOR	33	58.4	73.5	0.41 in/h
95	RAIN BIRD PEB-IVM	1-1/2"	TURF ROTOR	36.4	56.9	72.4	0.38 in/h
96	RAIN BIRD PEB-IVM	1-1/2"	TURF ROTOR	36.4	55.5	71.3	0.78 in/h
97	RAIN BIRD PEB-IVM	1-1/2"	TURF ROTOR	36.4	56.9	72.7	0.39 in/h
98	RAIN BIRD PEB-IVM	1-1/2"	TURF ROTOR	36.4	56.9	73.1	0.39 in/h
99	RAIN BIRD PEB-IVM	1-1/2"	TURF ROTOR	36.4	56.9	73.4	0.39 in/h
100	RAIN BIRD PEB-IVM	1-1/2"	TURF ROTOR	36.4	56.9	73.8	0.39 in/h
101	RAIN BIRD PEB-IVM	1-1/2"	TURF ROTOR	36.4	56.9	74.1	0.39 in/h
102	RAIN BIRD PEB-IVM	1-1/2"	TURF ROTOR	36.4	55.5	72.7	0.78 in/h
103	RAIN BIRD PEB-IVM	1-1/2"	TURF ROTOR	36.4	56.9	74.5	0.38 in/h
104	RAIN BIRD PEB-IVM	1-1/2"	TURF ROTOR	33	58.3	76.3	0.42 in/h
105	RAIN BIRD PEB-IVM	1-1/2"	TURF ROTOR	36.4	58.8	76.9	0.78 in/h
106	RAIN BIRD PEB-IVM	1-1/2"	TURF ROTOR	45.5	57.6	75.6	0.89 in/h

MN

C

New Rosemount Middle School

Rosemount, Minnesota 55088

Independent School District #196
3455 153RD STREET WEST
ROSEMOUNT, MINNESOTA 55068

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RICHARD W. KOECHLEIN
LIC. NO. 26678 DATE 07/31/2024

Revisions		
Description	Date	Num

Comm: 232086
Date: 07/31/2024
Drawn: RWK
Check: RWK
North

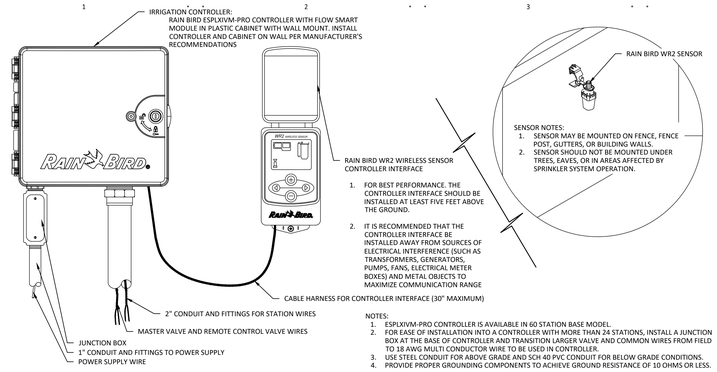
IRRIGATION SCHEDULES

Scale:

I1.09

CITY SUBMITTAL - NOT FOR CONSTRUCTION

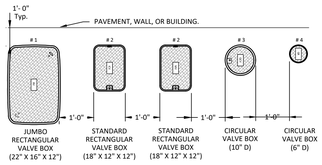
MN



NOTES:
1. ESPLXIVM-PRO CONTROLLER IS AVAILABLE IN 60 STATION BASE MODEL.
2. FOR EASE OF INSTALLATION INTO A CONTROLLER WITH MORE THAN 24 STATIONS, INSTALL A JUNCTION BOX AT THE BASE OF CONTROLLER AND TRANSITION LARGER VALVE AND COMMON WIRES FROM FIELD TO 18 AWG MULTI CONDUCTOR WIRE TO BE USED IN CONTROLLER.
3. USE STEEL CONDUIT FOR ABOVE GRADE AND SCH 40 PVC CONDUIT FOR BELOW GRADE CONDITIONS.
4. PROVIDE PROPER GROUNDING COMPONENTS TO ACHIEVE GROUND RESISTANCE OF 10 OHMS OR LESS.

1 / I1.10 WALL MOUNT IRRIGATION CONTROLLER WITH RAIN SENSOR

NOT TO SCALE



EXAMPLE

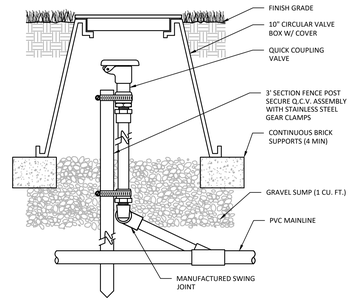
POTABLE WATER SYSTEM ON CONTROLLER 'A', REMOTE CONTROL VALVE STATION # 3.

NOTES:
1. VALVE BOX # 1 THRU # 3 SHALL HAVE STAINLESS STEEL LOCKING HARDWARE.
2. VALVE BOXES SHALL BE LABELED BY HOT IRON BRANDING OR ALUMINUM ASPHALTIC BASE WATER PROOF PAINT.
3. LOCATE VALVE ASSEMBLIES IN PLANTING AREA WHEN POSSIBLE.
4. VALVE LOCATIONS SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.
5. VALVE BOXES SHALL BE CENTERED ABOVE VALVE ASSEMBLIES TO FACILITATE ACCESS AND MAINTENANCE.
6. VALVE BOXES SHALL BE FLUSH WITH FINISHED GRADE.
7. VALVE BOXES SHALL BE SET PARALLEL TO EACH OTHER AND PERPENDICULAR TO THE EDGE OF PAVEMENT.
8. SEE OTHER IRRIGATION DETAILS FOR FURTHER INFORMATION.

Water type	Controller	Designation	Box size	Lid Color	Identification Guide
PW	A	MV	# 2	Green	Master valve
PW	A	FS	# 2	Green	Flow sensor
PW	A	HM	# 2	Green	Hydrometer
PW	A	BV	# 2	Green	Ball valve 3" or less
PW	A	BV	# 1	Green	Ball valve 4" or more
PW	A	IV	# 2	Green	Isolation Valve
PW	A	ARV	# 2	Green	Air release valve
PW	A	QCV	# 3	Green	Quick coupler valve
PW	A	RCV	# 2	Green	Remote control valve
PW	A	MS	# 2	Green	Moisture sensor
PW	A	GR	# 4	Green	Grounding rod
PW	A	SB	# 3	Green	Splice box
PW	A	FC	# 3	Green	Future connection

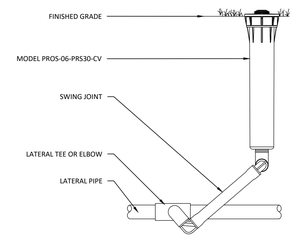
7 / I1.10 SERVICE BOX REQUIREMENTS

NOT TO SCALE



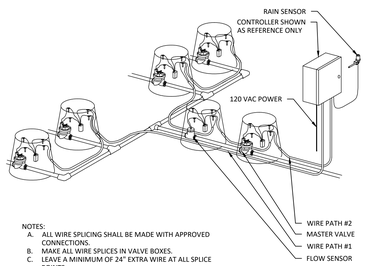
10 / I1.10 QUICK COUPLER

NOT TO SCALE



13 / I1.10 6" ROTARY SPRINKLER

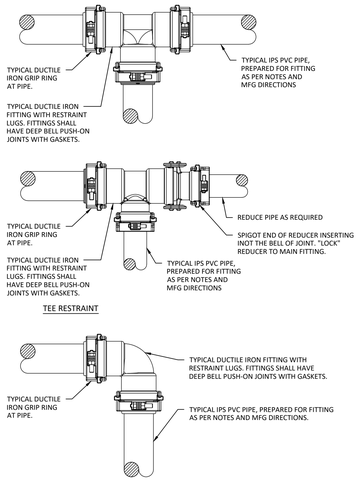
NOT TO SCALE



NOTES:
A. ALL WIRE SPLICING SHALL BE MADE WITH APPROVED CONNECTIONS.
B. MAKE ALL WIRE SPLICES IN VALVE BOXES.
C. LEAVE A MINIMUM OF 24" EXTRA WIRE AT ALL SPLICE POINTS.
D. MAXIMUM DISTANCE FROM DECODER TO VALVE = 150 FT.
E. MAXIMUM WIRE LENGTH = 10,200 FT.
F. WIRE LENGTHS INCLUDE MASTER VALVE AND # 12 WIRE

2 / I1.10 TWO-WIRE PATHS EXAMPLE

NOT TO SCALE



1. REVIEW THE MANUFACTURER PIPE PREPARATIONS DIRECTIONS FOR CUTTING THE PIPE, CLEANING, MARKING, LUBRICATING, ALIGNING, AND FITTING.
2. INSERT THE BEVELED SPIGOT PIPE INTO THE FITTING.
3. ASSEMBLE GRIP RING ON PIPE AND TIGHTEN CLAMP BOLTS PER MFG DIRECTIONS.
4. SLIDE I-BOLTS THROUGH SLOTS IN GRIP RINGS AND AROUND FITTING LUGS, TIGHTEN TO MFG SPECS.

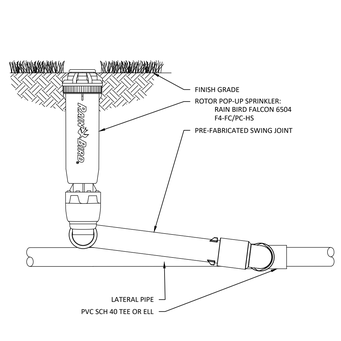
NOTE : RESTRAIN ALL PIPE JOINTS WITHIN 20FT WITH PIPE TO PIPE RESTRAINT.

5 / I1.10 JOINT RESTRAINTS

NOT TO SCALE

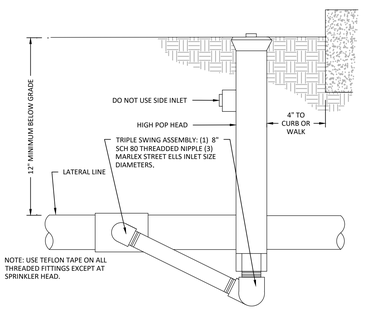
DET# / SHT# ISOLATION VALVE

NOT TO SCALE



12 / I1.10 ROTOR POP-UP SPRINKLER FALCON 6504

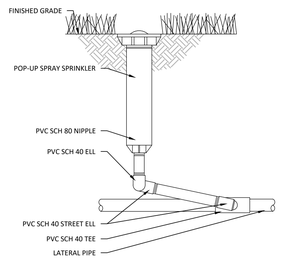
NOT TO SCALE



NOTE: USE TEFLON TAPE ON ALL THREADED FITTINGS EXCEPT AT SPRINKLER HEAD.

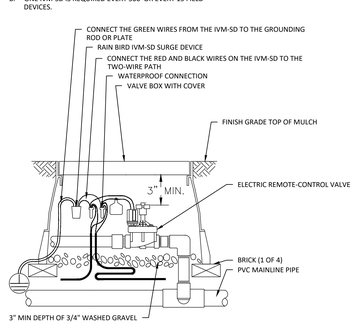
15 / I1.10 SHRUB SPRAY HIGHPOP ASSEMBLY

NOT TO SCALE



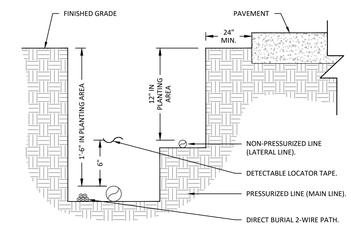
14 / I1.10 6" POP-UP SPRAY SPRINKLER

NOT TO SCALE



11 / I1.10 ELECTRIC REMOTE-CONTROL VALVE WITH SURGE SUPPRESSION

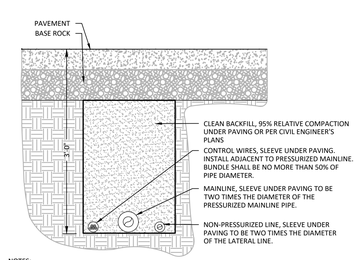
NOT TO SCALE



NOTES:
1. SEE IRRIGATION LEGEND FOR MAINLINE AND LATERAL LINE PIPE SIZES AND TYPE.
2. DIRECT BURIAL CONTROL WIRES SHALL BE INSTALLED IN SCHEDULE 40 PVC ELECTRICAL CONDUIT IF REQUIRED.
3. 2-WIRE IRRIGATION WIRE SHALL BE INSTALLED IN SCHEDULE 40 PVC ELECTRICAL CONDUIT.
4. DETECTABLE LOCATOR TAPE SHALL BE LOCATED SIX INCHES (6") ABOVE THE ENTIRE MAINLINE RUN.

3 / I1.10 IRRIGATION TRENCHING

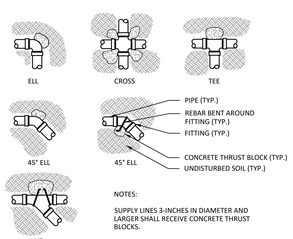
NOT TO SCALE



NOTES:
1. SEE IRRIGATION LEGEND FOR MAINLINE AND LATERAL LINE PIPE SIZES AND TYPE.
2. ALL SLEEVES SHALL BE SCHEDULE 40 PVC PIPE.
3. ALL SLEEVES SHALL EXTEND 12" BEYOND THE EDGE OF PAVEMENT.
4. END OF SLEEVES SHALL BE LOCATED WITH A WOODEN STAKE OR PVC PIPE. LOCATORS SHALL RUN CONTINUOUSLY FROM THE END OF THE SLEEVE TO FINISHED GRADE.

4 / I1.10 PIPE BENEATH PAVEMENT

NOT TO SCALE

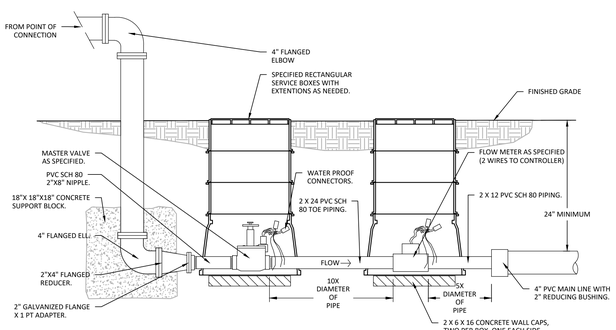


NOTES:

SUPPLY LINES 3-INCHES IN DIAMETER AND LARGER SHALL RECEIVE CONCRETE THRUST BLOCKS.

6 / I1.10 THRUST BLOCK

NOT TO SCALE



9 / I1.10 MASTER VALVE & FLOW SENSOR

NOT TO SCALE

C

New Rosemount Middle School

Rosemount, Minnesota 55088

Independent School District #196

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RICHARD W. KOECHLEIN
LIC. NO. 26678 DATE 07/31/2024

Revisions		
Description	Date	Num

Comm: 232086
Date: 07/31/2024
Drawn: RWK
Check: RWK
North

IRRIGATION DETAILS2

Scale:

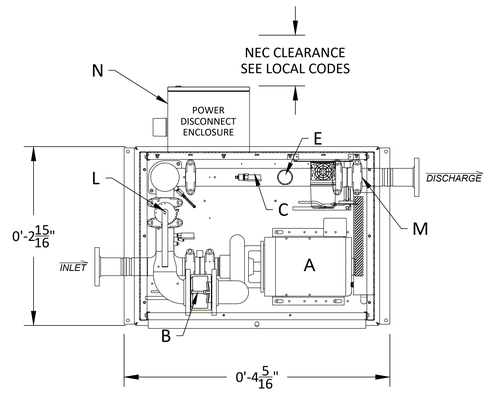
I1.10

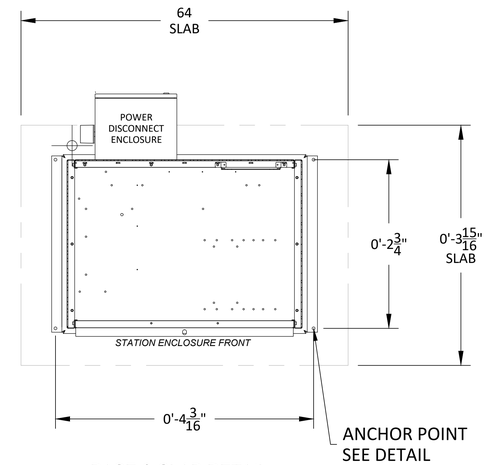
CITY SUBMITTAL - NOT FOR CONSTRUCTION

PUMP STATION SPECIFICATIONS:
NAME: ISD 196 MIDDLE SCHOOL
STATION MODEL: WMBV-5000-2-15-460-3-200-100
STATION TOTAL PERFORMANCE: 200 GPM @ 100 PSI
DYNAMIC INLET PRESSURE: 48 PSI
BOOST PRESSURE: 52 PSI
REGULATED DISCHARGE PRESSURE: 100 PSI
PUMP HORSEPOWER:
PUMP NO.1: 15HP (3600RPM)
ISOLATION VALVE SIZES:
DISCHARGE ISOLATION VALVE SIZE: 3"
DISCHARGE MANIFOLD SIZE: 3"

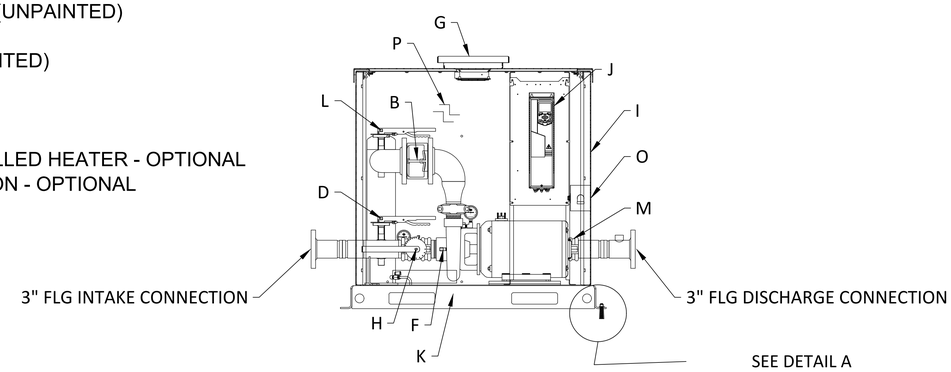
POWER REQUIREMENTS: 460V, 60HZ, 3PHZ, 22FLA (EST.)
EXHAUST FAN REQUIREMENTS: STD. FAN

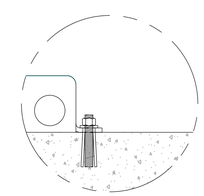
STATION COMPONENTS:
A PUMP AND MOTOR
B CHECK VALVE
C PRESSURE TRANSDUCER WITH GAUGE
D BYPASS VALVE
E FLOW SENSOR
F TEMP SENSOR
G STATION FAN HOOD MOUNTED
H PUMP INTAKE ISOLATION VALVE
I MARINE GRADE ALUMINUM ENCLOSURE (UNPAINTED)
J VFD
K MARINE GRADE ALUMINUM BASE (UNPAINTED)
L PUMP DISCHARGE ISOLATION VALVE
M STATION DISCHARGE ISOLATION VALVE
N DEAD-FRONT DISCONNECT
O 500 WATT THERMOSTATICALLY CONTROLLED HEATER - OPTIONAL
P INTERNAL SOUND DAMPENING INSULATION - OPTIONAL





BASE & SLAB DETAIL





DETAIL "A"
CONCRETE ANCHOR
TYPICAL (4) LOCATIONS

7				
6				
5				
4				
3				
2				
1	--/--/--	---	------	
NO.	DATE	BY	DESCRIPTION	

☐ APPROVED AS SUBMITTED
☐ APPROVED AS NOTED
☐ REVISE AND RESUBMIT
SIGNATURE: _____
NAME: _____
DATE: _____

DRAWN BY: --- DATE: DATE
CHECKED BY: CHECKED DATE: DATE2

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Rosemount, Minnesota 55088

Independent School District #196
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Revisions

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Comm: 232086
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Drawn: RWK
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North

PUMP STATION DETAILS

Scale:

I1.11

CITY SUBMITTAL - NOT FOR CONSTRUCTION

Plan View
Scale - 1' = 60ft

Light Loss Factor

Symbol	Label	Image	Quantity	Manufacturer	Catalog Number	Description	Lumens Per Lamp	Wattage	Distribution	Plot
	BB1		14	Lithonia Lighting	DSX1 LED P6 40K 80CRI TFTM	D-Series Size 1 Area Luminaire P6 Performance Package 4000K CCT 80 CRI Forward Throw	19259	165.25	TYPE IV, SHORT, BUG RATING: B3 - U0 - G5	Max: 1735lcd
	BB2		3	Lithonia Lighting	DSX1 LED P6 40K 80CRI TFTM	D-Series Size 1 Area Luminaire P6 Performance Package 4000K CCT 80 CRI Forward Throw	19259	330.5	TYPE IV, SHORT, BUG RATING: B3 - U0 - G5	Max: 1735lcd
	BB2W		2	Lithonia Lighting	DSX1 LED P6 40K 80CRI T2M	D-Series Size 1 Area Luminaire P6 Performance Package 4000K CCT 80 CRI Type 2 Medium	18629	165.25	TYPE III, MEDIUM, BUG RATING: B3 - U0 - G4	Max: 1696lcd
	BB4		2	Lithonia Lighting	DSX1 LED P6 40K 80CRI TFTM	D-Series Size 1 Area Luminaire P6 Performance Package 4000K CCT 80 CRI Forward Throw	19259	661	TYPE IV, SHORT, BUG RATING: B3 - U0 - G5	Max: 1735lcd
	BB290		4	Lithonia Lighting	DSX1 LED P6 40K 80CRI TFTM	D-Series Size 1 Area Luminaire P6 Performance Package 4000K CCT 80 CRI Forward Throw	19259	330.5	TYPE IV, SHORT, BUG RATING: B3 - U0 - G5	Max: 1735lcd
	A		34	Lithonia Lighting	WST LED P3 40K VF MVOLT	WST LED, Performance package 3, 4000 K, visual comfort forward throw, MVOLT	6609	50	TYPE III, VERY SHORT, BUG RATING: B1 - U0 - G1	Max: 4096cd

Paulson & Clark Engineering
Structural | Mechanical | Electrical | Security

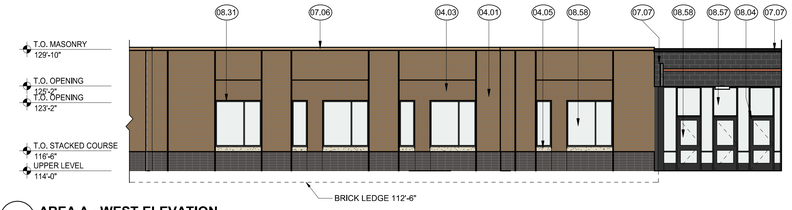
NEW ROSEMOUNT MIDDLE SCHOOL
SITE PHOTOMETRIC PLAN

Designer

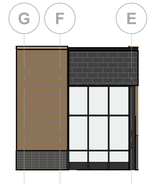
Date
07/29/2024
Scale
Not to Scale
Drawing No.

Summary

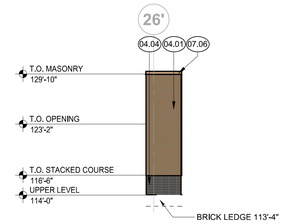
MN



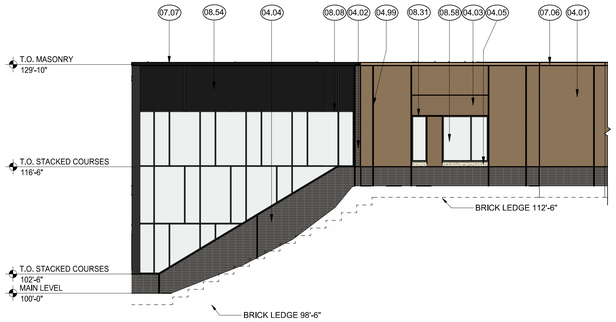
A1 AREA A - WEST ELEVATION
1/8" = 1'-0"



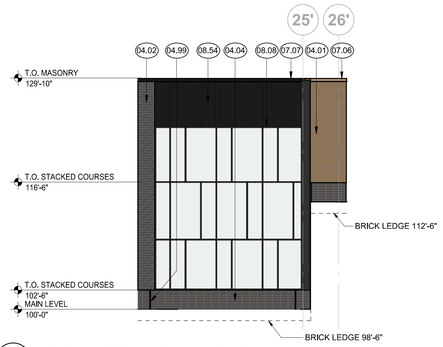
A4 AREA A - NORTH ELEVATION
1/8" = 1'-0"



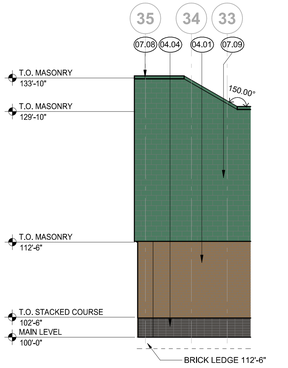
A5 AREA A - SOUTHEAST ELEVATION
1/8" = 1'-0"



C1 AREA A - NORTHWEST ELEVATION
1/8" = 1'-0"

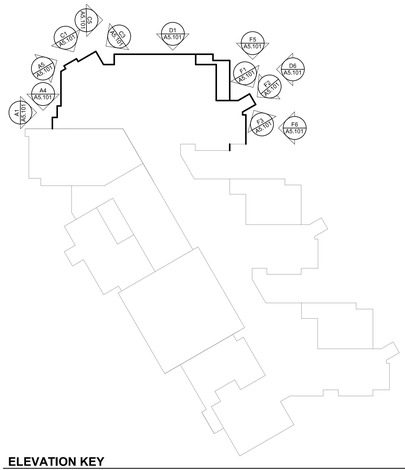


C3 AREA A - NORTHEAST ELEVATION
1/8" = 1'-0"

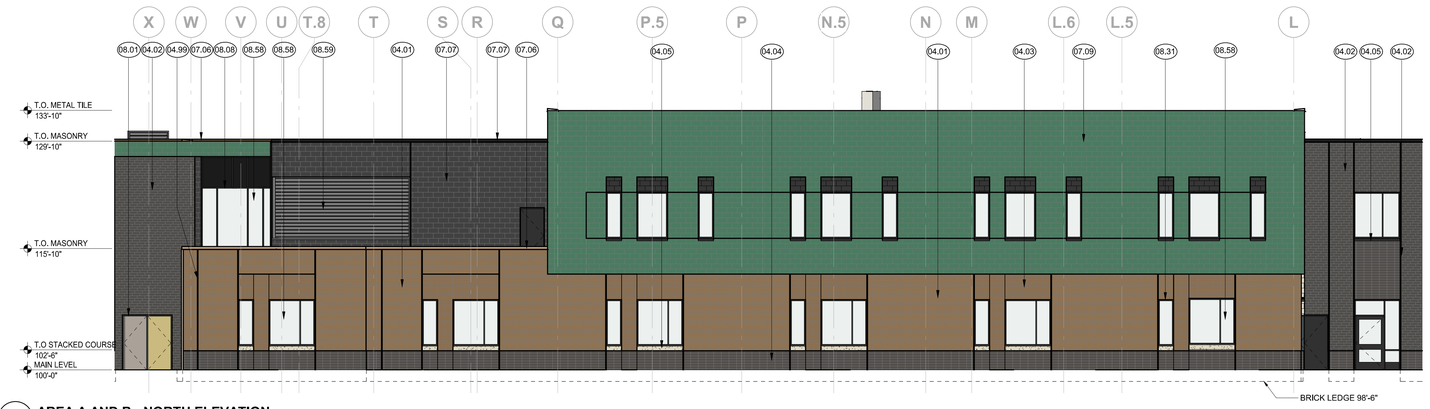


C5 AREA B - WEST ELEVATION
1/8" = 1'-0"

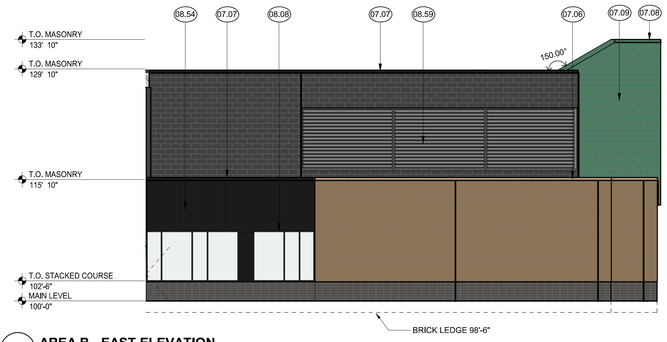
MATERIALS KEY	
KEY	MATERIAL
04.01	BRICK 1 (TAN VELOUR RUNNING BOND)
04.02	BRICK 2 (DARK VELOUR RUNNING BOND)
04.03	BRICK 3 (TAN SMOOTH STACK BOND)
04.04	BRICK 4 (DARK SMOOTH STACK BOND)
04.05	CAST STONE SILL
04.99	BRICK EXPANSION JOINT
07.06	PREFINISHED METAL COPING 1 (LIGHT)
07.07	PREFINISHED METAL COPING 2 (DARK)
07.08	PREFINISHED METAL COPING 3 (GREEN)
07.09	METAL WALL TILE 1 (GREEN)
07.10	METAL WALL TILE 2 (DARK)
08.01	PAINTED HOLLOW METAL FRAME AND DOOR
08.04	PREFINISHED ALUMINUM DOOR
08.08	PREFINISHED ALUMINUM FRAME
08.31	PREFINISHED ALUMINUM WINDOW
08.54	SPANDREL PANEL
08.57	GLASS
08.58	EXTERIOR GLAZING
08.59	PREFINISHED ALUMINUM LOUVER



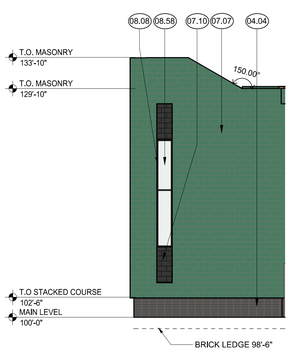
ELEVATION KEY



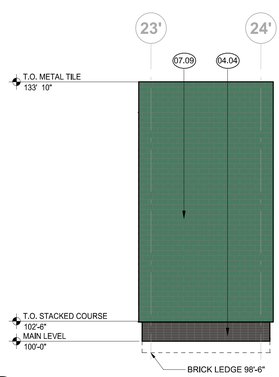
D1 AREA A AND B - NORTH ELEVATION
1/8" = 1'-0"



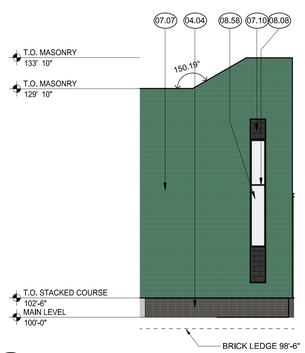
D6 AREA B - EAST ELEVATION
1/8" = 1'-0"



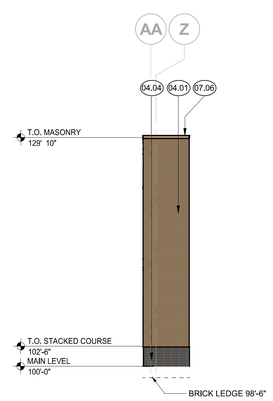
F1 AREA B - NORTH ELEVATION STAIR TOWER
1/8" = 1'-0"



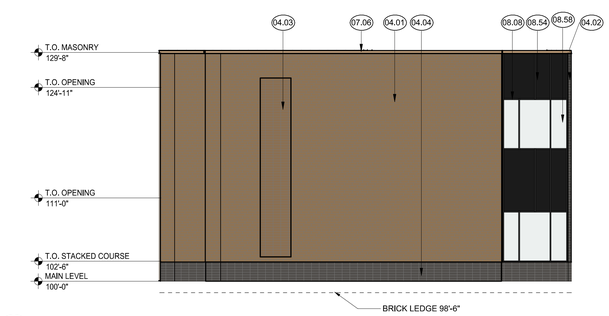
F2 AREA B - EAST ELEVATION AT STAIR TOWER
1/8" = 1'-0"



F3 AREA B - SOUTH ELEVATION AT STAIR
1/8" = 1'-0"



F5 AREA B - NORTH ELEVATION
1/8" = 1'-0"



F6 AREA B - EAST ELEVATION
1/8" = 1'-0"

A

NEW ROSEMOUNT MIDDLE SCHOOL

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Independent School District #196
3455 153RD STREET WEST
ROSEMOUNT, MN 55068

WOLD ARCHITECTS AND ENGINEERS
332 Minnesota Street, Suite W2000
St. Paul, Minnesota 55101
woldae.com | 651 227 7773

GENERAL NOTES:

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

R. SCOTT MCQUEEN
License Number: **20155** Date **8/14/2024**

Revisions		
Description	Date	Num

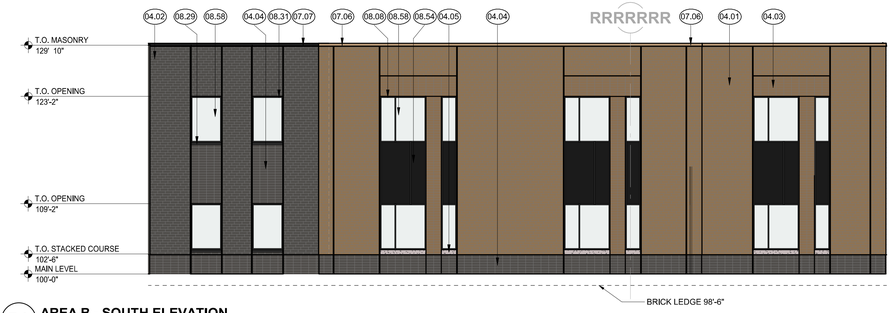
Comm: **232086**
Date: **8/14/2024**
Drawn: **MM**
Check: **AA/TE**

EXTERIOR ELEVATIONS

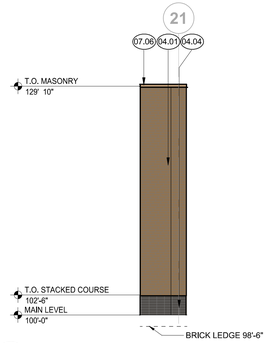
Scale: **As indicated**

A5.101

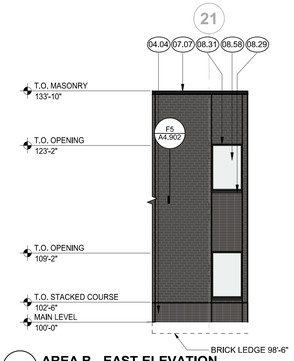
MN



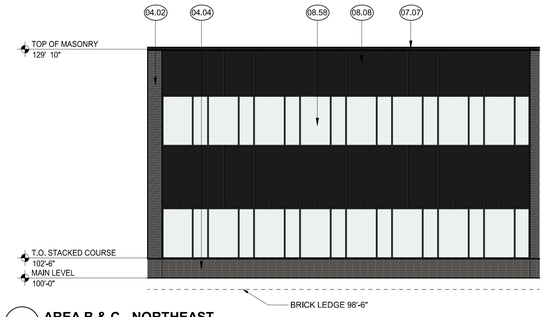
B1 AREA B - SOUTH ELEVATION
1/8" = 1'-0"



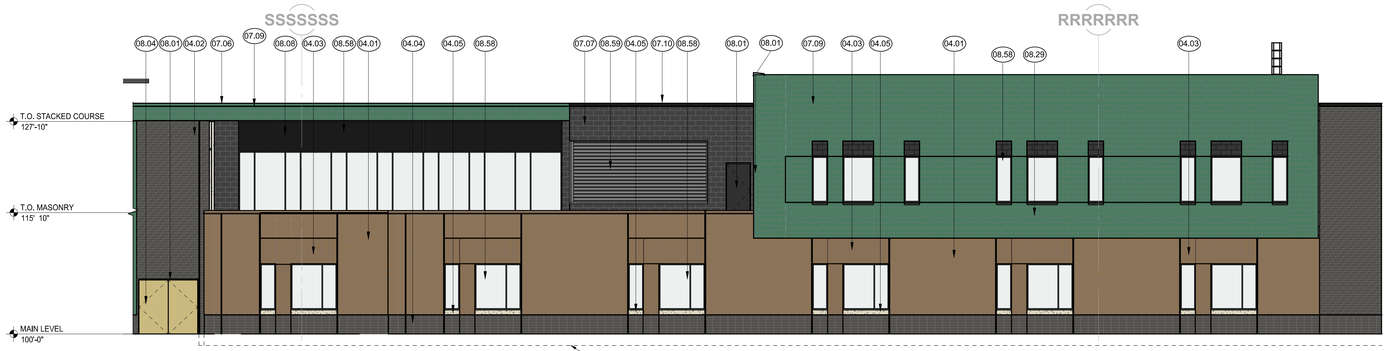
B4 AREA B - WEST ELEVATION
1/8" = 1'-0"



B5 AREA B - EAST ELEVATION
1/8" = 1'-0"

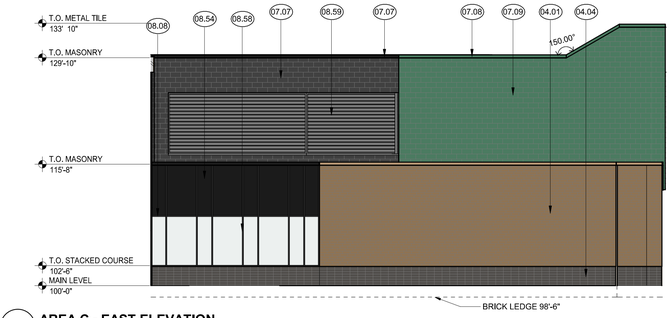


B7 AREA B & C - NORTHEAST
1/8" = 1'-0"

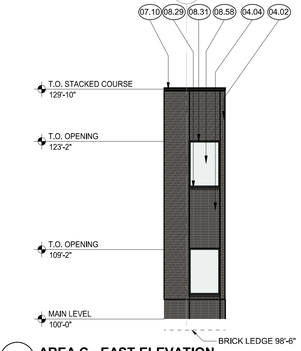


C1 AREA C - NORTH ELEVATION
1/8" = 1'-0"

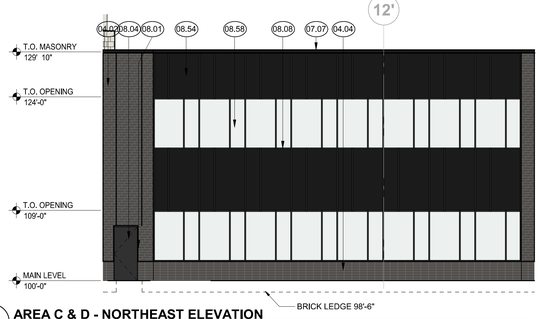
MATERIALS KEY	
KEY	MATERIAL
03.03	PRECAST STRUCTURAL CONCRETE
04.01	BRICK 1 (TAN VELOUR RUNNING BOND)
04.02	BRICK 2 (DARK VELOUR RUNNING BOND)
04.03	BRICK 3 (TAN SMOOTH STACK BOND)
04.04	BRICK 4 (DARK SMOOTH STACK BOND)
04.05	CAST STONE SILL
07.06	PREFINISHED METAL COPING 1 (LIGHT)
07.07	PREFINISHED METAL COPING 2 (DARK)
07.08	PREFINISHED METAL COPING 3 (GREEN)
07.09	METAL WALL TILE 1 (GREEN)
07.10	METAL WALL TILE 2 (DARK)
08.01	PAINTED HOLLOW METAL FRAME AND DOOR
08.04	PREFINISHED ALUMINUM DOOR
08.08	PREFINISHED ALUMINUM FRAME
08.29	PREFINISHED WINDOW SILL
08.31	PREFINISHED ALUMINUM WINDOW
08.54	SPANDREL PANEL
08.58	EXTERIOR GLAZING
08.59	PREFINISHED ALUMINUM LOUVER



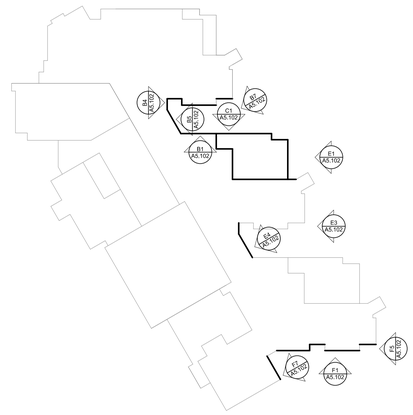
E1 AREA C - EAST ELEVATION
1/8" = 1'-0"



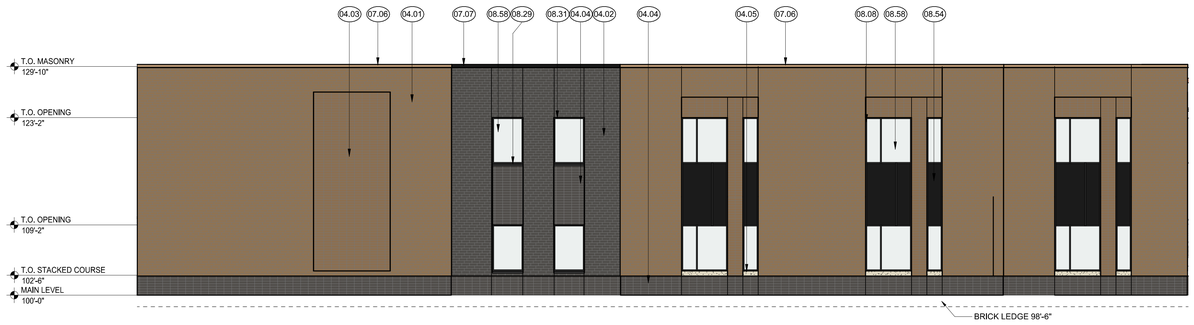
E3 AREA C - EAST ELEVATION
1/8" = 1'-0"



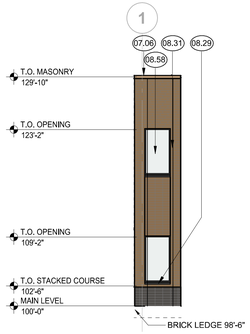
E4 AREA C & D - NORTHEAST ELEVATION
1/8" = 1'-0"



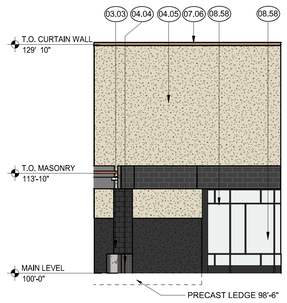
ELEVATION KEY



F1 AREA D - SOUTH ELEVATION
1/8" = 1'-0"



F5 AREA D - EAST ELEVATION
1/8" = 1'-0"



F7 AREA E - EAST ELEVATION
1/8" = 1'-0"

A

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R. SCOTT MCQUEEN
License Number: **20155** Date: **8/14/2024**

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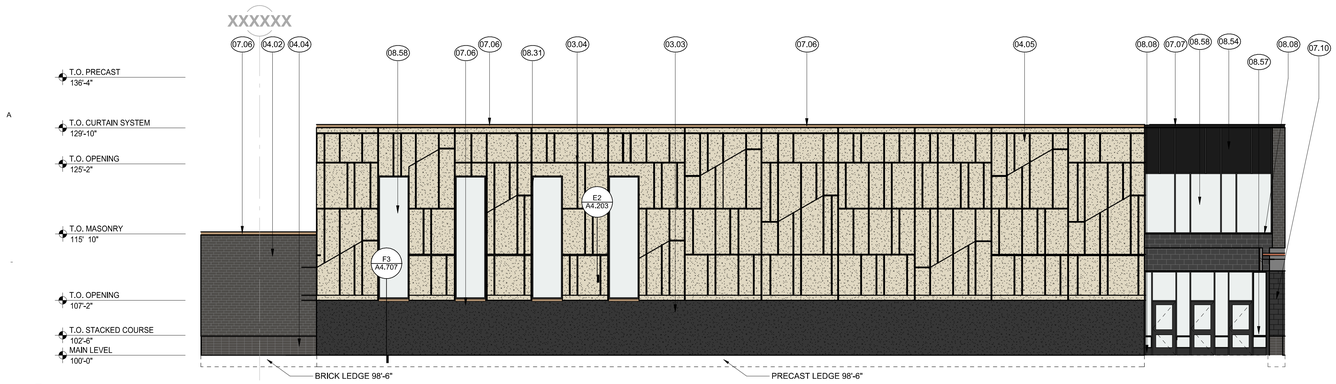
EXTERIOR ELEVATIONS

Scale: **As indicated**

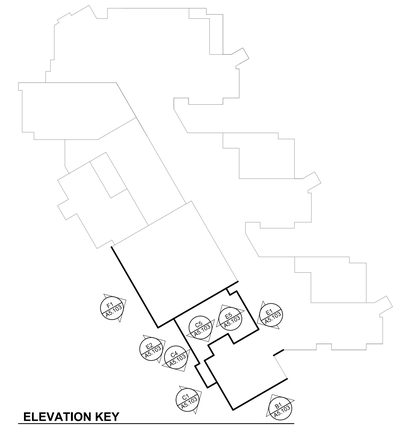
A5.102

MN

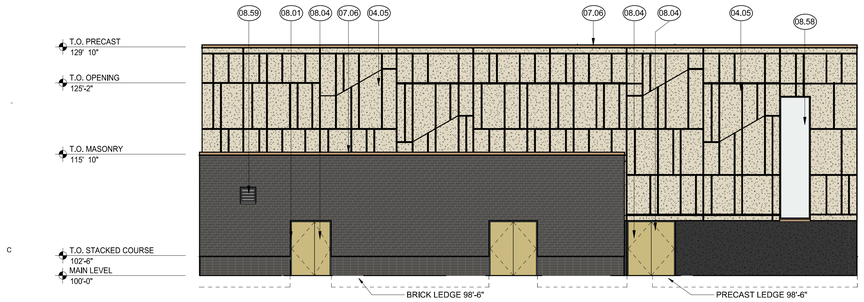


B1 **AREA E - SOUTH ELEVATION**
1/8" = 1'-0"

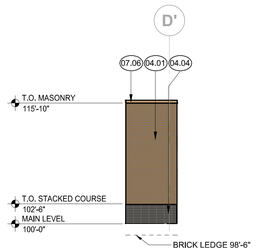
MATERIALS KEY	
KEY	MATERIAL
03.03	PRECAST STRUCTURAL CONCRETE
03.04	PRECAST CONCRETE
04.01	BRICK 1 (TAN VELOUR RUNNING BOND)
04.02	BRICK 2 (DARK VELOUR RUNNING BOND)
04.03	BRICK 3 (TAN SMOOTH STACK BOND)
04.04	BRICK 4 (DARK SMOOTH STACK BOND)
04.05	CAST STONE SILL
07.06	PREFINISHED METAL COPING 1 (LIGHT)
07.07	PREFINISHED METAL COPING 2 (DARK)
07.08	PREFINISHED METAL COPING 3 (GREEN)
07.09	METAL WALL TILE 1 (GREEN)
07.10	METAL WALL TILE 2 (DARK)
07.28	RIGID INSULATION
08.01	PAINTED HOLLOW METAL FRAME AND DOOR
08.04	PREFINISHED ALUMINUM DOOR
08.06	PREFINISHED ALUMINUM FRAME
08.31	PREFINISHED ALUMINUM WINDOW
08.54	SPANDREL PANEL
08.57	GLASS
08.58	EXTERIOR GLAZING
08.59	PREFINISHED ALUMINUM LOUVER



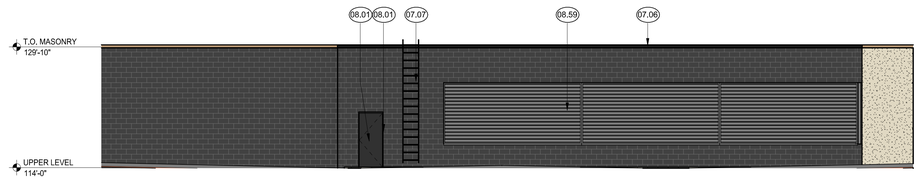
ELEVATION KEY



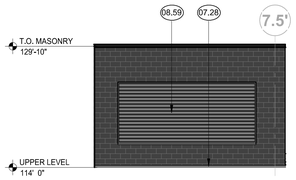
C1 **AREA E - WEST ELEVATION**
1/8" = 1'-0"



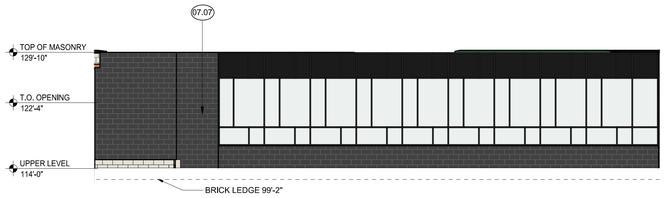
C4 **AREA E - NORTH ELEVATION**
1/8" = 1'-0"



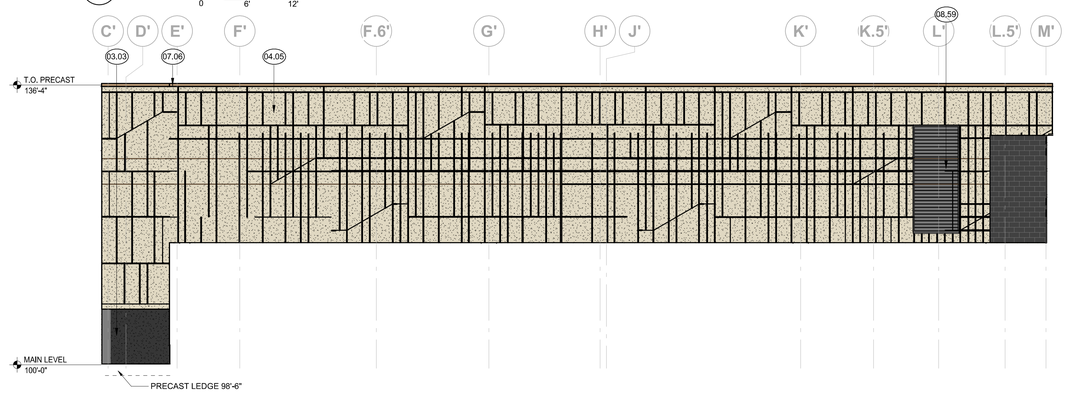
C5 **AREA E - NORTH ELEVATION AT POOL PENTHOUSE**
1/8" = 1'-0"



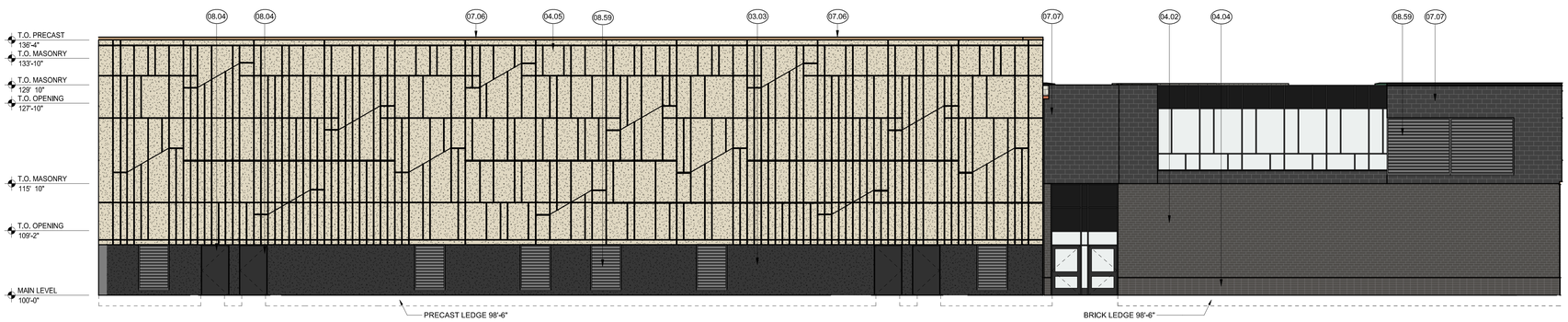
E1 **AREA E - EAST ELEVATION AT POOL PENTHOUSE**
1/8" = 1'-0"



E2 **AREAS E & F - WEST ELEVATION AT CLERESTORY**
1/8" = 1'-0"



E5 **AREA F - GYM SOUTHEAST ELEVATION**
1/8" = 1'-0"



F1 **GYMNASIUM & LOCKERS - WEST ELEVATION**
1/8" = 1'-0"

A

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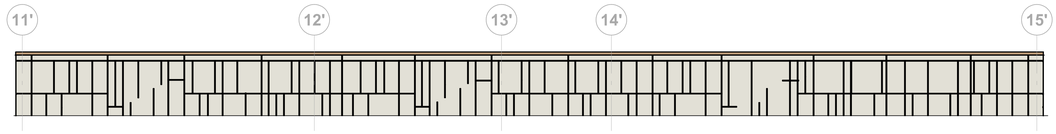
EXTERIOR ELEVATIONS

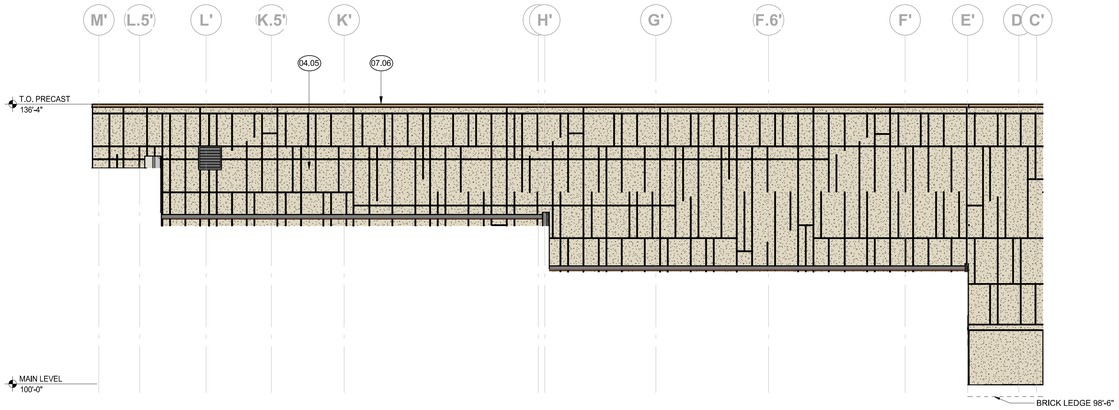
Scale: **As indicated**

A5.103

MN

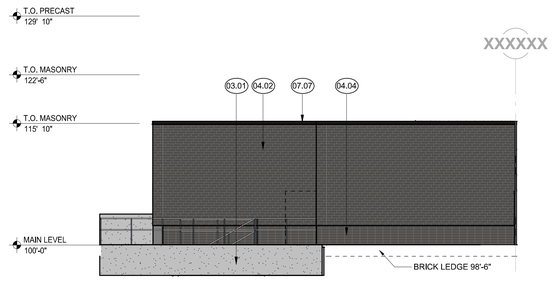


A1 AREA F - GYM NORTHEAST ELEVATION
1/8" = 1'-0"

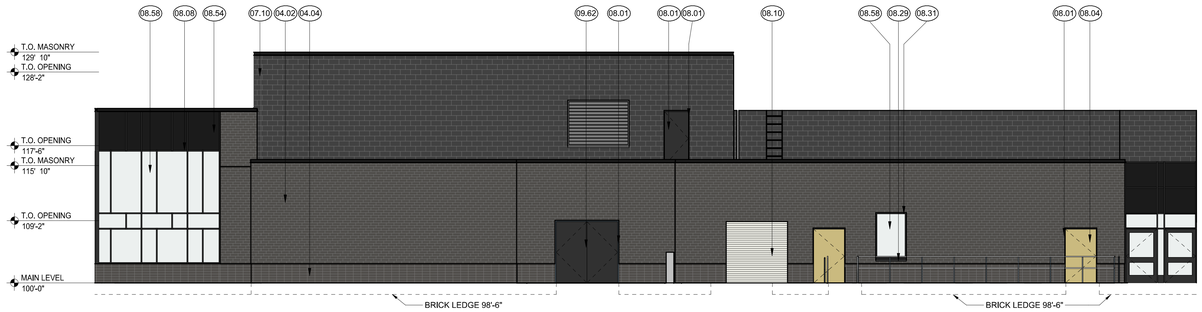


C1 AREA F - GYM NORTHWEST ELEVATION
1/8" = 1'-0"

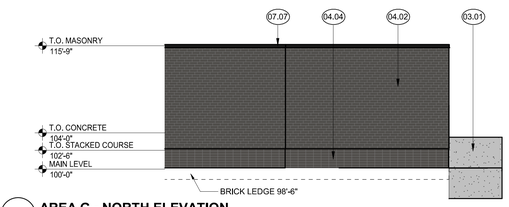
MATERIALS KEY	
KEY	MATERIAL
03.01	CONCRETE
04.02	BRICK 2 (DARK VELOUR RUNNING BOND)
04.04	BRICK 4 (DARK SMOOTH STACK BOND)
04.05	CAST STONE SILL
07.06	PREFINISHED METAL COPING 1 (LIGHT)
07.07	PREFINISHED METAL COPING 2 (DARK)
07.10	METAL WALL TILE 2 (DARK)
08.01	PAINTED HOLLOW METAL FRAME AND DOOR
08.04	PREFINISHED ALUMINUM DOOR
08.08	PREFINISHED ALUMINUM FRAME
08.10	PREFINISHED COILING DOOR
08.29	PREFINISHED WINDOW SILL
08.31	PREFINISHED ALUMINUM WINDOW
08.54	SPANDREL PANEL
08.57	GLASS
08.58	EXTERIOR GLAZING
09.62	PAINT 4B



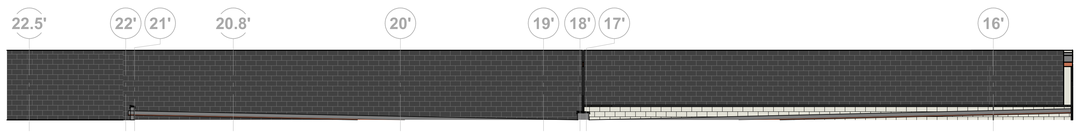
C5 AREA G - SOUTH ELEVATION
1/8" = 1'-0"



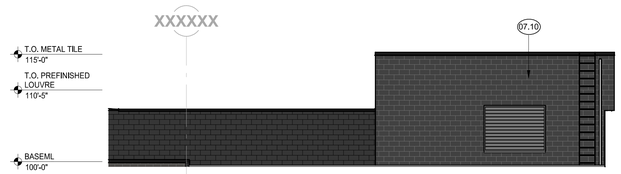
D1 AREA G - WEST ELEVATION
1/8" = 1'-0"



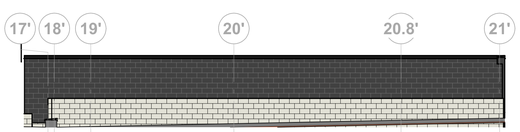
D5 AREA G - NORTH ELEVATION
1/8" = 1'-0"



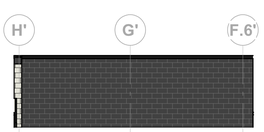
E1 AREA G - WEST ELEVATION HIGH
1/8" = 1'-0"



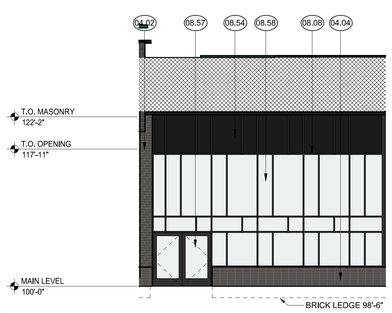
E5 AREA G - SOUTH ELEVATION AT PENTHOUSE
1/8" = 1'-0"



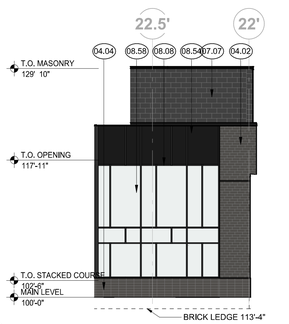
F1 AREA G - EAST ELEVATION AT PENTHOUSE
1/8" = 1'-0"



F3 AREA G - NORTH ELEVATION AT PENTHOUSE
1/8" = 1'-0"



F4 AREA H - WEST ELEVATION
1/8" = 1'-0"



F6 AREA H - WEST ELEVATION
1/8" = 1'-0"

ELEVATION KEY

NEW ROSEMOUNT MIDDLE SCHOOL

Rosemount, Minnesota 55068

Independent School District #196
3455 153RD STREET WEST
ROSEMOUNT, MN 55068

WOLD ARCHITECTS AND ENGINEERS
332 Minnesota Street, Suite W2000
St. Paul, Minnesota 55101
woldae.com | 651 227 7773

GENERAL NOTES:

1. ALL INTERIOR CORNERS IN BRICK TO BE BRICK EXPANSION JOINTS.

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R. SCOTT MCQUEEN
License Number: **20155** Date **8/14/2024**

Revisions		
Description	Date	Num

Comm: **232086**
Date: **8/14/2024**
Drawn: **MM**
Check: **AA/TE**

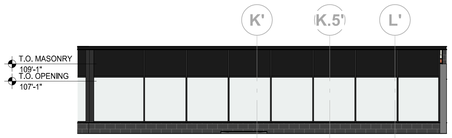
EXTERIOR ELEVATIONS

Scale: **As Indicated**

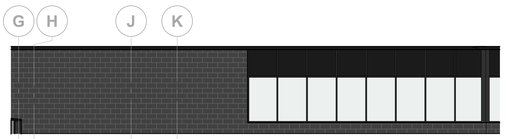
A5.104

A

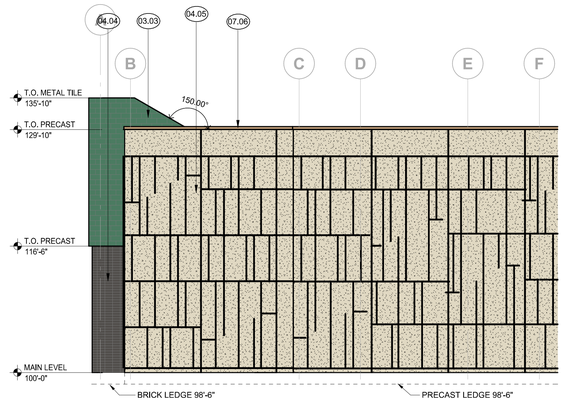
MN



B1 AREA H CLERESTORY - SOUTH EAST ELEVATION
1/8" = 1'-0"

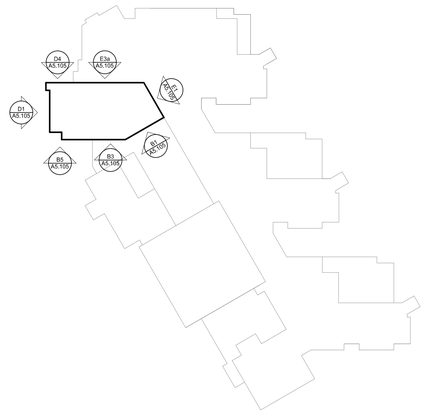


B3 AREA H CLERESTORY - SOUTH ELEVATION
1/8" = 1'-0"

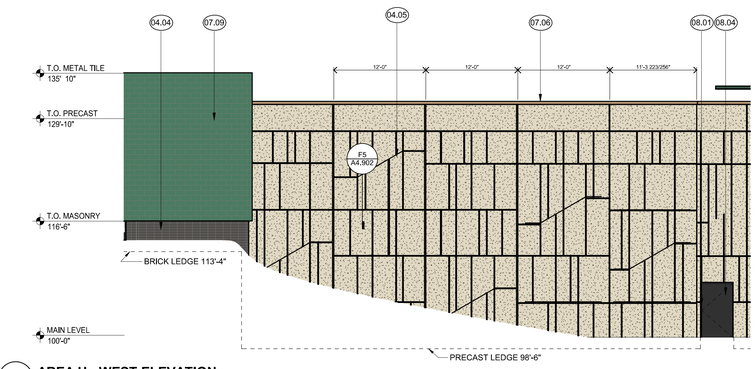


B5 AREA H - SOUTH ELEVATION
1/8" = 1'-0"

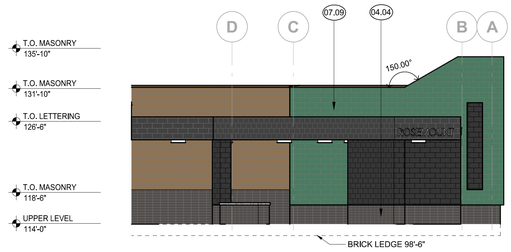
MATERIALS KEY	
KEY	MATERIAL
03.03	PRECAST STRUCTURAL CONCRETE
04.04	BRICK 4 (DARK SMOOTH STACK BOND)
04.05	CAST STONE SILL
07.06	PREFINISHED METAL COPING 1 (LIGHT)
07.07	PREFINISHED METAL COPING 2 (DARK)
07.09	METAL WALL TILE 1 (GREEN)
07.10	METAL WALL TILE 2 (DARK)
08.01	PAINTED HOLLOW METAL FRAME AND DOOR
08.04	PREFINISHED ALUMINUM DOOR
10.06	ALUMINUM DIMENSION LETTER SIGNAGE



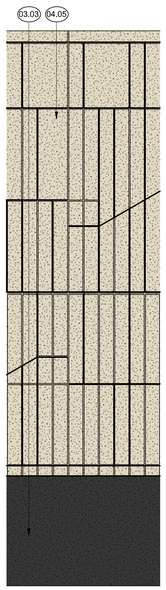
ELEVATION KEY



D1 AREA H - WEST ELEVATION
1/8" = 1'-0"

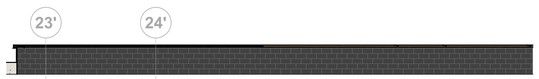


D4 AREA H - NORTH ELEVATION
1/8" = 1'-0"

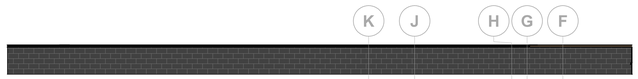


NOTE: ASSUME UP TO 12 UNIQUE PANEL TYPES OF SIMILAR FINISHES

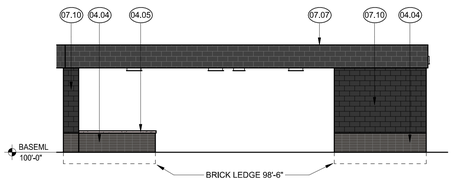
E6 PRECAST PANEL
1/4" = 1'-0"



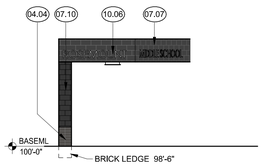
E1 AREA G - EAST ELEVATION
1/8" = 1'-0"



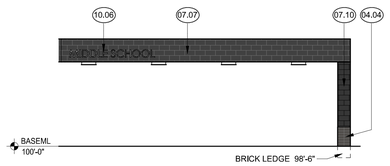
E3a AREA G - NORTH ELEVATION
1/8" = 1'-0"



F1 AREA A - CANOPY NORTHEAST ELEVATION
1/8" = 1'-0"



F3 AREA A - CANOPY NORTHWEST ELEVATION
1/8" = 1'-0"



F4 AREA A - CANOPY WEST ELEVATION
1/8" = 1'-0"

A

NEW ROSEMOUNT MIDDLE SCHOOL

Rosemount, Minnesota 55068

Independent School District #196
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Revisions		
Description	Date	Num

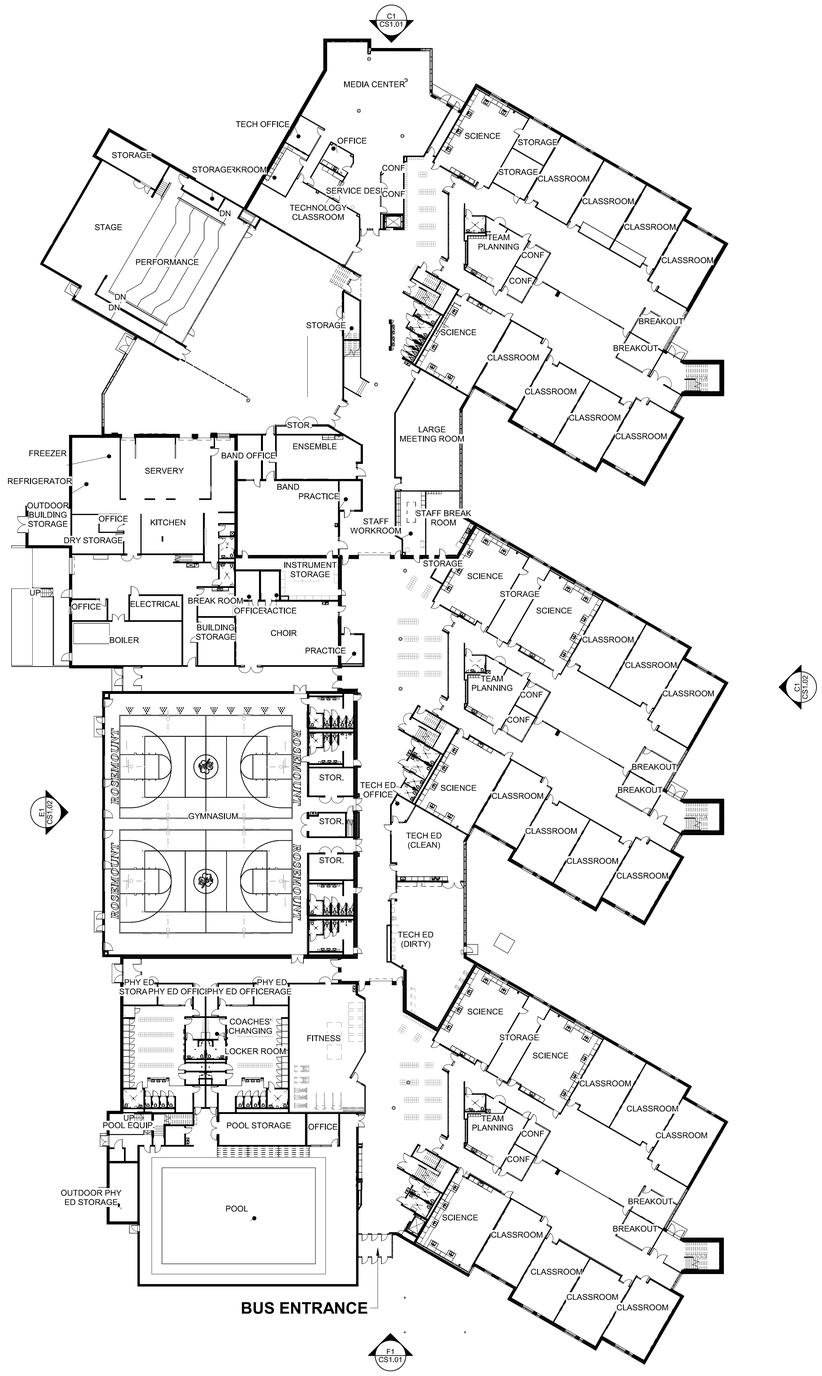
Comm: **232086**
Date: **8/14/2024**
Drawn: **MM**
Check: **AA/TE**

EXTERIOR ELEVATIONS

Scale: **As indicated**

A5.105

MN



A

F1 FLOOR PLAN - MAIN LEVEL
1" = 30'-0"
0 22'-6" 45'

F5 FLOOR PLAN - UPPER LEVEL
1" = 30'-0"
0 22'-6" 45'

NEW ROSEMOUNT MIDDLE SCHOOL

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Comm: 232086
Date:
Drawn: AH
Check: PT
North

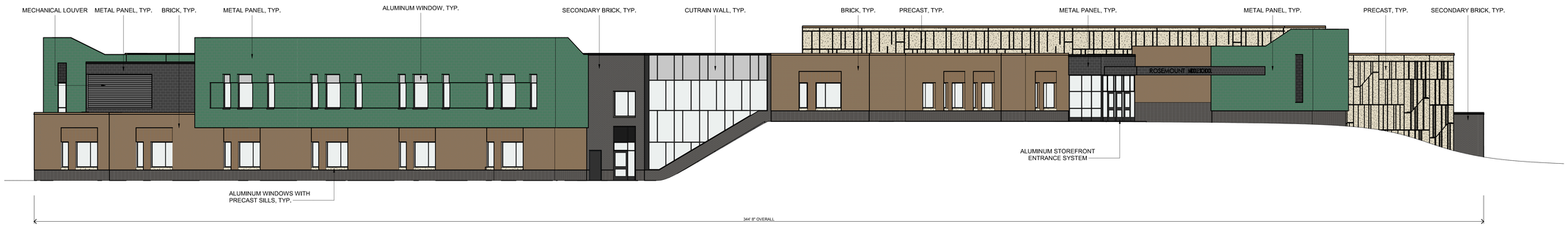
FLOOR PLANS

PEER REVIEW SET 07.08
NOT FOR CONSTRUCTION

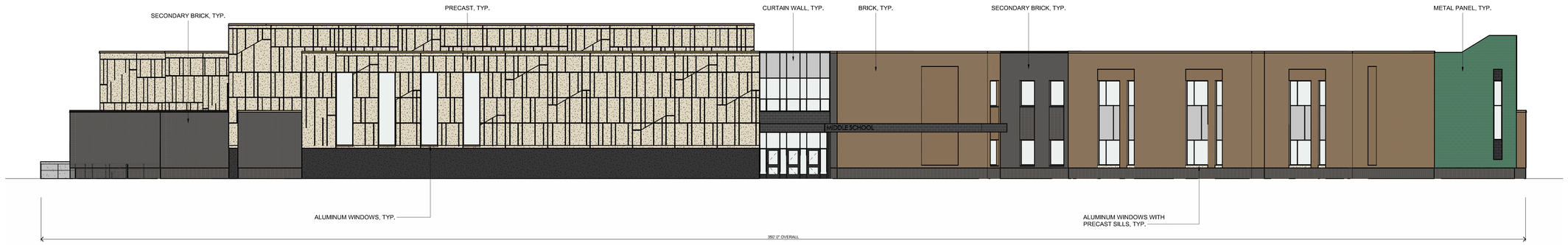
Scale: 1" = 30'-0"

CS1.00

MN



C1 EXTERIOR ELEVATION NORTH
3/32" = 1'-0"
0 8' 16'



F1 EXTERIOR ELEVATION SOUTH
3/32" = 1'-0"
0 8' 16'

A

NEW ROSEMOUNT MIDDLE SCHOOL

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Drawn: **AH**
Check: **PT**
North

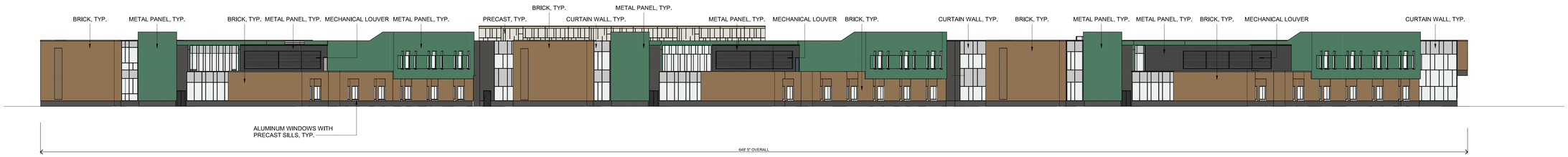
EXTERIOR ELEVATIONS

Scale: **3/32" = 1'-0"**

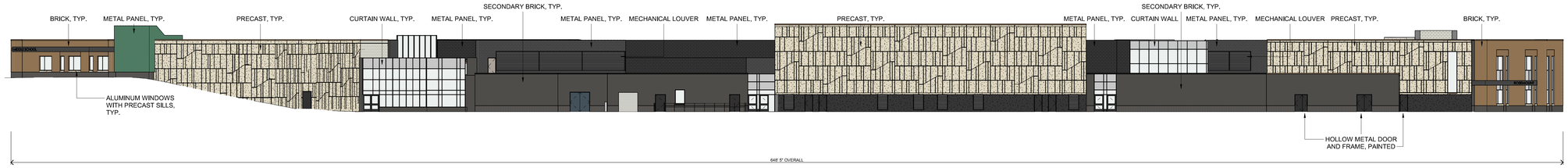
NOT FOR CONSTRUCTION

CS1.01

MN



C1 EXTERIOR ELEVATION EAST
1" = 20'-0"
0 15' 30'



E1 EXTERIOR ELEVATION WEST
1" = 20'-0"
0 15' 30'

A

NEW ROSEMOUNT MIDDLE SCHOOL

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Date:
Drawn: **AH**
Check: **PT**

North

EXTERIOR ELEVATIONS

Scale: **1" = 20'-0"**

NOT FOR CONSTRUCTION

CS1.02

MN

RENDERING - BUS ENTRY

NOT TO SCALE

RENDERING - MAIN ENTRY

NOT TO SCALE

RENDERING - SOUTHEAST BIRD'S EYE VIEW

NOT TO SCALE

A

NEW ROSEMOUNT MIDDLE SCHOOL

Rosemount, Minnesota 55068

Independent School District #196
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ROSEMOUNT, MN 55068

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Date:
Drawn: AH
Check: PT
North

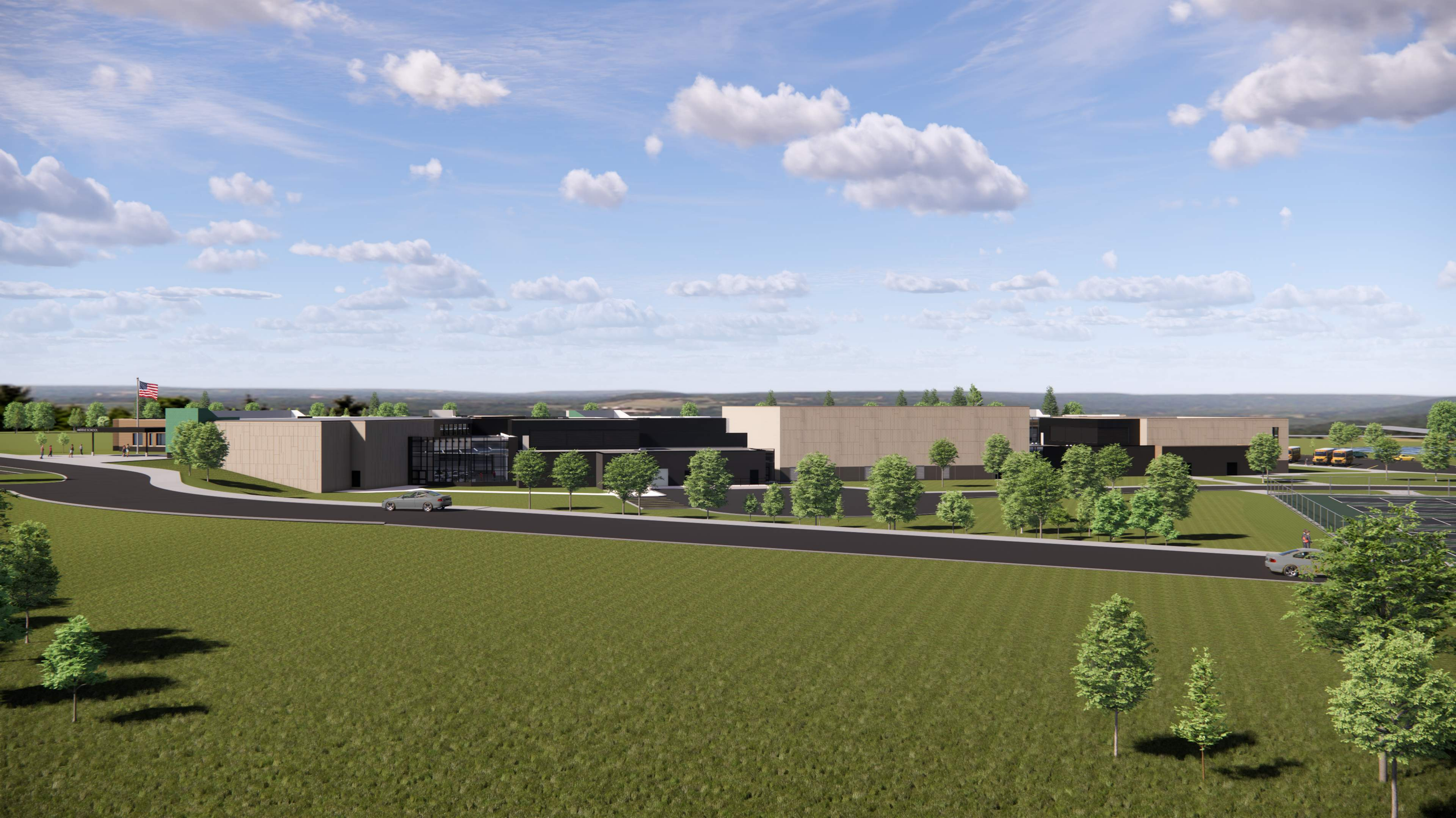
RENDERINGS

Scale:

NOT FOR CONSTRUCTION

CS1.03

ROSEMOUNT MIDDLE SCHOOL


MIDDLE SCHOOL

STONEWALL MIDDLE SCHOOL

ROSEMOUNT MIDDLE SCHOOL

MIDDLE SCHOOL
STOP
CENTRAL SCHOOL

MIDDLE SCHOOL

Memorandum

To: Nick Egger, Director of Public Works

From: Monica Heil, WSB
Amanda Sachi, WSB
Kris Keller, WSB
John LaPointe, WSB
Henry Meeker, WSB

Date: August 20, 2024

Re: Independent School District 196 – Middle School and Boulder Trail Utility Extensions
Engineering Review
WSB Project No. 026152-000

We have reviewed the documents provided by Wold and by Bolton and Menk on July 30, 2024. Documents reviewed include:

- ISD 196 Middle School - Site Plans, dated 7/31/2024
- ISD 196 Middle School Site Plans, dated 7/31/2024
- ISD 196 Middle School Existing HydroCAD Report, dated 7/28/2024
- ISD 196 Middle School Proposed HydroCAD Report, dated 7/28/2024
- ISD 196 Middle School Dead Storage Calculations, dated 7/31/2024
- ISD 196 Middle School Infiltration Calculations, dated 7/31/2024
- Boulder Trail Utility Street and Utility Plans, dated August 6th, 2024

Additional redline comments are provided on the submitted civil plans. Applicant should provide responses to each comment and redline comment. We offer the following comments below.

Engineering Review:

1. General
    a. The project consists of the construction of a middle school campus with building, parking, and adjacent recreational and stormwater facilities

2. Site Demolition Plan
    a. No comments.

3. Geometric/Finishing Plans
    a. Call out areas of tip-out curb

701 XENIA AVENUE S | SUITE 300 | MINNEAPOLIS, MN | 55416 | 763.541.4800 | WSBENG.COM

4. Utility Plans

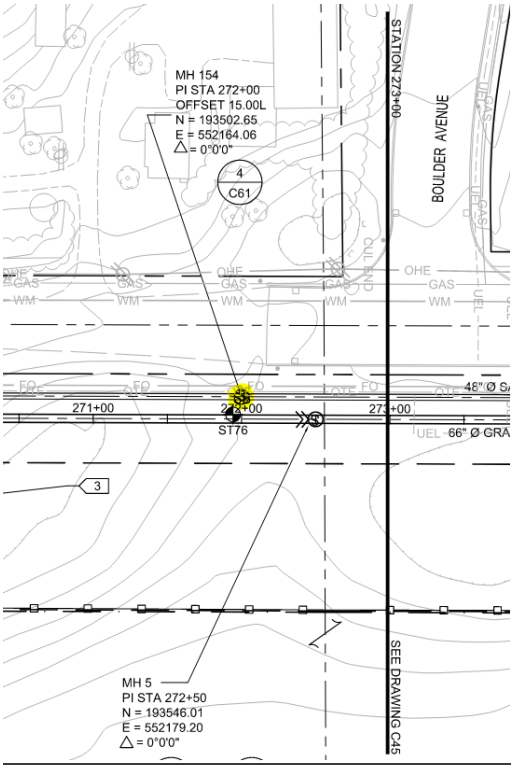
Watermain Comments:

1. General
    a. Consider constructing the 12-inch diameter DIP water main with a positive slope from the end of the line near Station 47+25 (where the water main is capped) to the point of connection to the existing water main along Biscayne Avenue. High points in the water main should be avoided, if possible.
    b. Call out all proposed water fittings
    c. Fire Marshal to review fire coverage and emergency access
        i. Provide turning movements for access to hydrants on site
    d. Insulate at crossings where the vertical separation between the water and the storm sewer is less than 36"

2. Air Release Valves & Manholes
    a. The Minnesota Department of Health uses Ten States Standards for Water Works as the guide for the design of water system improvements. Ten States Standards for Water Works states, "At high points in water mains where air can accumulate provisions shall be made to remove the air by means of air relief valves." If the water main elevations shown in the profile on Sheet C4.01 are utilized, an air relief valve should be provided on the high point at Station 40+25. There is a second high point at Station 42+54.01. The fire hydrant at Station 42+54.01 could be used as a manual air relief valve for the high point at that location.

Sanitary Sewer Comments:

1. Sheet C4.01:
    a. On Sheet C4.01, the 8-inch diameter DIP forcemain should be connected into the raw wastewater interceptor sewer at MH 154 (see snippet from record drawings below) via an outside drop instead of MH 5 (effluent water to river) where it is shown on the Bolton & Menk drawings. Alternatively, a connection could be made using the construction of a new manhole over the top of the existing interceptor line, in accordance with standards and specifications of MetCouncil Environmental Services and the City.
    b. On Sheet C4.01, consideration should be given to the design and construction of a gravity sanitary sewer main extending eastward from the 48-inch diameter raw wastewater interceptor to a point 400 – 500 feet east of the interceptor for future development on the north side of Boulder Trail.



Note: North is to the right on the drawing above.

3. Sheet C4.02:
    a. On Sheet C4.02, we recommend constructing the sanitary sewer west of Manhole MH-1 in the center of the street until the sewer is directly south of the lift station, then turning north by use of a manhole and going into the lift station directly from the south. Going diagonally across the property immediately east of the lift station could cause conflicts with future developments.

4. Landscape Plans
    a. No comments.

5. Details & Specifications
    a. No comments.

6. Transportation
    a. Concept Boulder Trail extension to the east had been previously discussed. The City desires to review concept alignment for future extension of the roadway to the east to review grading tie-ins, for in the short term and the permanent stages.

    b. Vehicle access from Boulder Trail
        i. Coordinate site construction with Boulder Trail construction.

c. Fire official to review emergency access
    i. Provide emergency vehicle turning movements with access to all hydrants
d. Clarify the use of standard stalls in the bus lot.
    i. What and how will those be accessed for

Grading, Drainage, and Erosion Control Comments:

1. General
    a. A NPDES permit will be required since over an acre of disturbance is proposed.
    b. Signed plans will be required for final permit approval.
    c. Please combine the stormwater calculations and reports with narrative in a stormwater management plan document for ease of future review.
    d. Existing conditions and removals plan sheets are needed for the site.
    e. Clarify intended phasing of grading for the future extension of Boulder Trail eastward. Current plans rely on this grading to form the southern slope of the BMP basin, but do not indicate how grading will occur offsite.

2. Ponds and Wetlands
    a. Applicant to clarify how the Pond A NWL is intended to be 920 with an outlet elevation of 922.
    b. Native seeding must cover the infiltration basin surface.
    c. Defined maintenance routes to outfalls and BMPs must be specified on the plans. Removal of shrub plantings at outfalls is recommended for maintenance access.

3. Emergency Overflow Routes:
    a. Applicant to show the emergency overflow elevations and locations for all proposed basins and site low points on the plans.

4. Retaining Walls:
    a. Retaining walls exceeding 4’ in height shall require a plan prepared by a licensed engineer submitted for review and approval by the Building Official prior to permit issuance.

5. Erosion Control:
    a. An erosion control note must be included specifying that final infiltration basin excavation will only be graded once site stabilization has been achieved.
6. Grading:
    a. No comments.

Stormwater Management Plan:

1. General Storm Sewer Design
    a. Storm sewer capacity calculations must be provided to confirm storm sewer is sized for the 10-year storm event.
    b. The storm sewer profiles besides those on sheet C4.09 need labels.

i. Profiles must also include utility crossings. Insulation is needed for any crossings within 36” of vertical separation.

c. The furthest downstream storm sewer structure prior to draining to a pond must have a 3’ sump to capture sediment.
d. While the BMP OCS detail is provided, it is not shown in the utility plan sheets. Additionally, the inlet skimmer pipe and trunk manhole structures must be shown.
e. Pipes flowing to BMP inlets must be designed with maximum flow velocities of 6 ft/s. Current pipes are too steep.
f. Catchbasins 118, 130, and 228 appear to have undersized structure diameters considering the pipe sizes and angles proposed. Confirm constructability.
g. Parking lot concrete gutter pan section needs to as wide as or tapered to match width/depth of all curb inlet grates.
h. Revise the backsloped pipe from CB 219 to CB 218.
i. CB 229 is recommended to be shifted to provide greater horizontal separation from the sanitary manhole.
j. Connecting draintile to storm sewer is recommended where possible to reduce nuisance drainage concerns.

2. <u>Water Quantity</u>
   a. All drainage must be accounted for. Based on existing ground, it appears areas north of the site will surface flow onto the site.
   b. Proposed drainage area delineation must be revised to follow grading on the northwest region of the site. It is unclear how runoff there will be captured in site storm sewer.
   c. The drainage maps must be updated to include the offsite 107 acres draining to a future BMP.
   d. Applicant to provide further detail and mapping of local low points in snowmelt modeling.

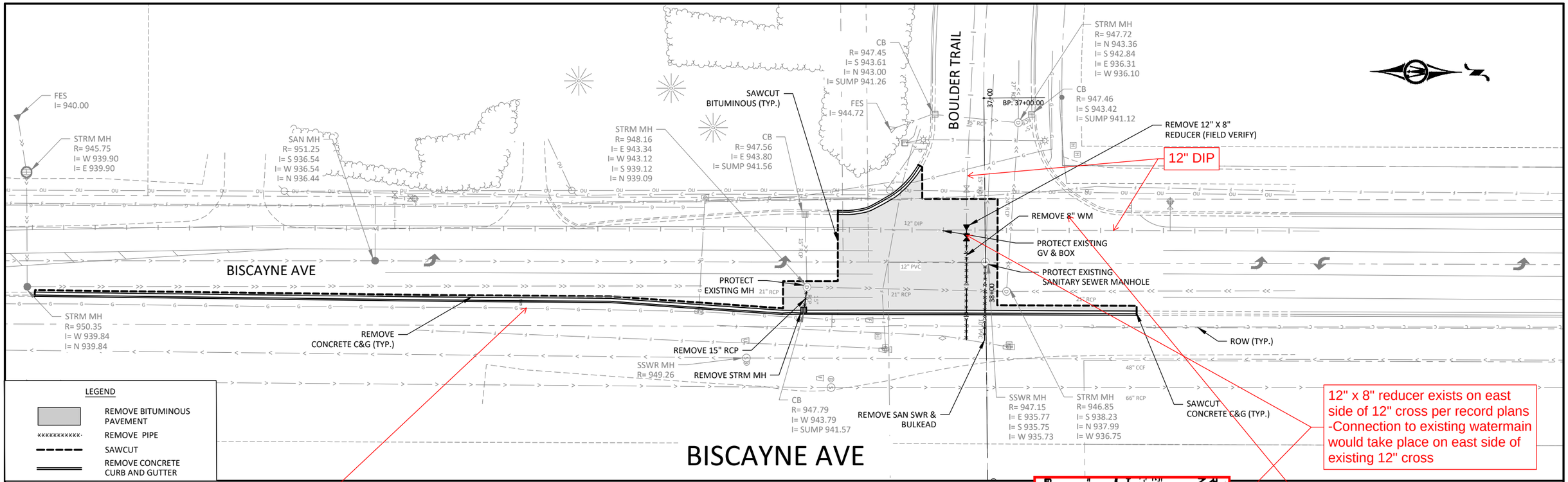
3. <u>Rate/Volume Control</u>
   a. Applicant to clarify the HydroCAD modeled EOF. It is unclear where flows go from there and how they may be impacted by future extension of Boulder Trail.
      i. Stage storage should also be extended up to this outflow device for accurate modeling in HydroCAD.
4. <u>Freeboard</u>
   a. No comments.

5. <u>Water Quality</u>
   a. Infiltration calculations must be provided based on City requirements of basin area (not counting basin side slopes) sized to 1/12 ac-ft/ac/day for the entire site area. The following formula can be used to determine this area:

$$Required\ Area\ (ac) = \frac{Site\ Area\ (ac)}{Infiltration\ Rate\ ({}^{in}/_{hr})} * 0.0416\ (conversion\ factor)$$

b. For design purposes, a maximum infiltration rate of 3 in/hr will be considered by the City Engineer based on the high infiltration rates demonstrated in the provided infiltrometer testing.
c. Final infiltration rates of the constructed basin will need to be shown as less than 8.3 in/hr based on NPDES permit requirements. Soils amendments will be required as needed to reach this upper limit.

6. Easements
   a. No comments for stormwater review based on plat documents dated July 26, 2024. Stormwater stormwater basins and storm trunk lines are bounded by sufficiently large D&U easements to capture the HWLs and pipe depth at 1:1 excavation slopes.
   b. Beyond what has been proposed for permanent easements for lift station purposes, construction easements may be required to accommodate construction of 30-foot deep lift station and gravity sewers.



HORZ. 0 25 50 SCALE FEET

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.

MATTHEW R. BLAZER, P.E.
LIC. NO. 56110 DATE MM/DD/YYYY

BOLTON & MENK

12224 NICOLLET AVENUE
BURNSVILLE, MN 55337
Phone: (952) 890-0509
Email: Burnsville@bolton-menk.com
www.bolton-menk.com

ROSEMOUNT MINNESOTA

DESIGNED	MB
DRAWN	JB
CHECKED	MB
CLIENT PROJ. NO.	1131812

NO.	ISSUED FOR	DATE

ROSEMOUNT, MINNESOTA
ISD 196 NEW MIDDLE SCHOOL
EXISTING CONDITIONS & REMOVALS
BOULDER TRAIL & BISCAYNE AVENUE

SHEET C0.01

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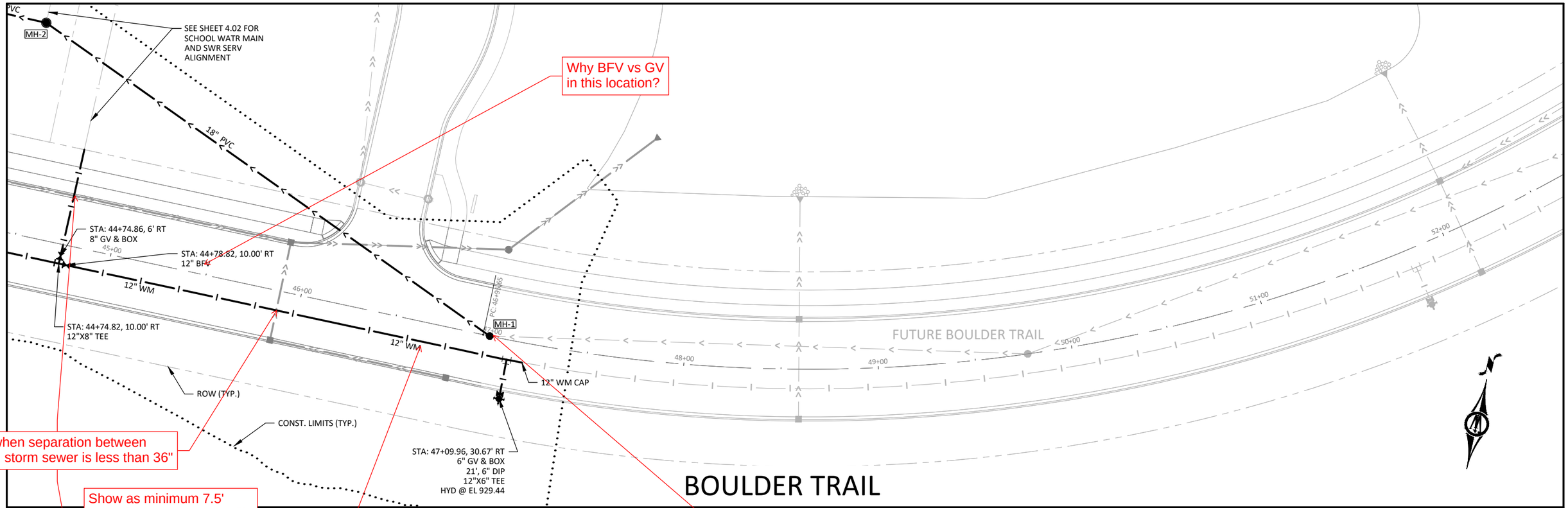
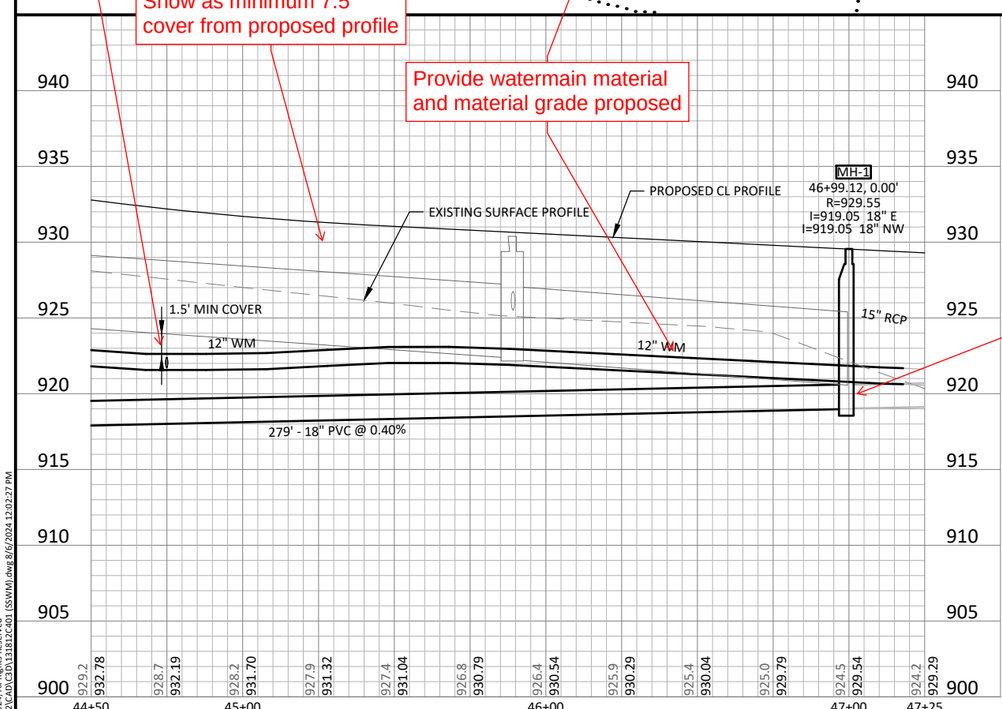


Insulate when separation between water and storm sewer is less than 36"

Show as minimum 7.5' cover from proposed profile

Provide watermain material and material grade proposed

Describe how manhole penetration to east will be blocked (short pipe w/ plug, etc.)



BOULDER TRAIL

HORZ. 0 25 50 SCALE FEET

VERT. 0 5 10 SCALE FEET

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.

MATTHEW R. BLAZER, P.E.
LIC. NO. 56110 DATE MM/DD/YYYY

BOLTON & MENK

12224 NICOLLET AVENUE
BURNSVILLE, MN 55337
Phone: (952) 890-0509
Email: Burnsville@bolton-menk.com
www.bolton-menk.com

ROSEMOUNT MINNESOTA

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CLIENT PROJ. NO.	1131812

NO.	ISSUED FOR	DATE

ROSEMOUNT, MINNESOTA
ISD 196 NEW MIDDLE SCHOOL
SANITARY & WATER PLAN & PROFILE
BOULDER TRAIL 44+50 - 47+00

SHEET C4.02

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Memorandum

To: Nick Egger, Director of Public Works
Anthony Nemcek, Senior Planner

From: Bill Alms, PE
Henry Meeker, EIT

Date: August 20, 2024

Re: Boulder Trail Extension Stormwater Review
WSB Project No. 026152-000

We have reviewed the documents provided by Bolton & Menk on August 6, 2024. Documents reviewed include:

- Boulder Trail Road Plans, dated 8/6/2024

Applicant should provide responses to each comment. I offer the following comments below.

Grading, Drainage, and Erosion Control Comments:

1. General
    a. A NPDES permit will be required since over an acre of disturbance is proposed.
    b. Signed plans will be required for final permit approval.
2. Ponds and Wetlands
    a. Future proposed outfalls into BMPs should be consolidated. Preliminary storm sewer shown to the east of project extents appears to have potential to be combined.
3. Emergency Overflow Routes:
    a. No comments.
4. Retaining Walls:
    a. Not applicable.
5. Erosion Control:
    a. A SWPPP is needed for the project.
    b. A stabilized construction exit is needed for the project.
    c. Inlet protection is needed for any inlets in pervious areas receiving runoff from disturbed soils.
6. Grading:
    a. Correct the drainage arrows on the erosion control sheet, some point uphill.

Stormwater Management Plan:

1. General Storm Sewer Design
    a. Storm sewer capacity calculations must be provided to confirm storm sewer is sized for the 10-year storm event.

701 XENIA AVENUE S | SUITE 300 | MINNEAPOLIS, MN | 55416 | 763.541.4800 | WSBENG.COM

   b. Spread and run calculations are needed to ensure compliance with State Aid design standards.
   c. Casting types and structure diameter must be provided for all storm sewer.
   d. Applicant to provide a detail of the proposed box culvert manholes.
   e. Pipes flowing to BMP inlets must be designed with maximum flow velocities of 6 ft/s. Current pipes are too steep.
   f. The watermain crossing near STA 44+75 must be shown in the profile.
   g. Insulation is needed at utility crossings with less than 36” of vertical separation.
2. Water Quantity
   a. Applicant to provide narrative describing how the roadway runoff factors into the regional BMP treatment.
3. Rate/Volume Control
   a. See the above comment about regional BMP treatment.
4. Freeboard
   a. No comments.
5. Water Quality
   a. See the above comment about regional BMP treatment.
6. Easements
   a. The current alignment and depth of pipe between structure 2 and 3 results in 1:1 excavation slopes for pipe maintenance outside of ROW extents. No action is needed, but this should be noted for future potential development of land south of Boulder Trail ROW.

ROSEMOUNT
PARKS AND RECREATION

M E M O R A N D U M

To: Adam Kienberger, Community Development Director
Anthony Nemcek, Senior Planner
Julia Hogan, Planner

From: Dan Schultz, Parks and Recreation Director

Date: August 20, 2024

Subject: ISD 196 Middle School Development

The Parks and Recreation Department recently reviewed the plans for the ISD 196 Middle School Development plans. After reviewing the plans, the Parks and Recreation Department staff has the following comments:

Trails and Sidewalks
Because Biscayne Avenue is identified in the Transportation section of the 2040 Comprehensive Plan as a Major Collector Road, staff is recommending the school district add a trail along the east side of Biscayne Avenue from the Biscayne Avenue and County Road 42 intersection to the district's southwest property corner. This request is consistent with other Major Collectors such as Shannon Parkway, Connemara Trail and Chippendale Avenue.

Parks Dedication
Staff are recommending that park dedication not be collected due to the public recreation spaces being created by the ISD 196 development plans for the middle school. Public ballfields, outdoor track and greenspaces are all part of the plans submitted by ISD 196.

Please let me know if you have any questions about this memo.

File #193807025
August 22, 2024

Traffic Study for a Proposed Middle School in Rosemount, MN

Prepared for:

Independent School District 196

3455 153rd St W
Rosemount, MN 55068

Prepared by:

Stantec Consulting Services Inc.
One Carlson Pkwy, #100
Plymouth, MN 55447Phone: 7963-479-4200
Fax: 763-479-4242

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I hereby certify that this 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: August 22, 2024

Edward F. Terhaar
License No. 24441

1.0 Executive Summary

The purpose of this Traffic Study is to evaluate the impacts of a proposed new middle school in Rosemount, MN. The project site is located in the southeast quadrant of the CSAH 42/Biscayne Avenue intersection.

This study examined weekday a.m. and p.m. peak hour traffic impacts of the proposed project at the following intersections:

- CSAH 42/Biscayne Avenue
- CSAH 42/Business Parkway
- CSAH 42/145th Street W
- CSAH 46/Biscayne Avenue
- Biscayne Avenue/145th Street W
- Biscayne Avenue/Boulder Trail

The study also includes a review of pedestrian and bicycle connection impacts related to the proposed project.

The proposed project includes the construction of a new 1,350 student middle school. Access for the project site will be via one driveway onto Boulder Trail east of Biscayne Avenue. The project will include approximately 198 vehicle parking stalls and 35 bus parking stalls. Boulder Trail will be extended east of Biscayne Avenue to the proposed access location in conjunction with construction of the proposed school. The roadway will be extended further east as future development occurs.

The school day for students will begin at 8:20 a.m. and end at 3:10 p.m. School district staff indicated that 100% of the students will reside in the bussing attendance area of the school. The school is expected to be complete in the fall of 2027.

The peak hours for school traffic are 7:30-8:30 a.m. and 3:00-4:00 p.m.. The a.m. peak is the same as the peak hour of adjacent traffic while the p.m. peak hour is earlier than the peak hour of adjacent traffic (4:15-5:15 p.m.).

The conclusions drawn from the information and analyses presented in this report are as follows:

- The proposed school is expected to generate 765 trips during the a.m. peak hour (7:30-8:30 a.m.), 416 trips during the p.m. peak hour (3:00-4:00 p.m.), and 2,323 trips daily.

- Under 2024 and 2027 No-Build conditions, the northbound and southbound left turns at CSAH 42/Biscayne Avenue experience higher delay levels due to the amount of through traffic on CSAH 42. Other intersections included in the study operate at acceptable levels.

- Under 2027 Build conditions, traffic operations at CSAH 42/Biscayne Avenue deteriorate to level of service F with traffic added from the middle school. Other intersections included in the study continue to operate at acceptable levels.

- A review of crash data at the study intersection revealed the following:
    - At CSAH 42/Biscayne Avenue, the calculated crash rate is greater than the statewide average and greater than the critical rate. An observed crash rate greater than the critical rate indicates that the intersection operates outside the expected, normal range. Crash reduction strategies such as changes to intersection control, intersection lighting, and increased visibility signing may be needed at this location.

    - At CSAH 42/Business Parkway and Biscayne Avenue/145th Street W, the calculated rate is less than the statewide average and less than the critical rate. This intersection operates within the expected range.

    - At CSAH 42/145th Street W and Biscayne Avenue/Boulder Trail, the calculated rate is slightly greater than the statewide average but less than the critical rate. This intersection operates within the expected range.

    - At CSAH 46/Biscayne Avenue, the calculated rate is greater than the statewide average but less than the critical rate. This intersection operates within the expected range.

- The current site plan shows pedestrian facilities within the site and near the proposed school. Adequate pedestrian connections are shown within the site to connect the school building with the parking lot and the other amenities, including the athletic facilities and other building access points.

- Adequate connections to the surrounding sidewalk and trail system will be needed to accommodate students that walk and bike to school. Depending on the routes students use, additional sidewalks or trails may be needed along the streets near the site. Further detailed review of these pedestrian routes by the City and School District is recommended to develop a detailed pedestrian plan for this area prior to opening the school, including along CSAH 42.

- At Biscayne Avenue/Boulder Trail, striped pedestrian crossings should be provided on all legs. At CSAH 42/Biscayne Avenue, all legs should include striped pedestrian crossings in conjunction with future traffic signal control.

- The following improvements are recommended to accommodate the proposed middle school:

    - CSAH 42/Biscayne Avenue
        - Install traffic signal control.
        - Provide pedestrian signals and striped crosswalks on all legs.

    - Biscayne Avenue/Boulder Trail
        - Extend Boulder Trail east to the proposed access location with one lane in each direction.
        - Preserve right-of-way on the east leg for future addition of westbound left and right turn lanes.
        - Provide striped crosswalks.
        - Review traffic operations as the surrounding area develops to determine if intersection geometric and control changes are needed in the future.

- Boulder Trail/site access
    - Provide dedicated eastbound left turn lane on Boulder Trail.
    - Provide dedicated westbound right turn lane on Boulder Trail.
    - Provide two exiting lanes, with one left turn and one right turn lane.

- Level of service results under 2027 Build conditions with traffic signal control installed at CSAH 42/Biscayne Avenue are as follows:

    - A.M. peak hour – Overall intersection operates at LOS C and all movements operate at LOS C or better. All vehicle queues are contained within the existing turn lane lengths.

    - P.M. peak hour – Overall intersection operates at LOS B and all movements operate at LOS C or better. All vehicle queues are contained within the existing turn lane lengths.

2.0 Purpose and Background

The purpose of this Traffic Study is to evaluate the impacts of a proposed new middle school in Rosemount, MN. The project site is located in the southeast quadrant of the CSAH 42/Biscayne Avenue intersection. The project location is shown in **Figure 1**.

This study examined weekday a.m. and p.m. peak hour traffic impacts of the proposed project at the following intersections:

- CSAH 42/Biscayne Avenue
- CSAH 42/Business Parkway
- CSAH 42/145th Street W
- CSAH 46/Biscayne Avenue
- Biscayne Avenue/145th Street W
- Biscayne Avenue/Boulder Trail

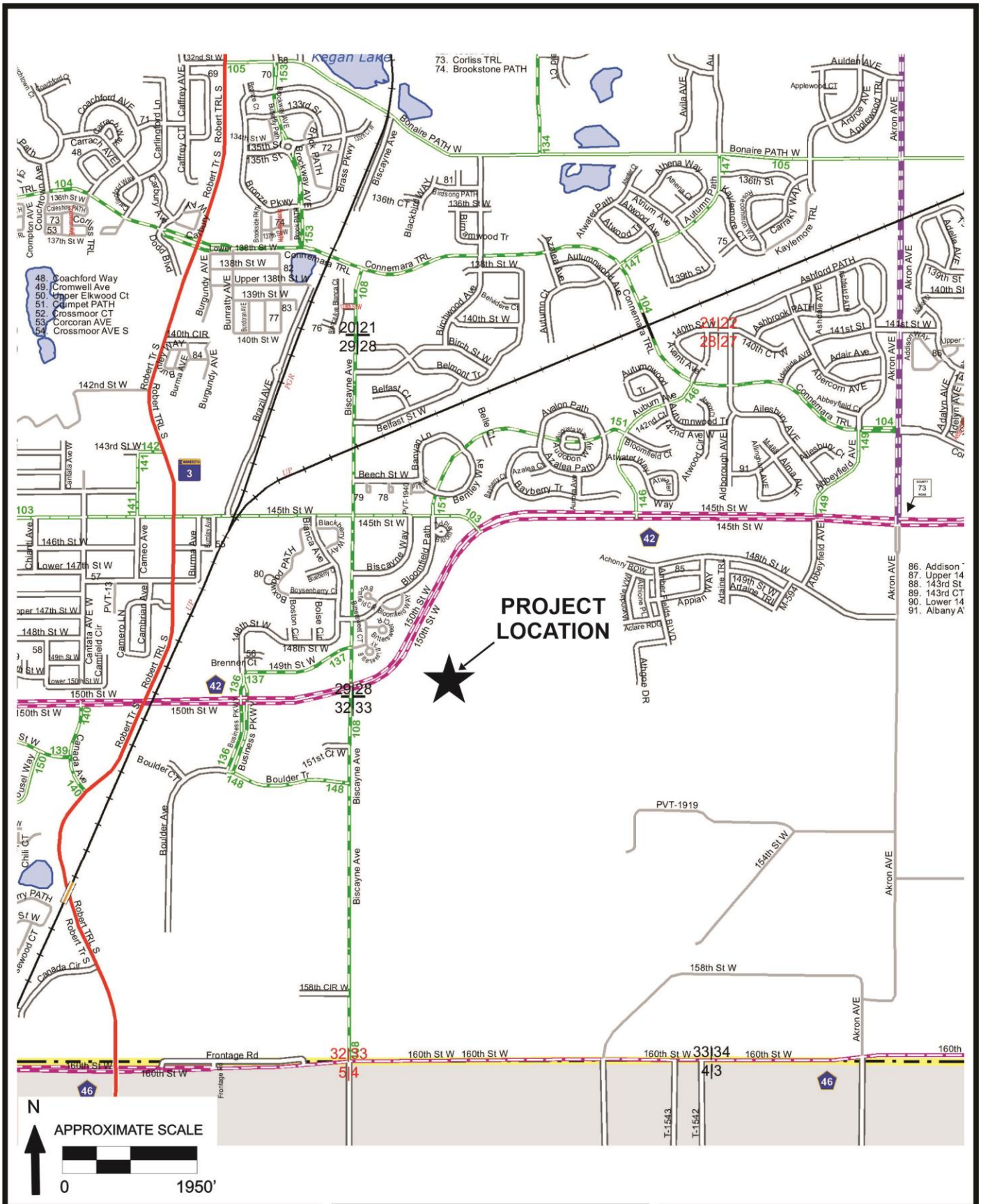
The study also includes a review of pedestrian and bicycle connection impacts related to the proposed project.

Project Characteristics

The proposed project includes the construction of a new 1,350 student middle school. Access for the project site will be via one driveway onto Boulder Trail east of Biscayne Avenue. The project will include approximately 198 vehicle parking stalls and 35 bus parking stalls. Boulder Trail will be extended east of Biscayne Avenue to the proposed access location in conjunction with construction of the proposed school. The roadway will be extended further east as future development occurs. The proposed site plan is shown in **Figure 2**.

The school day for students will begin at 8:20 a.m. and end at 3:10 p.m. The school day for students will begin at 8:20 a.m. and end at 3:10 p.m. School district staff indicated that 100% of the students will reside in the bussing attendance area of the school. The school is expected to be complete in the fall of 2027.

The peak hours for school traffic are 7:30-8:30 a.m. and 3:00-4:00 p.m.. The a.m. peak is the same as the peak hour of adjacent traffic while the p.m. peak hour is earlier than the peak hour of adjacent traffic (4:15-5:15 p.m.).



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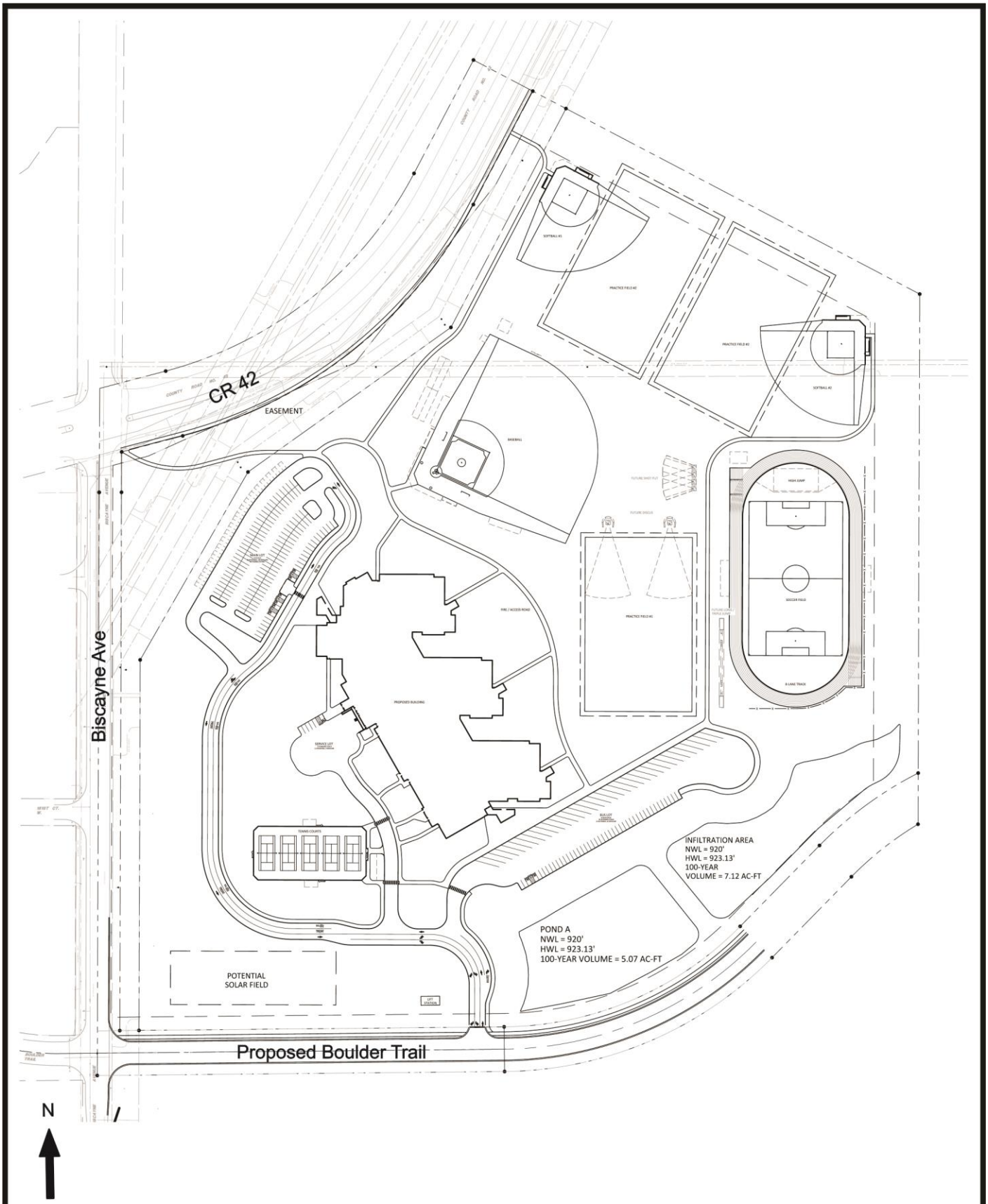
TRAFFIC STUDY FOR
MIDDLE SCHOOL
IN ROSEMOUNT, MN

FIGURE 1

PROJECT LOCATION



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IN ROSEMOUNT, MN

FIGURE 2

SITE PLAN

3.0 Existing Conditions

The proposed project site is currently undeveloped open space. The site is bounded by CSAH 42 on the north, Biscayne Avenue on the west, and undeveloped land to the east and south.

Near the site location, CSAH 42 is a four lane divided roadway with turn lanes at major intersections. Biscayne Avenue is a three lane roadway with a center left turn lane. Boulder Trail is a two lane local roadway that currently only extends west from Biscayne Avenue.

Existing conditions near the proposed project location are shown in **Figure 3** and described below.

CSAH 42/Biscayne Avenue

This four-way intersection is controlled with stop signs on the northbound and southbound approaches. The eastbound approach provides one left turn lane, two through lanes, and one right turn lane. The westbound approach provides one left turn, two through lanes, and one through/right turn. The northbound and southbound approaches provide one left turn lane and one through/right turn lane.

CSAH 42/Business Parkway

This four-way intersection is controlled with stop signs on the northbound and southbound approaches. The eastbound and westbound approaches provide one left turn lane, two through lanes, and one right turn lane. The northbound approach provides one left turn lane and one through/right turn lane. The southbound approach provides one left turn/through lane and one through/right turn lane.

CSAH 42/145th Street W

This three-way intersection is controlled with a stop sign on the southeast bound approach. The southeast bound approach provides one left turn/right turn lane. The northeast bound approach provides one left lane and two through lanes. The southwest bound approach provides one right turn lane and two through lanes.

CSAH 46/Biscayne Avenue

This four-way intersection is controlled with stop signs on the northbound and southbound approaches. The eastbound and westbound approaches provide one left turn lane, one through lane, and one right turn lane. The northbound and southbound approaches provide one left turn/through lane and one right turn lane.

Biscayne Avenue/145th Street W

This four-way intersection is controlled with stop signs on all approaches. The eastbound and westbound approaches provide one left turn/through/right turn lane. The northbound and southbound approaches provide one left turn and one through/right turn lane.

Biscayne Avenue/Boulder Trail

This three-way intersection is controlled with a stop sign on the eastbound approach. The eastbound approach provides one left turn/right turn lane. The northbound approach provides one left turn lane and one through lane. The southbound approach provides one through/right turn lane and a left turn lane for the future east leg.

Traffic Volume Data

Weekday traffic volume data was recorded at the existing intersections on Thursday, May 2 2024 from 6:00 a.m. to 7:00 p.m. to capture the peak periods for school traffic. In addition, traffic volume data was collected at intersections near the existing middle school located at 3135 143rd Street W. on the same day to document existing traffic operations.

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FIGURE 3

EXISTING CONDITIONS

4.0 Traffic Forecasts

Traffic Forecast Scenarios

To adequately address the impacts of the proposed project, forecasts and analyses were completed for the year 2027. Specifically, weekday a.m. and p.m. peak hour traffic forecasts were completed for the following scenarios:

- *2024 Existing*. Existing volumes were determined through traffic counts at the subject intersections. The existing volume information includes trips generated by existing uses near the project site.

- *2027 No-Build*. Existing volumes were increased by 2.2 percent per year to account for background growth in the surrounding area. The growth rate was based on historic growth in the area and traffic forecast information presented in the City of Rosemount 2040 Comprehensive Plan.

- *2027 Build*. Trips generated by the proposed school were added to the 2027 No-Build volumes to determine 2027 Build volumes.

Trip Generation for Proposed Project

The expected new trips were calculated using data collected at the existing Rosemount Middle School, which is adjacent to Rosemount Elementary School. Under existing conditions, the school day for elementary students begins at 9:30 a.m. and ends at 3:50 p.m., while the school day for middle school students begins at 8:20 a.m. and ends at 3:10 p.m. In order to account for potential overlap with traffic associated with Rosemount Elementary School, traffic volumes collected at the Middle School were adjusted using detailed information on activities that occur prior to the elementary school start time of 9:30 a.m. Based on this information, 100 entering and 100 exiting trips were removed from the total volumes during the 7:30 to 8:30 peak hour for the middle school to account for the before school program and other early drop-off activities. During the p.m. time period, a distinct peak occurs at 3:15 p.m., which corresponds to the 3:10 p.m. dismissal time. These volumes were used as a best estimate for the p.m. peak hour that will occur at the new location.

The resultant trip generation estimates are shown in **Table 4-1**.

Table 4-1
Weekday Trip Generation for Proposed Middle School Using Traffic Volumes from Rosemount Middle School

Land Use	Size	Weekday AM Peak Hour 7:30 to 8:30 a.m.			Weekday PM Peak Hour 3:00 to 4:00 p.m.			Weekday Daily
		In	Out	Total	In	Out	Total	Total
Parent drop-off/pick-up and employees	1,350 students	390	311	701	160	192	352	2195
Buses	32 buses	32	32	64	32	32	64	128
Totals		**422**	**343**	**765**	**192**	**224**	**416**	**2323**

For comparison purposes, the expected new trips were also calculated based on data presented in Trip Generation, Eleventh Edition, published by the Institute of Transportation Engineers. The resultant trip generation estimates are shown in **Table 4-2**.

Table 4-2
Weekday Trip Generation for Proposed Middle School Using ITE Data

Land Use	Size	Weekday AM Peak Hour 7:30 to 8:30 a.m.			Weekday PM Peak Hour 3:00 to 4:00 p.m.			Weekday Daily
		In	Out	Total	In	Out	Total	Total
Middle School (ITE 522)	1,350 students	488	417	905	224	262	486	2835

The data collected at the existing middle school accounts for the transportation modes specific to this site. Therefore, the total a.m. and p.m. peak hour trips shown in Table 4-1 calculated using the existing school data were used for the traffic forecasts.

Trip Distribution Percentages for the Middle School

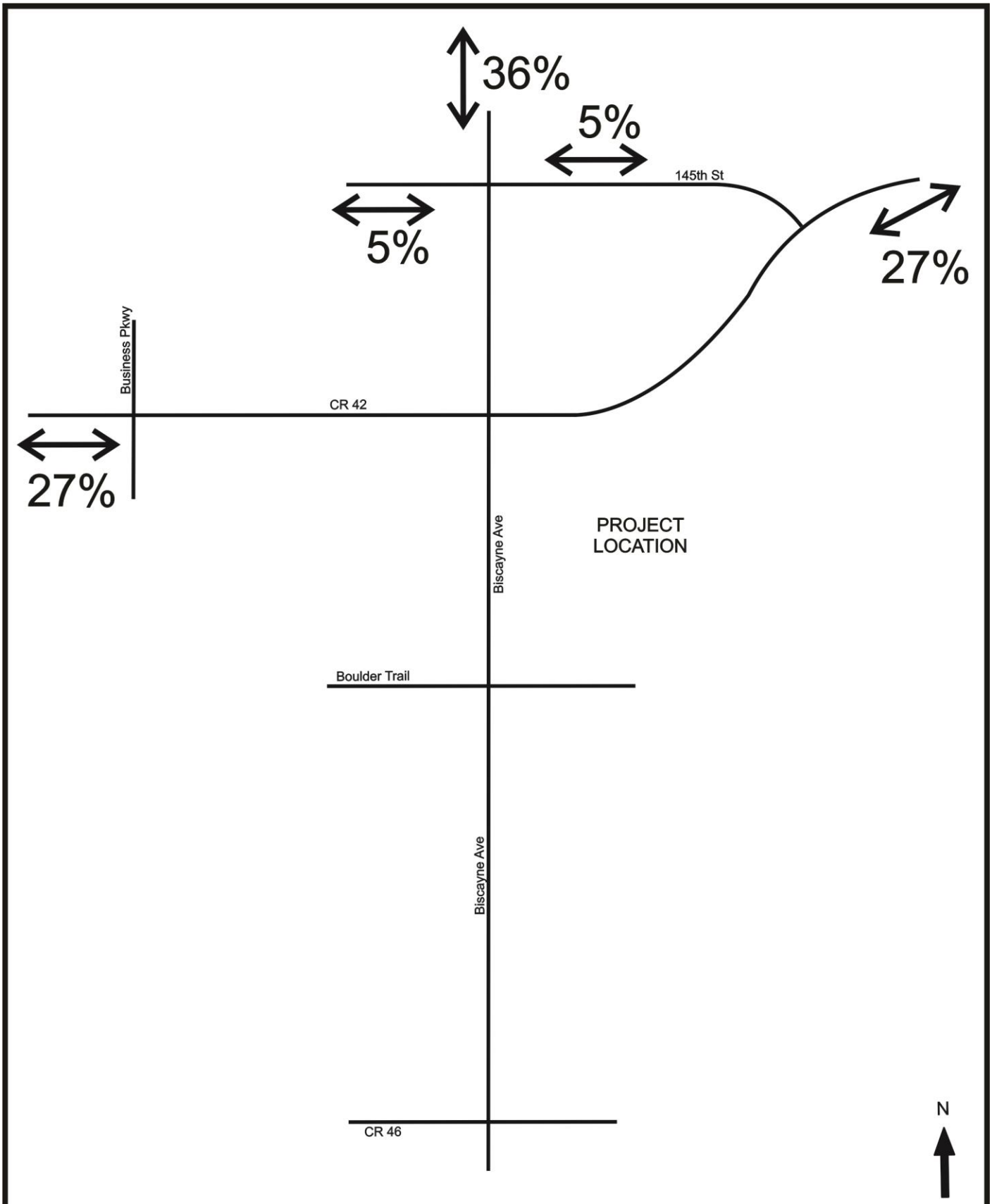
Trip distribution percentages for the school trips were established based on the detailed attendance area information for the school and patterns observed at the existing middle school. The trip distribution percentages are described below and are shown in **Figure 4**:

- 27 percent to/from the east on CSAH 42
- 27 percent to/from the west on CSAH 42
- 36 percent to/from the north on Biscayne Avenue
- 5 percent to/from the west on 145th Street
- 5 percent to/from the east on 145th Street

The middle school attendance areas are shown in **Figure 5**. The attendance area for Rosemount middle school will remain the same as existing after relocation to the new site. The vast majority of students live north and west of proposed school site, with no significant numbers of students located in the southern or eastern portions of the attendance area.

Traffic Volumes

Development trips from Table 4-1 were assigned to the surrounding roadway network using the preceding trip distribution percentages. Traffic volumes were established for all the forecasting scenarios described earlier during the weekday a.m. and p.m. peak hours. The resultant peak hour volumes are shown in **Figures 6, 7, and 8**.



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IN ROSEMOUNT, MN

FIGURE 4

TRIP DISTRIBUTION PERCENTAGES

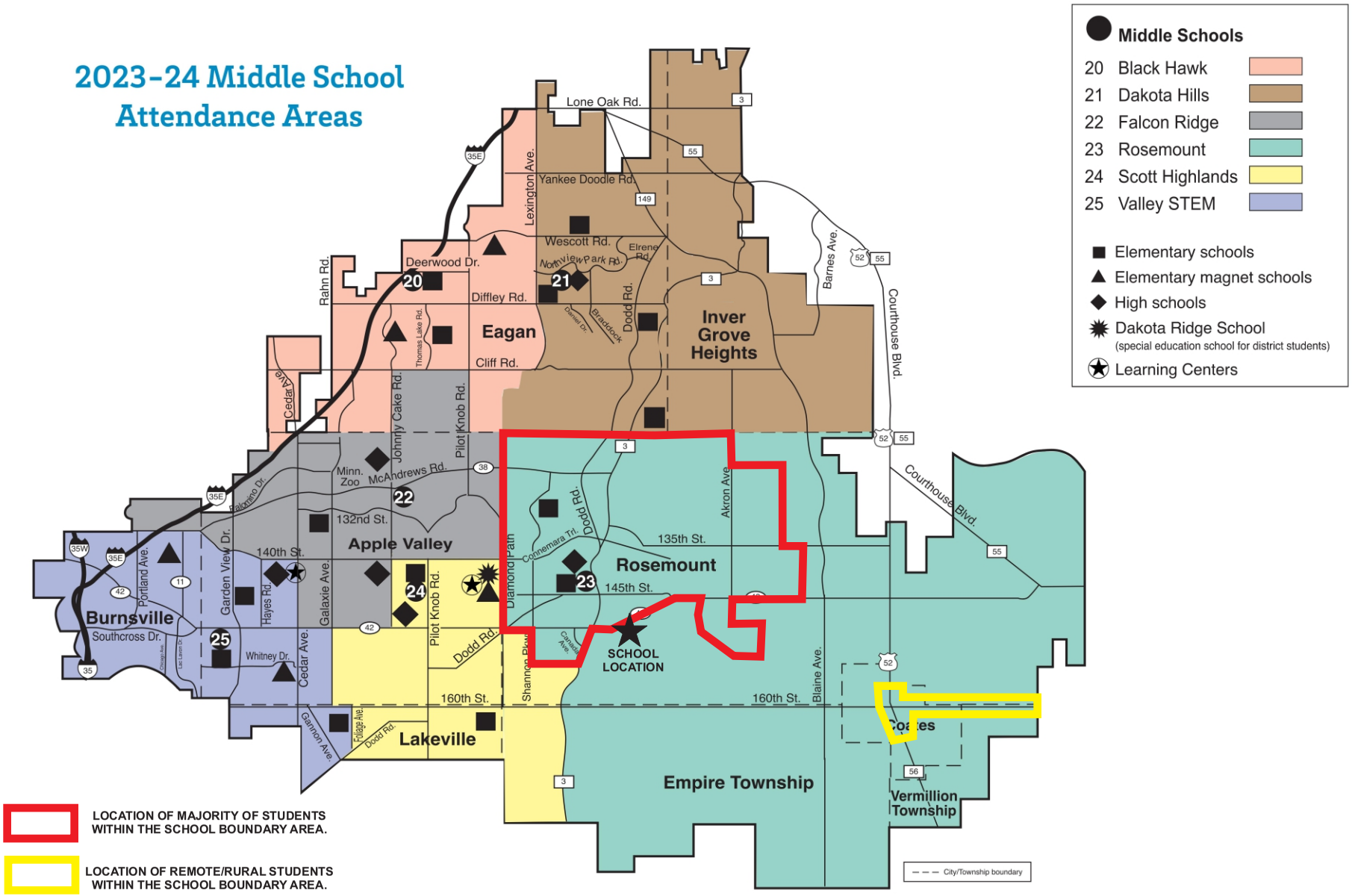

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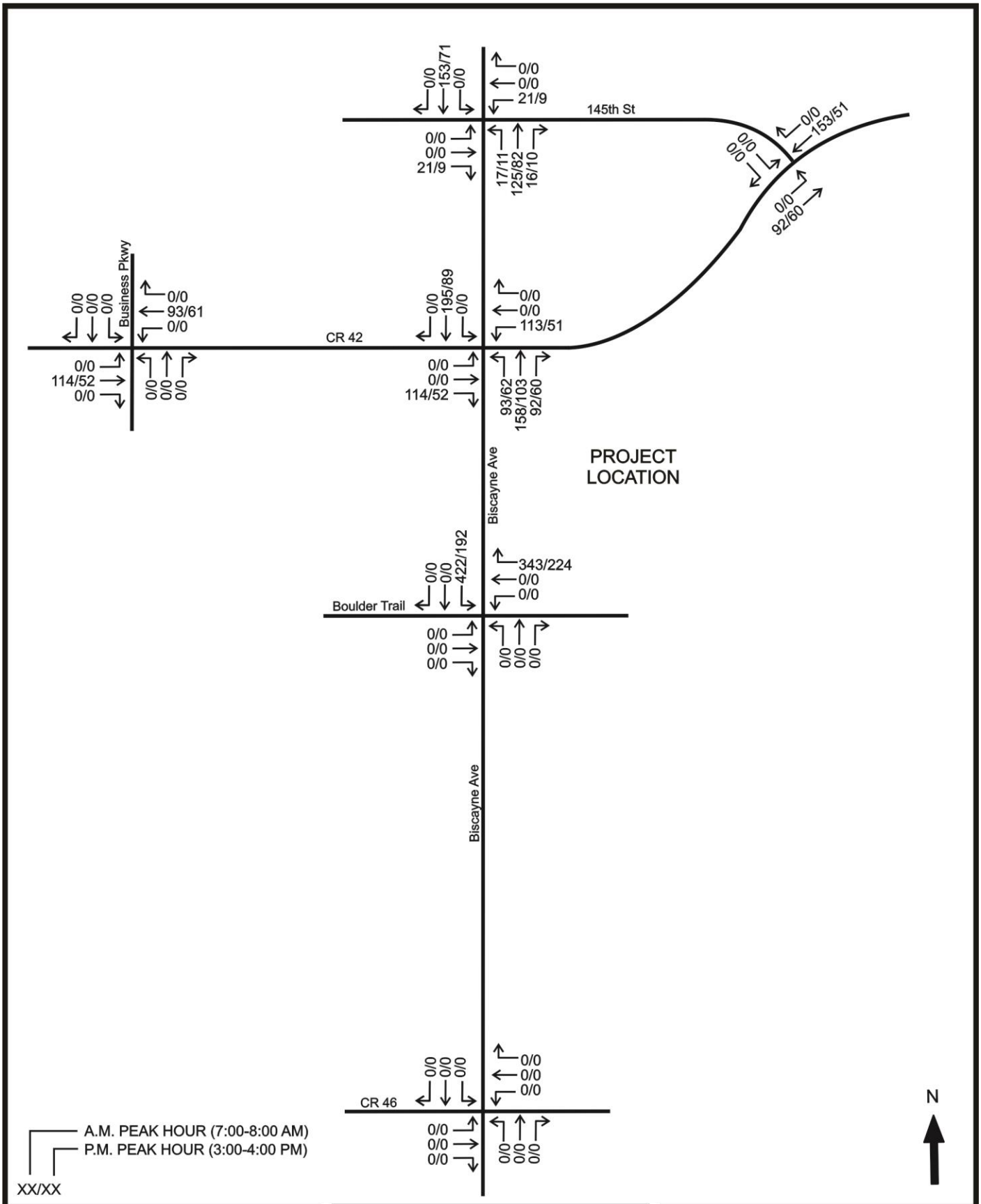
FIGURE 5

MIDDLE SCHOOL ATTENDANCE AREAS



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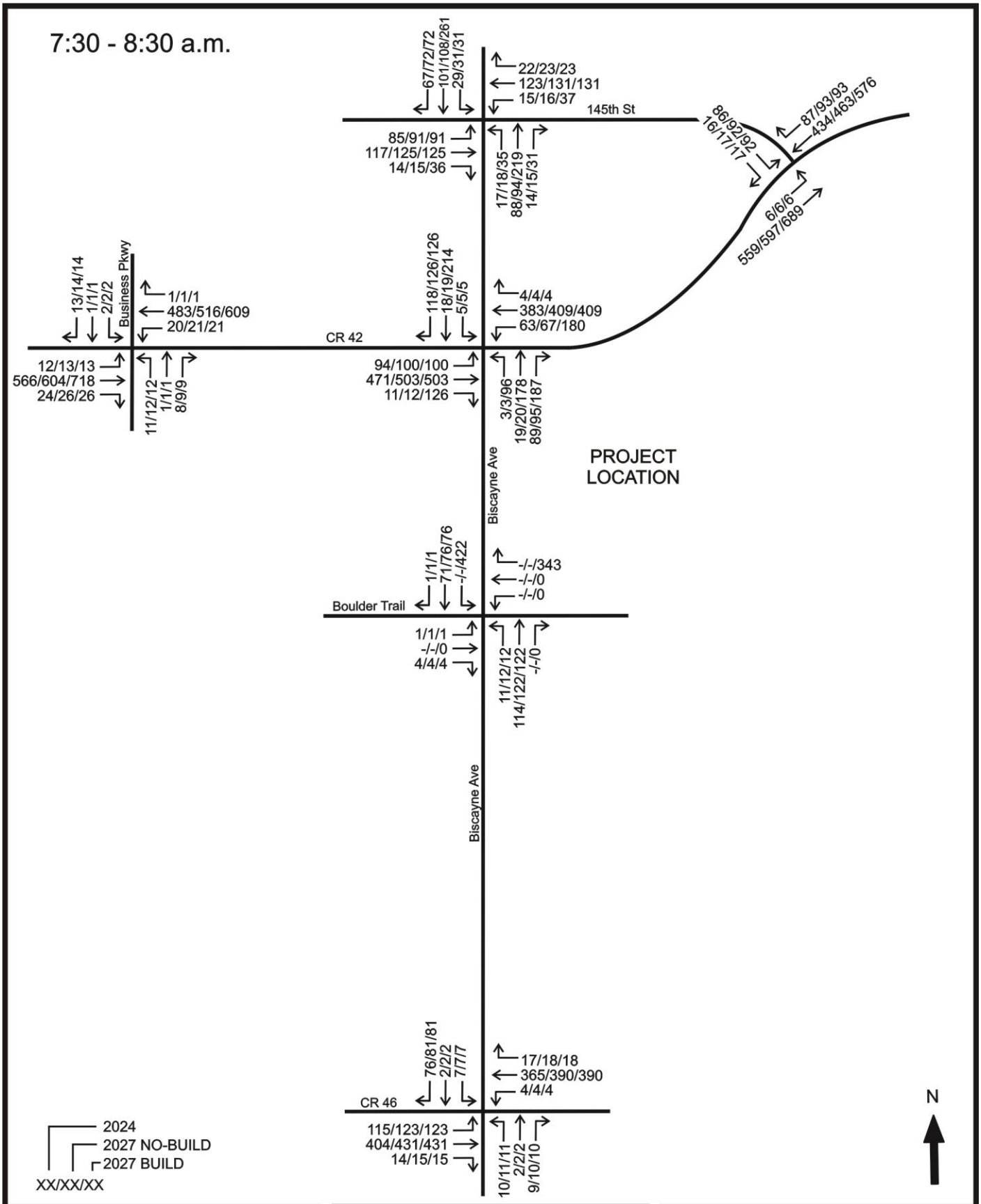
MIDDLE SCHOOL
IN ROSEMOUNT, MN

FIGURE 6

WEEKDAY A.M. AND P.M. PEAK HOUR TRIPS



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MIDDLE SCHOOL
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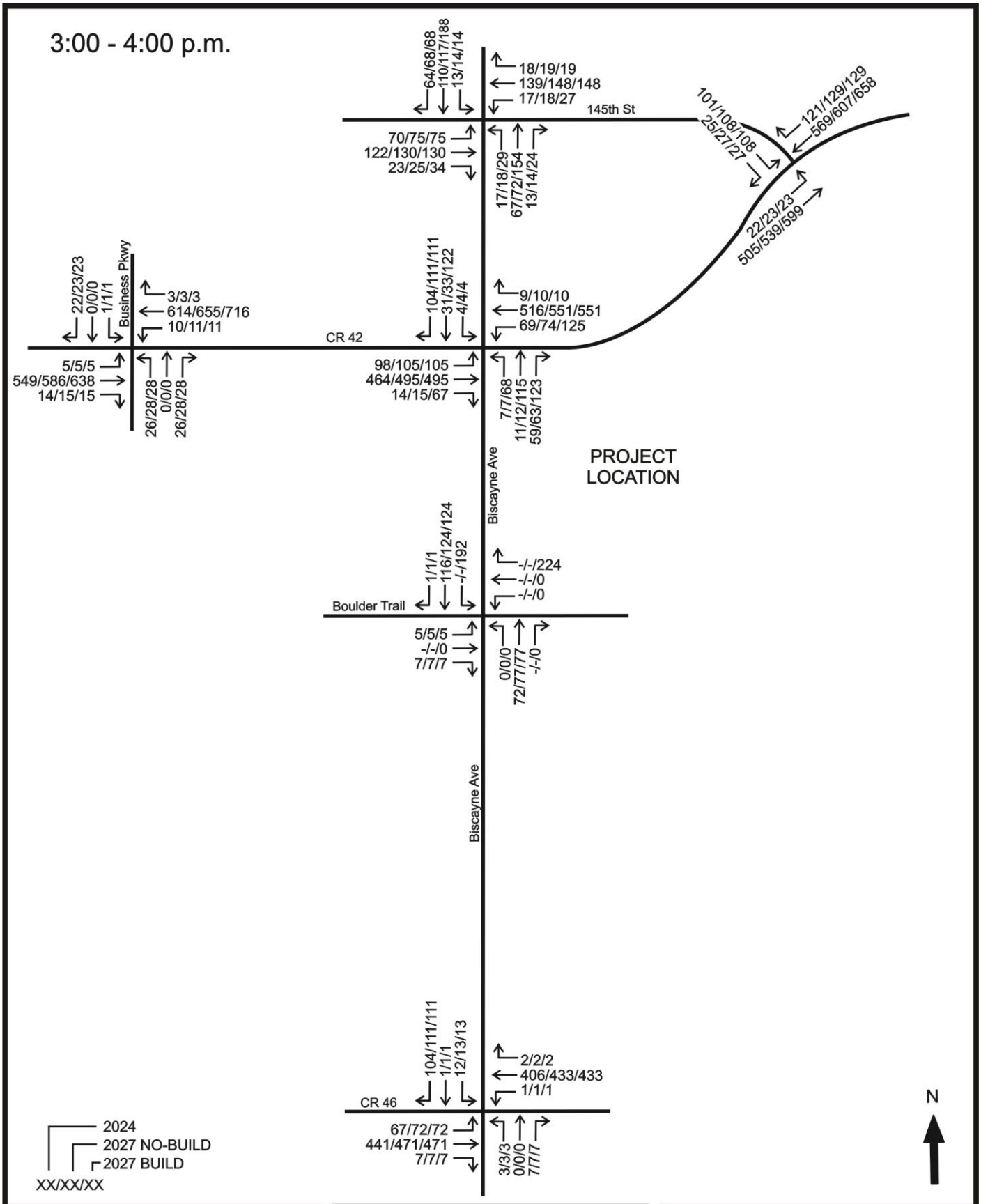
FIGURE 7

**WEEKDAY A.M.
PEAK HOUR VOLUMES**



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MIDDLE SCHOOL
IN ROSEMOUNT, MN

FIGURE 8

**WEEKDAY P.M.
PEAK HOUR VOLUMES**

5.0 Traffic Analysis

Intersection Level of Service Analysis

Traffic analyses were completed for the subject intersections for all scenarios described earlier during the weekday a.m. and p.m. peak hours using Synchro software. Initial analysis was completed using existing geometrics and intersection control. For the 2027 Build analysis at Biscayne Avenue/Boulder Trail, the following intersection geometrics were used:

- Northbound approach – One left turn lane and one through/right turn lane.
- Southbound approach – One left turn lane and one through/right turn lane.
- Eastbound approach – One left turn/through/right turn lane.
- Westbound approach – One left turn/through/right turn lane.

Capacity analysis results are presented in terms of level of service (LOS), which is defined in terms of traffic delay at the intersection. LOS ranges from A to F. LOS A represents the best intersection operation, with little delay for each vehicle using the intersection. LOS F represents the worst intersection operation with excessive delay. In accordance with Minnesota Department of Transportation (MnDOT) guidelines, this analysis used the LOS D/E boundary as an indicator of acceptable traffic operations. The following is a detailed description of the conditions described by each LOS designation:

- Level of service A corresponds to a free flow condition with motorists virtually unaffected by the intersection control mechanism. For a signalized or an unsignalized intersection, the average delay per vehicle would be approximately 10 seconds or less.

- Level of service B represents stable flow with a high degree of freedom, but with some influence from the intersection control device and the traffic volumes. For a signalized intersection, the average delay ranges from 10 to 20 seconds. An unsignalized intersection would have delays ranging from 10 to 15 seconds for this level.

- Level of service C depicts a restricted flow which remains stable, but with significant influence from the intersection control device and the traffic volumes. The general level of comfort and convenience changes noticeably at this level. The delay ranges from 20 to 35 seconds for a signalized intersection and from 15 to 25 seconds for an unsignalized intersection at this level.

- Level of service D corresponds to high-density flow in which speed and freedom are significantly restricted. Though traffic flow remains stable, reductions in comfort and convenience are experienced. The control delay for this level is 35 to 55 seconds for a signalized intersection and 25 to 35 seconds for an unsignalized intersection.

- Level of service E represents unstable flow of traffic at or near the capacity of the intersection with poor levels of comfort and convenience. The delay ranges from 55 to 80 seconds for a signalized intersection and from 35 to 50 seconds for an unsignalized intersection at this level.

- Level of service F represents forced flow in which the volume of traffic approaching the intersection exceeds the volume that can be served. Characteristics often experienced include long queues, stop-and-go waves, poor travel times, low comfort and convenience, and increased accident exposure. Delays over 80 seconds for a signalized intersection and over 50 seconds for an unsignalized intersection correspond to this level of service.

The LOS results are described below. All LOS worksheets are included in the Appendix for further detail.

2024 Existing

Weekday 7:30-8:30 A.M. and 3:00-4:00 P.M. Peak Hour LOS Results

Intersection	Traffic Control	AM Peak Hour LOS	PM Peak Hour LOS
CSAH 42/Biscayne Avenue	NB/SB stop	A/E	A/F
CSAH 42/Business Parkway	NB/SB stop	A/D	A/C
CSAH 42/145th Street W	SEB stop	A/C	A/D
CSAH 46/Biscayne Avenue	NB/SB stop	A/D	A/D
Biscayne Avenue/145th Street W	All-Way stop	B/B	B/B
Biscayne Avenue/Boulder Trail	EB stop	A/A	A/A

Note: Level of service results presented with overall intersection LOS followed by worst movement LOS.

At CSAH 42/Biscayne Avenue, the overall intersection operates at LOS A during both time periods while the northbound and southbound left turns operate at LOS E during the a.m. peak hour and LOS F during the p.m. peak hour. At all other intersections, all intersections operate at LOS B or better and all movements operate at LOS D or better during the a.m. and p.m. peak hours.

2027 No-Build

Weekday 7:30-8:30 A.M. and 3:00-4:00 P.M. Peak Hour LOS Results

Intersection	Traffic Control	AM Peak Hour LOS	PM Peak Hour LOS
CSAH 42/Biscayne Avenue	NB/SB stop	A/F	A/F
CSAH 42/Business Parkway	NB/SB stop	A/D	A/D
CSAH 42/145th Street W	SEB stop	A/C	A/E
CSAH 46/Biscayne Avenue	NB/SB stop	A/E	A/D
Biscayne Avenue/145th Street W	All-Way stop	B/B	B/B
Biscayne Avenue/Boulder Trail	EB stop	A/A	A/A

Note: Level of service results presented with overall intersection LOS followed by worst movement LOS.

At CSAH 42/Biscayne Avenue, the overall intersection operates at LOS A during both time periods while the northbound and southbound left turns operate at LOS F during the a.m. and p.m. peak hours. At all other intersections, all intersections operate at LOS B or better and all movements operate at LOS E or better during the a.m. and p.m. peak hours.

2027 Build

Weekday 7:30-8:30 A.M. and 3:00-4:00 P.M. Peak Hour LOS Results

Intersection	Traffic Control	AM Peak Hour LOS	PM Peak Hour LOS
CSAH 42/Biscayne Avenue	NB/SB stop	F/F	F/F
CSAH 42/Business Parkway	NB/SB stop	A/E	A/D
CSAH 42/145th Street W	SEB stop	A/E	A/E
CSAH 46/Biscayne Avenue	NB/SB stop	A/E	A/D
Biscayne Avenue/145th Street W	All-Way stop	D/E	B/C
Biscayne Avenue/Boulder Trail	EB/WB stop	A/E	A/C

Note: Level of service results presented with overall intersection LOS followed by worst movement LOS.

During the a.m. peak hour at CSAH 42/Biscayne Avenue, the overall intersection operates at LOS F and the northbound and southbound movements operate at LOS F. All other movements operate at LOS B or better. At all other intersections, all intersections operate at LOS D or better and all movements operate at LOS E or better.

During the p.m. peak hour at CSAH 42/Biscayne Avenue, the overall intersection operates at LOS F and the northbound and southbound movements operate at LOS F. All other movements operate at LOS A. At all other intersections, all intersections operate at LOS B or better and all movements operate at LOS E or better.

Overall Traffic Impacts

Under 2024 and 2027 No-Build conditions, the northbound and southbound left turns at CSAH 42/Biscayne Avenue experience higher delay levels due to the amount of through traffic on CSAH 42. Other intersections included in the study operate at acceptable levels.

Under 2027 Build conditions, traffic operations at CSAH 42/Biscayne Avenue deteriorate to level of service F with traffic added from the middle school. Other intersections included in the study continue to operate at acceptable levels.

Vehicle Queuing

Under 2024 and 2027 No-Build conditions, all vehicle queues at all intersections are contained within the existing turn lane lengths.

Under 2027 Build conditions at the CSAH 42/Biscayne Avenue intersection with existing stop sign control, the northbound and southbound left turn queues exceed the existing turn lane lengths during the a.m. peak hour. During the p.m. peak hour, the southbound left turn queue exceeds the existing turn lane length while the northbound left turn queue length is contained. All vehicle queues at all other intersections are contained within the existing turn lane lengths.

Detailed vehicle queuing information included in the Appendix.

Internal Site Layout

The main parking lot is located in the northwest potion of the site and is connected to Boulder Trail with a 1,400 foot access road. The access road includes two entry lanes, with one lane for through traffic and the other for drop-off and pick-up traffic. The lane dedicated to drop-off and pick-up traffic is approximately 1,300 feet in length. Observations

at the existing middle school site indicate a maximum queue of approximately 1,100 feet during the a.m. peak hour and 800 feet during the p.m. peak hour. Assuming similar operations occur at the new site, the queuing space provided for these activities is expected to be adequate.

After leaving the main building entry, vehicles either access the parking lot or leave the site via the access road. The access road provides one exit lane, which divides to two lanes approximately 500 feet before intersecting with Boulder Trail. At Boulder Trail, the southbound approach consists of separate left turn and right turn lanes to accommodate exiting traffic.

The bus parking lot is located 275 feet north of Boulder Trail and is separate from the main parking lot. A right turn lane is provided on the access road to accommodate entering buses. Buses exit the lot directly onto the access road into the turn lanes at Boulder Trail.

Pedestrian and Bicycle Needs

Under existing conditions, a trail is provided on the west side of Biscayne Avenue from Boulder Trail north to CSAH 42. The trail extends north of CSAH 42 to 145th Street W. No other trails or sidewalks are provided in the immediate location of the proposed school.

The current site plan shows pedestrian facilities within the site and near the proposed school. Adequate pedestrian connections are shown within the site to connect the school building with the parking lot and the other amenities, including the athletic facilities and other building access points.

A trail will be provided on the north side of Bolder Trail east of Biscayne Avenue to serve the school and areas to the east. Ultimately trails will be provided on both sides of Boulder Trail.

At Biscayne Avenue/Boulder Trail, striped pedestrian crossings should be provided on all legs. At CSAH 42/Biscayne Avenue, all legs should include striped pedestrian crossings in conjunction with future traffic signal control.

Adequate connections to the surrounding sidewalk and trail system will be needed to accommodate students that walk and bike to school. Depending on the routes students use, additional sidewalks or trails may be needed along the streets near the site. Further detailed review of these pedestrian routes by the City and School District is recommended to develop a detailed pedestrian plan for this area prior to opening the school, including along CSAH 42.

Crash Data

Crash data for the study intersections was obtained from the Minnesota Department of Transportation (MnDOT) for the period of 2019-2024. This data indicated the following crashes had occurred:

- CSAH 42/Biscayne Avenue – A total of 31 crashes, with 18 angle, nine rear end, two left turn, one run off road, and one sideswipe.

- CSAH 42/Business Parkway - A total of one crash, which was a run off road crash.

- CSAH 42/145th Street W – A total of five crashes, with four angle and one left turn.
- CSAH 46/Biscayne Avenue – A total of seven crashes, with three angle, two rear end, and two sideswipe.
- Biscayne Avenue/145th Street W - A total of four crashes, with three angle and one run off road.
- Biscayne Avenue/Boulder Trail – A total of one crash, which was a rear end crash.

No crashes involving pedestrians or bicycles were reported at these intersections.

At CSAH 42/Biscayne Avenue, the calculated crash rate is greater than the statewide average and greater than the critical rate. An observed crash rate greater than the critical rate indicates that the intersection operates outside the expected, normal range. Crash reduction strategies such as changes to intersection control, intersection lighting, and increased visibility signing may be needed at this location.

At CSAH 42/Business Parkway, the calculated crash rate is less than the statewide average and less than the critical rate. This intersection operates within the expected range.

At CSAH 42/145th Street W, the calculated crash rate is slightly greater than the statewide average but less than the critical rate. This intersection operates within the expected range.

At CSAH 46/Biscayne Avenue, the calculated crash rate is greater than the statewide average but less than the critical rate. This intersection operates within the expected range.

At Biscayne Avenue/145th Street W, the calculated crash rate is less than the statewide average and less than the critical rate. This intersection operates within the expected range.

At Biscayne Avenue/Boulder Trail, the calculated crash rate is slightly greater than the statewide average but less than the critical rate. This intersection operates within the expected range.

Recommended Improvements

The following improvements are recommended to accommodate the proposed middle school:

- CSAH 42/Biscayne Avenue
  - Install traffic signal control.
  - Provide pedestrian signals and striped crosswalks on all legs.

- Biscayne Avenue/Boulder Trail
  - Extend Boulder Trail east to the proposed access location with one lane in each direction.
  - Preserve right-of-way on the east leg for future addition of westbound left and right turn lanes.
  - Provide striped crosswalks.
  - Review traffic operations as the surrounding area develops to determine if intersection geometric and control changes are needed in the future.

- Boulder Trail/site access
  - Provide dedicated eastbound left turn lane on Boulder Trail.
  - Provide dedicated westbound right turn lane on Boulder Trail.
  - Provide two exiting lanes, with one left turn and one right turn lane.

2027 Build Operations with Traffic Signal Control

Weekday 7:30-8:30 A.M. and 3:00-4:00 P.M. Peak Hour LOS Results

Intersection	Traffic Control	AM Peak Hour LOS	PM Peak Hour LOS
CSAH 42/Biscayne Avenue	Signal control	C/C	B/C

Note: Level of service results presented with overall intersection LOS followed by worst movement LOS.

During the a.m. peak hour, both intersections operate at LOS C or better and all movements operate at LOS C or better. All vehicle queues are contained within the existing turn lane lengths.

During the p.m. peak hour, both intersections operate at LOS B or better and all movements operate at LOS C or better. All vehicle queues are contained within the existing turn lane lengths.

6.0 Conclusions and Recommendations

The conclusions drawn from the information and analyses presented in this report are as follows:

- The proposed school is expected to generate 765 trips during the a.m. peak hour (7:30-8:30 a.m.), 416 trips during the p.m. peak hour (3:00-4:00 p.m.), and 2,323 trips daily.

- Under 2024 and 2027 No-Build conditions, the northbound and southbound left turns at CSAH 42/Biscayne Avenue experience higher delay levels due to the amount of through traffic on CSAH 42. Other intersections included in the study operate at acceptable levels.

- Under 2027 Build conditions, traffic operations at CSAH 42/Biscayne Avenue deteriorate to level of service F with traffic added from the middle school. Other intersections included in the study continue to operate at acceptable levels.

- A review of crash data at the study intersection revealed the following:
    - At CSAH 42/Biscayne Avenue, the calculated crash rate is greater than the statewide average and greater than the critical rate. An observed crash rate greater than the critical rate indicates that the intersection operates outside the expected, normal range. Crash reduction strategies such as changes to intersection control, intersection lighting, and increased visibility signing may be needed at this location.

    - At CSAH 42/Business Parkway and Biscayne Avenue/145th Street W, the calculated rate is less than the statewide average and less than the critical rate. This intersection operates within the expected range.

    - At CSAH 42/145th Street W and Biscayne Avenue/Boulder Trail, the calculated rate is slightly greater than the statewide average but less than the critical rate. This intersection operates within the expected range.

    - At CSAH 46/Biscayne Avenue, the calculated rate is greater than the statewide average but less than the critical rate. This intersection operates within the expected range.

- The current site plan shows pedestrian facilities within the site and near the proposed school. Adequate pedestrian connections are shown within the site to connect the school building with the parking lot and the other amenities, including the athletic facilities and other building access points.

- Adequate connections to the surrounding sidewalk and trail system will be needed to accommodate students that walk and bike to school. Depending on the routes students use, additional sidewalks or trails may be needed along the streets near the site. Further detailed review of these pedestrian routes by the City and School District is recommended to develop a detailed pedestrian plan for this area prior to opening the school, including along CSAH 42.

- At Biscayne Avenue/Boulder Trail, striped pedestrian crossings should be provided on all legs. At CSAH 42/Biscayne Avenue, all legs should include striped pedestrian crossings in conjunction with future traffic signal control.

- The following improvements are recommended to accommodate the proposed middle school:

    - CSAH 42/Biscayne Avenue
        - Install traffic signal control.
        - Provide pedestrian signals and striped crosswalks on all legs.

    - Biscayne Avenue/Boulder Trail
        - Extend Boulder Trail east to the proposed access location with one lane in each direction.
        - Preserve right-of-way on the east leg for future addition of westbound left and right turn lanes.
        - Provide striped crosswalks.
        - Review traffic operations as the surrounding area develops to determine if intersection geometric and control changes are needed in the future.

    - Boulder Trail/site access
        - Provide dedicated eastbound left turn lane on Boulder Trail.
        - Provide dedicated westbound right turn lane on Boulder Trail.
        - Provide two exiting lanes, with one left turn and one right turn lane.

- Level of service results under 2027 Build conditions with traffic signal control installed at CSAH 42/Biscayne Avenue are as follows:

    - A.M. peak hour – Overall intersection operates at LOS C and all movements operate at LOS C or better. All vehicle queues are contained within the existing turn lane lengths.

    - P.M. peak hour – Overall intersection operates at LOS B and all movements operate at LOS C or better. All vehicle queues are contained within the existing turn lane lengths.

7.0 Appendix

- Level of Service worksheets
- Crash data
- Turn movement data

Weekday A.M. Peak Hour Level of Service Results

CSAH 42/ Biscayne Ave	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Intersection
2024	A	A	A	A	A	A	E	C	C	E	C	C	A
2027 No-Build	A	A	A	A	A	A	F	C	C	F	C	C	A
2027 Build	A	A	A	B	A	A	F	F	F	F	F	F	F
CSAH 42/ Business Pkwy	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**	
2024	A	A	A	A	A	A	D	B	B	C	B	B	A
2027 No-Build	A	A	A	A	A	A	D	B	B	D	B	B	A
2027 Build	A	A	A	A	A	A	E	B	B	D	B	B	A
CSAH 42/145th Street W	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**	
2024	C	-	C	-	-	-	A	A	-	-	A	A	A
2027 No-Build	C	-	C	-	-	-	A	A	-	-	A	A	A
2027 Build	E	-	E	-	-	-	A	A	-	-	A	A	A
CSAH 46/ Biscayne Ave	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**	
2024	A	A	A	A	A	A	D	D	B	D	D	B	A
2027 No-Build	A	A	A	A	A	A	E	E	B	D	D	B	A
2027 Build	A	A	A	A	A	A	E	E	B	D	D	B	A
Biscayne Ave/145th St W	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**	
2024	B	B	B	B	B	B	A	A	A	A	B	B	B
2027 No-Build	B	B	B	B	B	B	A	A	A	A	B	B	B
2027 Build	C	C	C	C	C	C	B	C	C	B	E	E	D
Biscayne Ave/Boulder Trl	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**	
2024	A	-	A	-	-	-	A	A	-	-	A	A	A
2027 No-Build	A	-	A	-	-	-	A	A	-	-	A	A	A
2027 Build	E	E	E	C	C	C	A	A	A	A	A	A	A

Weekday P.M. Peak Hour Level of Service Results

CSAH 42/ Biscayne Ave	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Intersection
2024	A	A	A	A	A	A	F	C	C	E	D	D	A
2027 No-Build	A	A	A	A	A	A	F	C	C	F	C	C	A
2027 Build	A	A	A	A	A	A	F	F	F	F	F	F	F
CSAH 42/ Business Pkwy	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**	
2024	A	A	A	A	A	A	C	B	B	C	B	B	A
2027 No-Build	A	A	A	A	A	A	D	B	B	D	B	B	A
2027 Build	A	A	A	A	A	A	D	B	B	D	B	B	A
CSAH 42/145th Street W	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**	
2024	D	-	D	-	-	-	A	A	-	-	A	A	A
2027 No-Build	E	-	E	-	-	-	A	A	-	-	A	A	A
2027 Build	E	-	E	-	-	-	A	A	-	-	A	A	A
CSAH 46/ Biscayne Ave	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**	
2024	A	A	A	A	A	A	D	D	B	D	D	B	A
2027 No-Build	A	A	A	A	A	A	D	D	B	D	D	B	A
2027 Build	A	A	A	A	A	A	D	D	B	D	D	B	A
Biscayne Ave/145th St W	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**	
2024	B	B	B	B	B	B	A	A	A	A	B	B	B
2027 No-Build	B	B	B	B	B	B	A	A	A	A	B	B	B
2027 Build	B	B	B	B	B	B	B	B	B	B	C	C	B
Biscayne Ave/Boulder Trl	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**	
2024	A	-	A	-	-	-	A	A	-	-	A	A	A
2027 No-Build	A	-	A	-	-	-	A	A	-	-	A	A	A
2027 Build	C	C	C	B	B	B	A	A	A	A	A	A	A

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	12	566	24	20	483	1	11	1	8	2	1	13
Future Vol, veh/h	12	566	24	20	483	1	11	1	8	2	1	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	300	-	300	300	-	300	300	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	5	2	2	5	2	2	2	2	2	2	2
Mvmt Flow	14	643	27	23	549	1	13	1	9	2	1	15

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	550	0	0	670	0	0	992	1267	322	945	1293	275
Stage 1	-	-	-	-	-	-	671	671	-	595	595	-
Stage 2	-	-	-	-	-	-	321	596	-	350	698	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1016	-	-	916	-	-	200	168	674	217	162	722
Stage 1	-	-	-	-	-	-	412	453	-	458	491	-
Stage 2	-	-	-	-	-	-	665	490	-	639	440	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1016	-	-	916	-	-	189	161	674	207	156	722
Mov Cap-2 Maneuver	-	-	-	-	-	-	189	161	-	207	156	-
Stage 1	-	-	-	-	-	-	406	447	-	452	479	-
Stage 2	-	-	-	-	-	-	634	478	-	620	434	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.4	19.6	12.8
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	189	498	1016	-	-	916	-	-	194	636
HCM Lane V/C Ratio	0.066	0.021	0.013	-	-	0.025	-	-	0.015	0.024
HCM Control Delay (s)	25.4	12.4	8.6	-	-	9	-	-	23.8	10.8
HCM Lane LOS	D	B	A	-	-	A	-	-	C	B
HCM 95th %tile Q(veh)	0.2	0.1	0	-	-	0.1	-	-	0	0.1

Intersection	
Int Delay, s/veh	4.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	94	471	11	63	383	4	3	19	89	5	18	118
Future Vol, veh/h	94	471	11	63	383	4	3	19	89	5	18	118
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	300	-	300	300	-	-	400	-	-	300	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	5	2	2	5	2	2	2	2	2	2	2
Mvmt Flow	108	541	13	72	440	5	3	22	102	6	21	136

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	445	0	0	554	0	0	1132	1346	271	1085	1357	223
Stage 1	-	-	-	-	-	-	757	757	-	587	587	-
Stage 2	-	-	-	-	-	-	375	589	-	498	770	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1112	-	-	1012	-	-	158	150	727	171	148	780
Stage 1	-	-	-	-	-	-	366	414	-	463	495	-
Stage 2	-	-	-	-	-	-	618	494	-	523	408	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1112	-	-	1012	-	-	100	126	727	112	124	780
Mov Cap-2 Maneuver	-	-	-	-	-	-	100	126	-	112	124	-
Stage 1	-	-	-	-	-	-	330	374	-	418	460	-
Stage 2	-	-	-	-	-	-	453	459	-	382	368	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.4	1.2	18.9	17.6
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	100	395	1112	-	-	1012	-	-	112	459
HCM Lane V/C Ratio	0.034	0.314	0.097	-	-	0.072	-	-	0.051	0.341
HCM Control Delay (s)	42.3	18.2	8.6	-	-	8.8	-	-	38.9	16.8
HCM Lane LOS	E	C	A	-	-	A	-	-	E	C
HCM 95th %tile Q(veh)	0.1	1.3	0.3	-	-	0.2	-	-	0.2	1.5

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	115	404	14	4	365	17	10	2	9	7	2	76
Future Vol, veh/h	115	404	14	4	365	17	10	2	9	7	2	76
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	250	-	250	250	-	250	-	-	300	-	-	300
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	126	444	15	4	401	19	11	2	10	8	2	84

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	420	0	0	459	0	0	1158	1124	444	1119	1120	401
Stage 1	-	-	-	-	-	-	696	696	-	409	409	-
Stage 2	-	-	-	-	-	-	462	428	-	710	711	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1139	-	-	1102	-	-	173	205	614	184	206	649
Stage 1	-	-	-	-	-	-	432	443	-	619	596	-
Stage 2	-	-	-	-	-	-	580	585	-	424	436	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1139	-	-	1102	-	-	136	181	614	164	182	649
Mov Cap-2 Maneuver	-	-	-	-	-	-	136	181	-	164	182	-
Stage 1	-	-	-	-	-	-	384	394	-	550	594	-
Stage 2	-	-	-	-	-	-	502	583	-	369	388	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.8	0.1	23.5	13.1
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	142	614	1139	-	-	1102	-	-	168	649
HCM Lane V/C Ratio	0.093	0.016	0.111	-	-	0.004	-	-	0.059	0.129
HCM Control Delay (s)	32.9	11	8.6	-	-	8.3	-	-	27.8	11.4
HCM Lane LOS	D	B	A	-	-	A	-	-	D	B
HCM 95th %tile Q(veh)	0.3	0	0.4	-	-	0	-	-	0.2	0.4

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	4	11	114	71	1
Future Vol, veh/h	1	4	11	114	71	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	300	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	74	74	74	74	74	74
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	5	15	154	96	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	281	97	97	0	-	0
Stage 1	97	-	-	-	-	-
Stage 2	184	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	709	959	1496	-	-	-
Stage 1	927	-	-	-	-	-
Stage 2	848	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	702	959	1496	-	-	-
Mov Cap-2 Maneuver	702	-	-	-	-	-
Stage 1	918	-	-	-	-	-
Stage 2	848	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.1	0.7	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1496	-	894	-	-
HCM Lane V/C Ratio	0.01	-	0.008	-	-
HCM Control Delay (s)	7.4	-	9.1	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	1.9

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	86	16	6	559	434	87
Future Vol, veh/h	86	16	6	559	434	87
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	200	-	-	200
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	5	5	2
Mvmt Flow	99	18	7	643	499	100

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	835	250	599	0	-	0
Stage 1	499	-	-	-	-	-
Stage 2	336	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	306	750	974	-	-	-
Stage 1	575	-	-	-	-	-
Stage 2	696	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	304	750	974	-	-	-
Mov Cap-2 Maneuver	304	-	-	-	-	-
Stage 1	571	-	-	-	-	-
Stage 2	696	-	-	-	-	-

Approach	SE	NE	SW
HCM Control Delay, s	21.4	0.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NEL	NET	SELn1	SWT	SWR
Capacity (veh/h)	974	-	335	-	-
HCM Lane V/C Ratio	0.007	-	0.35	-	-
HCM Control Delay (s)	8.7	-	21.4	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0	-	1.5	-	-

Intersection	
Intersection Delay, s/veh	11.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	85	117	14	15	123	22	17	88	14	29	101	67
Future Vol, veh/h	85	117	14	15	123	22	17	88	14	29	101	67
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	104	143	17	18	150	27	21	107	17	35	123	82
Number of Lanes	0	1	0	0	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	11.9	10.7	10.4	11.1
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	39%	9%	100%	0%
Vol Thru, %	0%	86%	54%	77%	0%	60%
Vol Right, %	0%	14%	6%	14%	0%	40%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	17	102	216	160	29	168
LT Vol	17	0	85	15	29	0
Through Vol	0	88	117	123	0	101
RT Vol	0	14	14	22	0	67
Lane Flow Rate	21	124	263	195	35	205
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.039	0.21	0.395	0.294	0.064	0.328
Departure Headway (Hd)	6.693	6.086	5.404	5.419	6.551	5.759
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	535	590	666	661	547	625
Service Time	4.437	3.831	3.442	3.459	4.29	3.498
HCM Lane V/C Ratio	0.039	0.21	0.395	0.295	0.064	0.328
HCM Control Delay	9.7	10.5	11.9	10.7	9.7	11.3
HCM Lane LOS	A	B	B	B	A	B
HCM 95th-tile Q	0.1	0.8	1.9	1.2	0.2	1.4

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	604	26	21	516	1	12	1	9	2	1	14
Future Vol, veh/h	13	604	26	21	516	1	12	1	9	2	1	14
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	300	-	300	300	-	300	300	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	5	2	2	5	2	2	2	2	2	2	2
Mvmt Flow	15	686	30	24	586	1	14	1	10	2	1	16

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	587	0	0	716	0	0	1058	1351	343	1008	1380	293
Stage 1	-	-	-	-	-	-	716	716	-	634	634	-
Stage 2	-	-	-	-	-	-	342	635	-	374	746	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	984	-	-	880	-	-	179	149	653	195	143	703
Stage 1	-	-	-	-	-	-	387	432	-	434	471	-
Stage 2	-	-	-	-	-	-	646	471	-	619	419	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	984	-	-	880	-	-	168	143	653	185	137	703
Mov Cap-2 Maneuver	-	-	-	-	-	-	168	143	-	185	137	-
Stage 1	-	-	-	-	-	-	381	426	-	427	458	-
Stage 2	-	-	-	-	-	-	613	458	-	598	413	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.4	21.2	13.2
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	168	481	984	-	-	880	-	-	173	615
HCM Lane V/C Ratio	0.081	0.024	0.015	-	-	0.027	-	-	0.016	0.027
HCM Control Delay (s)	28.3	12.7	8.7	-	-	9.2	-	-	26.2	11
HCM Lane LOS	D	B	A	-	-	A	-	-	D	B
HCM 95th %tile Q(veh)	0.3	0.1	0	-	-	0.1	-	-	0.1	0.1

Intersection	
Int Delay, s/veh	5.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	100	503	12	67	409	4	3	20	95	5	19	126
Future Vol, veh/h	100	503	12	67	409	4	3	20	95	5	19	126
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	300	-	300	300	-	-	400	-	-	300	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	5	2	2	5	2	2	2	2	2	2	2
Mvmt Flow	115	578	14	77	470	5	3	23	109	6	22	145

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	475	0	0	592	0	0	1208	1437	289	1158	1449	238
Stage 1	-	-	-	-	-	-	808	808	-	627	627	-
Stage 2	-	-	-	-	-	-	400	629	-	531	822	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1083	-	-	980	-	-	139	132	708	151	130	763
Stage 1	-	-	-	-	-	-	341	392	-	438	474	-
Stage 2	-	-	-	-	-	-	597	474	-	500	386	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1083	-	-	980	-	-	82	109	708	93	107	763
Mov Cap-2 Maneuver	-	-	-	-	-	-	82	109	-	93	107	-
Stage 1	-	-	-	-	-	-	305	350	-	392	437	-
Stage 2	-	-	-	-	-	-	423	437	-	353	345	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.4	1.3	21.4	19.8
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	82	362	1083	-	-	980	-	-	93	423
HCM Lane V/C Ratio	0.042	0.365	0.106	-	-	0.079	-	-	0.062	0.394
HCM Control Delay (s)	50.8	20.6	8.7	-	-	9	-	-	46.2	18.9
HCM Lane LOS	F	C	A	-	-	A	-	-	E	C
HCM 95th %tile Q(veh)	0.1	1.6	0.4	-	-	0.3	-	-	0.2	1.8

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	123	431	15	4	390	18	11	2	10	7	2	81
Future Vol, veh/h	123	431	15	4	390	18	11	2	10	7	2	81
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	250	-	250	250	-	250	-	-	300	-	-	300
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	135	474	16	4	429	20	12	2	11	8	2	89

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	449	0	0	490	0	0	1237	1201	474	1196	1197	429
Stage 1	-	-	-	-	-	-	744	744	-	437	437	-
Stage 2	-	-	-	-	-	-	493	457	-	759	760	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1111	-	-	1073	-	-	153	185	590	163	186	626
Stage 1	-	-	-	-	-	-	407	421	-	598	579	-
Stage 2	-	-	-	-	-	-	558	568	-	399	414	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1111	-	-	1073	-	-	118	162	590	143	163	626
Mov Cap-2 Maneuver	-	-	-	-	-	-	118	162	-	143	163	-
Stage 1	-	-	-	-	-	-	357	370	-	525	577	-
Stage 2	-	-	-	-	-	-	475	566	-	342	363	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.9	0.1	26.4	13.7
HCM LOS			D	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	123	590	1111	-	-	1073	-	-	147	626
HCM Lane V/C Ratio	0.116	0.019	0.122	-	-	0.004	-	-	0.067	0.142
HCM Control Delay (s)	38.1	11.2	8.7	-	-	8.4	-	-	31.2	11.7
HCM Lane LOS	E	B	A	-	-	A	-	-	D	B
HCM 95th %tile Q(veh)	0.4	0.1	0.4	-	-	0	-	-	0.2	0.5

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	4	12	122	76	1
Future Vol, veh/h	1	4	12	122	76	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	300	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	74	74	74	74	74	74
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	5	16	165	103	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	301	104	104	0	-	0
Stage 1	104	-	-	-	-	-
Stage 2	197	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	691	951	1488	-	-	-
Stage 1	920	-	-	-	-	-
Stage 2	836	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	683	951	1488	-	-	-
Mov Cap-2 Maneuver	683	-	-	-	-	-
Stage 1	910	-	-	-	-	-
Stage 2	836	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.1	0.7	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1488	-	882	-	-
HCM Lane V/C Ratio	0.011	-	0.008	-	-
HCM Control Delay (s)	7.4	-	9.1	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	2.1

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	92	17	6	597	463	93
Future Vol, veh/h	92	17	6	597	463	93
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	200	-	-	200
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	5	5	2
Mvmt Flow	106	20	7	686	532	107

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	889	266	639	0	-	0
Stage 1	532	-	-	-	-	-
Stage 2	357	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	283	732	941	-	-	-
Stage 1	553	-	-	-	-	-
Stage 2	679	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	281	732	941	-	-	-
Mov Cap-2 Maneuver	281	-	-	-	-	-
Stage 1	549	-	-	-	-	-
Stage 2	679	-	-	-	-	-

Approach	SE	NE	SW
HCM Control Delay, s	24.2	0.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NEL	NET	SELn1	SWT	SWR
Capacity (veh/h)	941	-	311	-	-
HCM Lane V/C Ratio	0.007	-	0.403	-	-
HCM Control Delay (s)	8.9	-	24.2	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0	-	1.9	-	-

Intersection	
Intersection Delay, s/veh	11.8
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	91	125	15	16	131	23	18	94	15	31	108	72
Future Vol, veh/h	91	125	15	16	131	23	18	94	15	31	108	72
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	111	152	18	20	160	28	22	115	18	38	132	88
Number of Lanes	0	1	0	0	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	12.8	11.3	10.8	11.7
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	39%	9%	100%	0%
Vol Thru, %	0%	86%	54%	77%	0%	60%
Vol Right, %	0%	14%	6%	14%	0%	40%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	18	109	231	170	31	180
LT Vol	18	0	91	16	31	0
Through Vol	0	94	125	131	0	108
RT Vol	0	15	15	23	0	72
Lane Flow Rate	22	133	282	207	38	220
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.042	0.231	0.433	0.321	0.07	0.36
Departure Headway (Hd)	6.851	6.244	5.534	5.566	6.69	5.896
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	521	573	648	643	535	608
Service Time	4.61	4.002	3.586	3.622	4.443	3.648
HCM Lane V/C Ratio	0.042	0.232	0.435	0.322	0.071	0.362
HCM Control Delay	9.9	10.9	12.8	11.3	9.9	12
HCM Lane LOS	A	B	B	B	A	B
HCM 95th-tile Q	0.1	0.9	2.2	1.4	0.2	1.6

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	718	26	21	609	1	12	1	9	2	1	14
Future Vol, veh/h	13	718	26	21	609	1	12	1	9	2	1	14
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	300	-	300	300	-	300	300	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	5	2	2	5	2	2	2	2	2	2	2
Mvmt Flow	15	816	30	24	692	1	14	1	10	2	1	16

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	693	0	0	846	0	0	1241	1587	408	1179	1616	346
Stage 1	-	-	-	-	-	-	846	846	-	740	740	-
Stage 2	-	-	-	-	-	-	395	741	-	439	876	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	898	-	-	787	-	-	131	107	593	146	103	650
Stage 1	-	-	-	-	-	-	323	377	-	375	421	-
Stage 2	-	-	-	-	-	-	602	421	-	567	365	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	898	-	-	787	-	-	122	102	593	137	98	650
Mov Cap-2 Maneuver	-	-	-	-	-	-	122	102	-	137	98	-
Stage 1	-	-	-	-	-	-	318	371	-	369	408	-
Stage 2	-	-	-	-	-	-	568	408	-	546	359	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.3	27.3	15.1
HCM LOS			D	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	122	400	898	-	-	787	-	-	127	544
HCM Lane V/C Ratio	0.112	0.028	0.016	-	-	0.03	-	-	0.022	0.03
HCM Control Delay (s)	38.2	14.3	9.1	-	-	9.7	-	-	34	11.8
HCM Lane LOS	E	B	A	-	-	A	-	-	D	B
HCM 95th %tile Q(veh)	0.4	0.1	0.1	-	-	0.1	-	-	0.1	0.1

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	100	503	126	180	409	4	96	178	187	5	214	126
Future Vol, veh/h	100	503	126	180	409	4	96	178	187	5	214	126
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	300	-	300	300	-	-	400	-	-	300	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	5	2	2	5	2	2	2	2	2	2	2
Mvmt Flow	115	578	145	207	470	5	110	205	215	6	246	145

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	475	0	0	723	0	0	1580	1697	289	1509	1840	238
Stage 1	-	-	-	-	-	-	808	808	-	887	887	-
Stage 2	-	-	-	-	-	-	772	889	-	622	953	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1083	-	-	875	-	-	~ 73	~ 92	708	83	~ 75	763
Stage 1	-	-	-	-	-	-	341	392	-	305	360	-
Stage 2	-	-	-	-	-	-	358	360	-	441	336	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1083	-	-	875	-	-	-	~ 63	708	-	~ 51	763
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	~ 63	-	-	~ 51	-
Stage 1	-	-	-	-	-	-	305	350	-	273	275	-
Stage 2	-	-	-	-	-	-	~ 23	275	-	114	300	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.2	3.2		
HCM LOS			-	-

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	118	1083	-	-	875	-	-	-	78
HCM Lane V/C Ratio	-	3.555	0.106	-	-	0.236	-	-	-	5.01
HCM Control Delay (s)	$	1226.4	8.7	-	-	10.4	-	-	$	1911.7
HCM Lane LOS	-	F	A	-	-	B	-	-	-	F
HCM 95th %tile Q(veh)	-	41.5	0.4	-	-	0.9	-	-	-	42.5

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	123	431	15	4	390	18	11	2	10	7	2	81
Future Vol, veh/h	123	431	15	4	390	18	11	2	10	7	2	81
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	250	-	250	250	-	250	-	-	300	-	-	300
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	135	474	16	4	429	20	12	2	11	8	2	89

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	449	0	0	490	0	0	1237	1201	474	1196	1197	429
Stage 1	-	-	-	-	-	-	744	744	-	437	437	-
Stage 2	-	-	-	-	-	-	493	457	-	759	760	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1111	-	-	1073	-	-	153	185	590	163	186	626
Stage 1	-	-	-	-	-	-	407	421	-	598	579	-
Stage 2	-	-	-	-	-	-	558	568	-	399	414	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1111	-	-	1073	-	-	118	162	590	143	163	626
Mov Cap-2 Maneuver	-	-	-	-	-	-	118	162	-	143	163	-
Stage 1	-	-	-	-	-	-	357	370	-	525	577	-
Stage 2	-	-	-	-	-	-	475	566	-	342	363	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.9	0.1	26.4	13.7
HCM LOS			D	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	123	590	1111	-	-	1073	-	-	147	626
HCM Lane V/C Ratio	0.116	0.019	0.122	-	-	0.004	-	-	0.067	0.142
HCM Control Delay (s)	38.1	11.2	8.7	-	-	8.4	-	-	31.2	11.7
HCM Lane LOS	E	B	A	-	-	A	-	-	D	B
HCM 95th %tile Q(veh)	0.4	0.1	0.4	-	-	0	-	-	0.2	0.5

Intersection	
Int Delay, s/veh	9.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	1	4	1	1	343	12	122	1	422	76	1
Future Vol, veh/h	1	1	4	1	1	343	12	122	1	422	76	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	300	-	-	300	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	73	73	73	73	73	73	73	73	73	73	73	73
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	1	5	1	1	470	16	167	1	578	104	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1696	1461	105	1464	1461	168	105	0	0	168	0	0
Stage 1	1261	1261	-	200	200	-	-	-	-	-	-	-
Stage 2	435	200	-	1264	1261	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	73	129	949	106	129	876	1486	-	-	1410	-	-
Stage 1	209	241	-	802	736	-	-	-	-	-	-	-
Stage 2	600	736	-	208	241	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	23	75	949	70	75	876	1486	-	-	1410	-	-
Mov Cap-2 Maneuver	23	75	-	70	75	-	-	-	-	-	-	-
Stage 1	207	142	-	793	728	-	-	-	-	-	-	-
Stage 2	275	728	-	121	142	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	45.1	15.1	0.7	7.9
HCM LOS	E	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1486	-	-	98	823	1410	-	-
HCM Lane V/C Ratio	0.011	-	-	0.084	0.574	0.41	-	-
HCM Control Delay (s)	7.5	-	-	45.1	15.1	9.3	-	-
HCM Lane LOS	A	-	-	E	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.3	3.7	2	-	-

Intersection	
Int Delay, s/veh	2.7

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	92	17	6	689	576	93
Future Vol, veh/h	92	17	6	689	576	93
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	200	-	-	200
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	5	5	2
Mvmt Flow	106	20	7	792	662	107

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1072	331	769	0	-	0
Stage 1	662	-	-	-	-	-
Stage 2	410	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	215	665	841	-	-	-
Stage 1	475	-	-	-	-	-
Stage 2	638	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	213	665	841	-	-	-
Mov Cap-2 Maneuver	213	-	-	-	-	-
Stage 1	471	-	-	-	-	-
Stage 2	638	-	-	-	-	-

Approach	SE	NE	SW
HCM Control Delay, s	35.8	0.1	0
HCM LOS	E		

Minor Lane/Major Mvmt	NEL	NET	SELn1	SWT	SWR
Capacity (veh/h)	841	-	238	-	-
HCM Lane V/C Ratio	0.008	-	0.526	-	-
HCM Control Delay (s)	9.3	-	35.8	-	-
HCM Lane LOS	A	-	E	-	-
HCM 95th %tile Q(veh)	0	-	2.8	-	-

Intersection	
Intersection Delay, s/veh	25.8
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	91	125	36	37	131	23	35	219	31	31	261	72
Future Vol, veh/h	91	125	36	37	131	23	35	219	31	31	261	72
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	111	152	44	45	160	28	43	267	38	38	318	88
Number of Lanes	0	1	0	0	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	22.8	18.3	22.1	34.6
HCM LOS	C	C	C	D

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	36%	19%	100%	0%
Vol Thru, %	0%	88%	50%	69%	0%	78%
Vol Right, %	0%	12%	14%	12%	0%	22%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	35	250	252	191	31	333
LT Vol	35	0	91	37	31	0
Through Vol	0	219	125	131	0	261
RT Vol	0	31	36	23	0	72
Lane Flow Rate	43	305	307	233	38	406
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.098	0.648	0.637	0.499	0.084	0.829
Departure Headway (Hd)	8.253	7.646	7.459	7.718	8.024	7.352
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	434	473	482	466	446	491
Service Time	6.017	5.409	5.524	5.791	5.783	5.11
HCM Lane V/C Ratio	0.099	0.645	0.637	0.5	0.085	0.827
HCM Control Delay	11.9	23.5	22.8	18.3	11.5	36.8
HCM Lane LOS	B	C	C	C	B	E
HCM 95th-tile Q	0.3	4.5	4.4	2.7	0.3	8.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	503	126	180	409	4	96	178	187	5	214	126
Future Volume (veh/h)	100	503	126	180	409	4	96	178	187	5	214	126
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1826	1870	1870	1826	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	115	578	145	207	470	5	110	205	215	6	246	145
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	5	2	2	5	2	2	2	2	2	2	2
Cap, veh/h	479	966	441	480	1252	13	257	266	279	201	292	172
Arrive On Green	0.08	0.28	0.28	0.16	0.36	0.36	0.06	0.32	0.32	0.01	0.26	0.26
Sat Flow, veh/h	1781	3469	1585	1781	3516	37	1781	836	877	1781	1103	650
Grp Volume(v), veh/h	115	578	145	207	232	243	110	0	420	6	0	391
Grp Sat Flow(s),veh/h/ln	1781	1735	1585	1781	1735	1819	1781	0	1713	1781	0	1753
Q Serve(g_s), s	3.4	11.1	5.6	5.4	7.7	7.7	3.3	0.0	17.1	0.2	0.0	16.3
Cycle Q Clear(g_c), s	3.4	11.1	5.6	5.4	7.7	7.7	3.3	0.0	17.1	0.2	0.0	16.3
Prop In Lane	1.00		1.00	1.00		0.02	1.00		0.51	1.00		0.37
Lane Grp Cap(c), veh/h	479	966	441	480	618	648	257	0	546	201	0	463
V/C Ratio(X)	0.24	0.60	0.33	0.43	0.38	0.38	0.43	0.00	0.77	0.03	0.00	0.84
Avail Cap(c_a), veh/h	479	966	441	480	618	648	277	0	730	305	0	733
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.8	24.1	22.1	14.0	18.5	18.5	19.8	0.0	23.7	21.6	0.0	26.9
Incr Delay (d2), s/veh	1.2	2.7	2.0	2.8	1.7	1.7	1.1	0.0	3.6	0.1	0.0	5.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.7	8.3	4.0	4.3	5.8	6.1	2.5	0.0	11.4	0.1	0.0	11.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.0	26.9	24.1	16.8	20.2	20.1	20.9	0.0	27.3	21.7	0.0	32.1
LnGrp LOS	B	C	C	B	C	C	C	A	C	C	A	C
Approach Vol, veh/h		838			682			530			397	
Approach Delay, s/veh		25.2			19.2			26.0			32.0	
Approach LOS		C			B			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.1	29.1	17.0	26.0	9.3	24.9	11.0	32.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.1	32.9	12.5	21.5	5.7	32.3	6.5	27.5
Max Q Clear Time (g_c+I1), s	2.2	19.1	7.4	13.1	5.3	18.3	5.4	9.7
Green Ext Time (p_c), s	0.0	2.3	0.3	2.8	0.0	2.1	0.0	2.6

Intersection Summary	
HCM 6th Ctrl Delay	24.8
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	549	14	10	614	3	26	1	26	1	1	22
Future Vol, veh/h	5	549	14	10	614	3	26	1	26	1	1	22
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	300	-	300	300	-	300	300	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	3	2	2	4	2	2	2	2	2	2	2
Mvmt Flow	5	566	14	10	633	3	27	1	27	1	1	23

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	636	0	0	580	0	0	913	1232	283	947	1243	317
Stage 1	-	-	-	-	-	-	576	576	-	653	653	-
Stage 2	-	-	-	-	-	-	337	656	-	294	590	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	943	-	-	990	-	-	228	176	714	216	173	679
Stage 1	-	-	-	-	-	-	470	500	-	423	462	-
Stage 2	-	-	-	-	-	-	651	460	-	690	493	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	943	-	-	990	-	-	217	173	714	205	170	679
Mov Cap-2 Maneuver	-	-	-	-	-	-	217	173	-	205	170	-
Stage 1	-	-	-	-	-	-	468	498	-	421	457	-
Stage 2	-	-	-	-	-	-	621	455	-	659	491	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.1	17.3	11.7
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	217	640	943	-	-	990	-	-	192	637
HCM Lane V/C Ratio	0.124	0.043	0.005	-	-	0.01	-	-	0.008	0.036
HCM Control Delay (s)	23.9	10.9	8.8	-	-	8.7	-	-	23.9	10.9
HCM Lane LOS	C	B	A	-	-	A	-	-	C	B
HCM 95th %tile Q(veh)	0.4	0.1	0	-	-	0	-	-	0	0.1

Intersection	
Int Delay, s/veh	4.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	98	464	14	69	516	9	7	11	59	4	31	104
Future Vol, veh/h	98	464	14	69	516	9	7	11	59	4	31	104
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	300	-	300	300	-	-	400	-	-	300	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	3	2	2	4	2	2	2	2	2	2	2
Mvmt Flow	105	499	15	74	555	10	8	12	63	4	33	112

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	565	0	0	514	0	0	1151	1422	250	1174	1432	283
Stage 1	-	-	-	-	-	-	709	709	-	708	708	-
Stage 2	-	-	-	-	-	-	442	713	-	466	724	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1003	-	-	1048	-	-	153	135	750	147	133	714
Stage 1	-	-	-	-	-	-	391	435	-	392	436	-
Stage 2	-	-	-	-	-	-	564	434	-	546	429	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1003	-	-	1048	-	-	87	112	750	108	111	714
Mov Cap-2 Maneuver	-	-	-	-	-	-	87	112	-	108	111	-
Stage 1	-	-	-	-	-	-	350	389	-	351	405	-
Stage 2	-	-	-	-	-	-	406	403	-	434	384	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.5	1	19.3	25.9
HCM LOS			C	D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	87	396	1003	-	-	1048	-	-	108	318
HCM Lane V/C Ratio	0.087	0.19	0.105	-	-	0.071	-	-	0.04	0.456
HCM Control Delay (s)	50.3	16.2	9	-	-	8.7	-	-	39.7	25.5
HCM Lane LOS	F	C	A	-	-	A	-	-	E	D
HCM 95th %tile Q(veh)	0.3	0.7	0.4	-	-	0.2	-	-	0.1	2.3

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	67	441	7	1	406	2	3	1	7	12	1	104
Future Vol, veh/h	67	441	7	1	406	2	3	1	7	12	1	104
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	250	-	250	250	-	250	-	-	300	-	-	300
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	74	490	8	1	451	2	3	1	8	13	1	116

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	453	0	0	498	0	0	1151	1093	490	1100	1099	451
Stage 1	-	-	-	-	-	-	638	638	-	453	453	-
Stage 2	-	-	-	-	-	-	513	455	-	647	646	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1108	-	-	1066	-	-	175	214	578	190	212	608
Stage 1	-	-	-	-	-	-	465	471	-	586	570	-
Stage 2	-	-	-	-	-	-	544	569	-	460	467	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1108	-	-	1066	-	-	134	199	578	177	198	608
Mov Cap-2 Maneuver	-	-	-	-	-	-	134	199	-	177	198	-
Stage 1	-	-	-	-	-	-	434	439	-	547	569	-
Stage 2	-	-	-	-	-	-	439	568	-	422	436	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.1	0	18.2	13.9
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	146	578	1108	-	-	1066	-	-	178	608
HCM Lane V/C Ratio	0.03	0.013	0.067	-	-	0.001	-	-	0.081	0.19
HCM Control Delay (s)	30.4	11.3	8.5	-	-	8.4	-	-	27	12.3
HCM Lane LOS	D	B	A	-	-	A	-	-	D	B
HCM 95th %tile Q(veh)	0.1	0	0.2	-	-	0	-	-	0.3	0.7

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	7	1	72	116	1
Future Vol, veh/h	5	7	1	72	116	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	300	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	8	1	83	133	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	219	134	134	0	-	0
Stage 1	134	-	-	-	-	-
Stage 2	85	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	769	915	1451	-	-	-
Stage 1	892	-	-	-	-	-
Stage 2	938	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	768	915	1451	-	-	-
Mov Cap-2 Maneuver	768	-	-	-	-	-
Stage 1	891	-	-	-	-	-
Stage 2	938	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.3	0.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1451	-	847	-	-
HCM Lane V/C Ratio	0.001	-	0.016	-	-
HCM Control Delay (s)	7.5	-	9.3	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	3

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	101	25	22	505	569	121
Future Vol, veh/h	101	25	22	505	569	121
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	200	-	-	200
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	3	4
Mvmt Flow	113	28	25	567	639	136

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	973	320	775	0	-	0
Stage 1	639	-	-	-	-	-
Stage 2	334	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	250	676	837	-	-	-
Stage 1	488	-	-	-	-	-
Stage 2	697	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	243	676	837	-	-	-
Mov Cap-2 Maneuver	243	-	-	-	-	-
Stage 1	473	-	-	-	-	-
Stage 2	697	-	-	-	-	-

Approach	SE	NE	SW
HCM Control Delay, s	30.7	0.4	0
HCM LOS	D		

Minor Lane/Major Mvmt	NEL	NET	SELn1	SWT	SWR
Capacity (veh/h)	837	-	278	-	-
HCM Lane V/C Ratio	0.03	-	0.509	-	-
HCM Control Delay (s)	9.4	-	30.7	-	-
HCM Lane LOS	A	-	D	-	-
HCM 95th %tile Q(veh)	0.1	-	2.7	-	-

Intersection	
Intersection Delay, s/veh	10.8
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	70	122	23	17	139	18	17	67	13	30	110	64
Future Vol, veh/h	70	122	23	17	139	18	17	67	13	30	110	64
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	81	142	27	20	162	21	20	78	15	35	128	74
Number of Lanes	0	1	0	0	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	11.3	10.5	9.8	10.9
HCM LOS	B	B	A	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	33%	10%	100%	0%
Vol Thru, %	0%	84%	57%	80%	0%	63%
Vol Right, %	0%	16%	11%	10%	0%	37%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	17	80	215	174	30	174
LT Vol	17	0	70	17	30	0
Through Vol	0	67	122	139	0	110
RT Vol	0	13	23	18	0	64
Lane Flow Rate	20	93	250	202	35	202
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.036	0.155	0.365	0.297	0.062	0.319
Departure Headway (Hd)	6.632	6.008	5.251	5.283	6.444	5.676
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	540	597	685	680	556	633
Service Time	4.37	3.746	3.281	3.315	4.177	3.408
HCM Lane V/C Ratio	0.037	0.156	0.365	0.297	0.063	0.319
HCM Control Delay	9.6	9.9	11.3	10.5	9.6	11.1
HCM Lane LOS	A	A	B	B	A	B
HCM 95th-tile Q	0.1	0.5	1.7	1.2	0.2	1.4

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	586	15	11	655	3	28	1	28	1	1	23
Future Vol, veh/h	5	586	15	11	655	3	28	1	28	1	1	23
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	300	-	300	300	-	300	300	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	3	2	2	4	2	2	2	2	2	2	2
Mvmt Flow	5	604	15	11	675	3	29	1	29	1	1	24

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	678	0	0	619	0	0	974	1314	302	1010	1326	338
Stage 1	-	-	-	-	-	-	614	614	-	697	697	-
Stage 2	-	-	-	-	-	-	360	700	-	313	629	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	910	-	-	957	-	-	206	157	694	194	154	658
Stage 1	-	-	-	-	-	-	446	481	-	398	441	-
Stage 2	-	-	-	-	-	-	631	440	-	672	474	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	910	-	-	957	-	-	195	154	694	183	152	658
Mov Cap-2 Maneuver	-	-	-	-	-	-	195	154	-	183	152	-
Stage 1	-	-	-	-	-	-	444	479	-	396	436	-
Stage 2	-	-	-	-	-	-	600	435	-	639	472	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.1	18.7	12
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	195	619	910	-	-	957	-	-	171	614
HCM Lane V/C Ratio	0.148	0.048	0.006	-	-	0.012	-	-	0.009	0.039
HCM Control Delay (s)	26.6	11.1	9	-	-	8.8	-	-	26.2	11.1
HCM Lane LOS	D	B	A	-	-	A	-	-	D	B
HCM 95th %tile Q(veh)	0.5	0.2	0	-	-	0	-	-	0	0.1

Intersection	
Int Delay, s/veh	5.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	105	495	15	74	551	10	7	12	63	4	33	111
Future Vol, veh/h	105	495	15	74	551	10	7	12	63	4	33	111
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	300	-	300	300	-	-	400	-	-	300	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	3	2	2	4	2	2	2	2	2	2	2
Mvmt Flow	113	532	16	80	592	11	8	13	68	4	35	119

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	603	0	0	548	0	0	1232	1521	266	1257	1532	302
Stage 1	-	-	-	-	-	-	758	758	-	758	758	-
Stage 2	-	-	-	-	-	-	474	763	-	499	774	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	971	-	-	1018	-	-	133	117	732	128	116	694
Stage 1	-	-	-	-	-	-	365	413	-	365	413	-
Stage 2	-	-	-	-	-	-	540	411	-	522	406	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	971	-	-	1018	-	-	67	95	732	89	94	694
Mov Cap-2 Maneuver	-	-	-	-	-	-	67	95	-	89	94	-
Stage 1	-	-	-	-	-	-	323	365	-	323	380	-
Stage 2	-	-	-	-	-	-	374	379	-	404	359	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.6	1	22.2	32.7
HCM LOS			C	D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	67	353	971	-	-	1018	-	-	89	282
HCM Lane V/C Ratio	0.112	0.228	0.116	-	-	0.078	-	-	0.048	0.549
HCM Control Delay (s)	65.4	18.2	9.2	-	-	8.8	-	-	47.5	32.3
HCM Lane LOS	F	C	A	-	-	A	-	-	E	D
HCM 95th %tile Q(veh)	0.4	0.9	0.4	-	-	0.3	-	-	0.1	3.1

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	72	471	7	1	433	2	3	1	7	13	1	111
Future Vol, veh/h	72	471	7	1	433	2	3	1	7	13	1	111
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	250	-	250	250	-	250	-	-	300	-	-	300
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	80	523	8	1	481	2	3	1	8	14	1	123

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	483	0	0	531	0	0	1229	1168	523	1175	1174	481
Stage 1	-	-	-	-	-	-	683	683	-	483	483	-
Stage 2	-	-	-	-	-	-	546	485	-	692	691	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1080	-	-	1036	-	-	155	193	554	168	192	585
Stage 1	-	-	-	-	-	-	439	449	-	565	553	-
Stage 2	-	-	-	-	-	-	522	552	-	434	446	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1080	-	-	1036	-	-	115	179	554	155	178	585
Mov Cap-2 Maneuver	-	-	-	-	-	-	115	179	-	155	178	-
Stage 1	-	-	-	-	-	-	407	416	-	523	552	-
Stage 2	-	-	-	-	-	-	411	551	-	395	413	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.1	0	20	14.8
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	126	554	1080	-	-	1036	-	-	156	585
HCM Lane V/C Ratio	0.035	0.014	0.074	-	-	0.001	-	-	0.1	0.211
HCM Control Delay (s)	34.6	11.6	8.6	-	-	8.5	-	-	30.6	12.8
HCM Lane LOS	D	B	A	-	-	A	-	-	D	B
HCM 95th %tile Q(veh)	0.1	0	0.2	-	-	0	-	-	0.3	0.8

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	7	1	77	124	1
Future Vol, veh/h	5	7	1	77	124	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	300	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	8	1	89	143	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	235	144	144	0	-	0
Stage 1	144	-	-	-	-	-
Stage 2	91	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	753	903	1438	-	-	-
Stage 1	883	-	-	-	-	-
Stage 2	933	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	752	903	1438	-	-	-
Mov Cap-2 Maneuver	752	-	-	-	-	-
Stage 1	882	-	-	-	-	-
Stage 2	933	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.4	0.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1438	-	833	-	-
HCM Lane V/C Ratio	0.001	-	0.017	-	-
HCM Control Delay (s)	7.5	-	9.4	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	3.8

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	108	27	23	539	607	129
Future Vol, veh/h	108	27	23	539	607	129
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	200	-	-	200
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	3	4	2
Mvmt Flow	121	30	26	606	682	145

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1037	341	827	0	-	0
Stage 1	682	-	-	-	-	-
Stage 2	355	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	227	655	800	-	-	-
Stage 1	464	-	-	-	-	-
Stage 2	681	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	220	655	800	-	-	-
Mov Cap-2 Maneuver	220	-	-	-	-	-
Stage 1	449	-	-	-	-	-
Stage 2	681	-	-	-	-	-

Approach	SE	NE	SW
HCM Control Delay, s	38.2	0.4	0
HCM LOS	E		

Minor Lane/Major Mvmt	NEL	NET	SELn1	SWT	SWR
Capacity (veh/h)	800	-	254	-	-
HCM Lane V/C Ratio	0.032	-	0.597	-	-
HCM Control Delay (s)	9.7	-	38.2	-	-
HCM Lane LOS	A	-	E	-	-
HCM 95th %tile Q(veh)	0.1	-	3.5	-	-

Intersection	
Intersection Delay, s/veh	11.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	75	130	25	18	148	19	18	72	14	32	117	68
Future Vol, veh/h	75	130	25	18	148	19	18	72	14	32	117	68
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	87	151	29	21	172	22	21	84	16	37	136	79
Number of Lanes	0	1	0	0	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	11.9	11	10.1	11.3
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	33%	10%	100%	0%
Vol Thru, %	0%	84%	57%	80%	0%	63%
Vol Right, %	0%	16%	11%	10%	0%	37%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	18	86	230	185	32	185
LT Vol	18	0	75	18	32	0
Through Vol	0	72	130	148	0	117
RT Vol	0	14	25	19	0	68
Lane Flow Rate	21	100	267	215	37	215
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.039	0.171	0.399	0.323	0.068	0.347
Departure Headway (Hd)	6.78	6.154	5.365	5.409	6.571	5.801
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	528	582	671	663	545	620
Service Time	4.528	3.902	3.405	3.452	4.312	3.542
HCM Lane V/C Ratio	0.04	0.172	0.398	0.324	0.068	0.347
HCM Control Delay	9.8	10.2	11.9	11	9.8	11.6
HCM Lane LOS	A	B	B	B	A	B
HCM 95th-tile Q	0.1	0.6	1.9	1.4	0.2	1.5

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	638	15	11	716	3	28	1	28	1	1	23
Future Vol, veh/h	5	638	15	11	716	3	28	1	28	1	1	23
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	300	-	300	300	-	300	300	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	3	2	2	4	2	2	2	2	2	2	2
Mvmt Flow	5	658	15	11	738	3	29	1	29	1	1	24

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	741	0	0	673	0	0	1060	1431	329	1100	1443	369
Stage 1	-	-	-	-	-	-	668	668	-	760	760	-
Stage 2	-	-	-	-	-	-	392	763	-	340	683	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	862	-	-	914	-	-	178	133	667	167	131	628
Stage 1	-	-	-	-	-	-	414	455	-	364	413	-
Stage 2	-	-	-	-	-	-	604	411	-	648	447	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	862	-	-	914	-	-	168	131	667	157	129	628
Mov Cap-2 Maneuver	-	-	-	-	-	-	168	131	-	157	129	-
Stage 1	-	-	-	-	-	-	412	452	-	362	408	-
Stage 2	-	-	-	-	-	-	573	406	-	615	444	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.1	21	12.6
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	168	585	862	-	-	914	-	-	146	580
HCM Lane V/C Ratio	0.172	0.051	0.006	-	-	0.012	-	-	0.011	0.042
HCM Control Delay (s)	30.8	11.5	9.2	-	-	9	-	-	29.9	11.5
HCM Lane LOS	D	B	A	-	-	A	-	-	D	B
HCM 95th %tile Q(veh)	0.6	0.2	0	-	-	0	-	-	0	0.1

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	105	495	67	125	551	10	68	115	123	4	122	111
Future Vol, veh/h	105	495	67	125	551	10	68	115	123	4	122	111
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	300	-	300	300	-	-	400	-	-	300	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	3	2	2	4	2	2	2	2	2	2	2
Mvmt Flow	113	532	72	134	592	11	73	124	132	4	131	119

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	603	0	0	604	0	0	1388	1629	266	1420	1696	302
Stage 1	-	-	-	-	-	-	758	758	-	866	866	-
Stage 2	-	-	-	-	-	-	630	871	-	554	830	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	971	-	-	970	-	-	102	~ 101	732	97	~ 92	694
Stage 1	-	-	-	-	-	-	365	413	-	314	369	-
Stage 2	-	-	-	-	-	-	436	367	-	484	383	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	971	-	-	970	-	-	-	~ 77	732	-	~ 70	694
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	~ 77	-	-	~ 70	-
Stage 1	-	-	-	-	-	-	323	365	-	278	318	-
Stage 2	-	-	-	-	-	-	183	316	-	232	339	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.4	1.7		
HCM LOS			-	-

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	143	971	-	-	970	-	-	-	122
HCM Lane V/C Ratio	-	1.79	0.116	-	-	0.139	-	-	-	2.054
HCM Control Delay (s)	-	$ 435.5	9.2	-	-	9.3	-	-	-	$ 560.5
HCM Lane LOS	-	F	A	-	-	A	-	-	-	F
HCM 95th %tile Q(veh)	-	19.1	0.4	-	-	0.5	-	-	-	20.6

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	72	471	7	1	433	2	3	1	7	13	1	111
Future Vol, veh/h	72	471	7	1	433	2	3	1	7	13	1	111
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	250	-	250	250	-	250	-	-	300	-	-	300
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	80	523	8	1	481	2	3	1	8	14	1	123

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	483	0	0	531	0	0	1229	1168	523	1175	1174	481
Stage 1	-	-	-	-	-	-	683	683	-	483	483	-
Stage 2	-	-	-	-	-	-	546	485	-	692	691	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1080	-	-	1036	-	-	155	193	554	168	192	585
Stage 1	-	-	-	-	-	-	439	449	-	565	553	-
Stage 2	-	-	-	-	-	-	522	552	-	434	446	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1080	-	-	1036	-	-	115	179	554	155	178	585
Mov Cap-2 Maneuver	-	-	-	-	-	-	115	179	-	155	178	-
Stage 1	-	-	-	-	-	-	407	416	-	523	552	-
Stage 2	-	-	-	-	-	-	411	551	-	395	413	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.1	0	20	14.8
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	126	554	1080	-	-	1036	-	-	156	585
HCM Lane V/C Ratio	0.035	0.014	0.074	-	-	0.001	-	-	0.1	0.211
HCM Control Delay (s)	34.6	11.6	8.6	-	-	8.5	-	-	30.6	12.8
HCM Lane LOS	D	B	A	-	-	A	-	-	D	B
HCM 95th %tile Q(veh)	0.1	0	0.2	-	-	0	-	-	0.3	0.8

Intersection	
Int Delay, s/veh	6.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	1	7	1	1	224	1	77	1	192	124	1
Future Vol, veh/h	5	1	7	1	1	224	1	77	1	192	124	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	300	-	-	300	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	73	73	73	73	73	73	73	73	73	73	73	73
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	1	10	1	1	307	1	105	1	263	170	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	959	805	171	810	805	106	171	0	0	106	0	0
Stage 1	697	697	-	108	108	-	-	-	-	-	-	-
Stage 2	262	108	-	702	697	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	237	316	873	298	316	948	1406	-	-	1485	-	-
Stage 1	431	443	-	897	806	-	-	-	-	-	-	-
Stage 2	743	806	-	429	443	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	138	260	873	254	260	948	1406	-	-	1485	-	-
Mov Cap-2 Maneuver	138	260	-	254	260	-	-	-	-	-	-	-
Stage 1	431	365	-	896	805	-	-	-	-	-	-	-
Stage 2	501	805	-	348	365	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	19.3	10.8	0.1	4.8
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1406	-	-	270	926	1485	-	-
HCM Lane V/C Ratio	0.001	-	-	0.066	0.334	0.177	-	-
HCM Control Delay (s)	7.6	-	-	19.3	10.8	7.9	-	-
HCM Lane LOS	A	-	-	C	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	1.5	0.6	-	-

Intersection	
Int Delay, s/veh	4.5

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	108	27	23	599	656	129
Future Vol, veh/h	108	27	23	599	656	129
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	200	-	-	200
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	3	4	2
Mvmt Flow	121	30	26	673	737	145

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1126	369	882	0	-	0
Stage 1	737	-	-	-	-	-
Stage 2	389	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	199	628	762	-	-	-
Stage 1	434	-	-	-	-	-
Stage 2	654	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	192	628	762	-	-	-
Mov Cap-2 Maneuver	192	-	-	-	-	-
Stage 1	419	-	-	-	-	-
Stage 2	654	-	-	-	-	-

Approach	SE	NE	SW
HCM Control Delay, s	49.8	0.4	0
HCM LOS	E		

Minor Lane/Major Mvmt	NEL	NET	SELn1	SWT	SWR
Capacity (veh/h)	762	-	223	-	-
HCM Lane V/C Ratio	0.034	-	0.68	-	-
HCM Control Delay (s)	9.9	-	49.8	-	-
HCM Lane LOS	A	-	E	-	-
HCM 95th %tile Q(veh)	0.1	-	4.3	-	-

Intersection	
Intersection Delay, s/veh	14.5
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	75	130	34	27	148	19	29	154	24	32	188	68
Future Vol, veh/h	75	130	34	27	148	19	29	154	24	32	188	68
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	87	151	40	31	172	22	34	179	28	37	219	79
Number of Lanes	0	1	0	0	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	14.9	13.6	13.2	15.7
HCM LOS	B	B	B	C

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	31%	14%	100%	0%
Vol Thru, %	0%	87%	54%	76%	0%	73%
Vol Right, %	0%	13%	14%	10%	0%	27%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	29	178	239	194	32	256
LT Vol	29	0	75	27	32	0
Through Vol	0	154	130	148	0	188
RT Vol	0	24	34	19	0	68
Lane Flow Rate	34	207	278	226	37	298
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.069	0.386	0.481	0.398	0.074	0.533
Departure Headway (Hd)	7.327	6.718	6.235	6.35	7.154	6.452
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	489	536	578	566	501	560
Service Time	5.069	4.46	4.273	4.391	4.892	4.191
HCM Lane V/C Ratio	0.07	0.386	0.481	0.399	0.074	0.532
HCM Control Delay	10.6	13.6	14.9	13.6	10.5	16.4
HCM Lane LOS	B	B	B	B	B	C
HCM 95th-tile Q	0.2	1.8	2.6	1.9	0.2	3.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	105	495	67	125	551	10	68	115	123	4	122	111
Future Volume (veh/h)	105	495	67	125	551	10	68	115	123	4	122	111
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1856	1870	1870	1841	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	113	532	72	134	592	11	73	124	132	4	131	119
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	3	2	2	4	2	2	2	2	2	2	2
Cap, veh/h	532	1247	561	579	1388	26	246	192	205	218	166	151
Arrive On Green	0.12	0.35	0.35	0.16	0.40	0.40	0.05	0.23	0.23	0.01	0.18	0.18
Sat Flow, veh/h	1781	3526	1585	1781	3512	65	1781	829	882	1781	903	820
Grp Volume(v), veh/h	113	532	72	134	295	308	73	0	256	4	0	250
Grp Sat Flow(s),veh/h/ln	1781	1763	1585	1781	1749	1829	1781	0	1712	1781	0	1723
Q Serve(g_s), s	2.6	8.3	2.2	2.8	8.8	8.8	2.3	0.0	9.7	0.1	0.0	10.0
Cycle Q Clear(g_c), s	2.6	8.3	2.2	2.8	8.8	8.8	2.3	0.0	9.7	0.1	0.0	10.0
Prop In Lane	1.00		1.00	1.00		0.04	1.00		0.52	1.00		0.48
Lane Grp Cap(c), veh/h	532	1247	561	579	691	723	246	0	397	218	0	317
V/C Ratio(X)	0.21	0.43	0.13	0.23	0.43	0.43	0.30	0.00	0.64	0.02	0.00	0.79
Avail Cap(c_a), veh/h	532	1247	561	579	691	723	337	0	700	345	0	657
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.0	17.7	15.8	9.6	15.9	15.9	22.0	0.0	25.0	24.0	0.0	28.1
Incr Delay (d2), s/veh	0.9	1.1	0.5	0.9	1.9	1.8	0.7	0.0	1.8	0.0	0.0	4.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.9	6.0	1.5	2.0	6.6	6.8	1.7	0.0	7.1	0.1	0.0	7.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.9	18.8	16.3	10.6	17.8	17.7	22.7	0.0	26.8	24.1	0.0	32.5
LnGrp LOS	B	B	B	B	B	B	C	A	C	C	A	C
Approach Vol, veh/h		717			737			329			254	
Approach Delay, s/veh		17.5			16.4			25.9			32.3	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.9	21.2	16.0	30.0	8.3	17.8	13.0	33.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.5	29.5	11.5	25.5	7.5	27.5	8.5	28.5
Max Q Clear Time (g_c+I1), s	2.1	11.7	4.8	10.3	4.3	12.0	4.6	10.8
Green Ext Time (p_c), s	0.0	1.4	0.2	3.4	0.0	1.3	0.1	3.5

Intersection Summary	
HCM 6th Ctrl Delay	20.3
HCM 6th LOS	C

Crash Summary

Biscayne/145th

Crash Severity/Crash Year

Crash Severity	Total	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
K - Fatal	0	0	0	0	0	0	0	0	0	0	0	0
A - Serious Injury	0	0	0	0	0	0	0	0	0	0	0	0
B - Minor Injury	0	0	0	0	0	0	0	0	0	0	0	0
C - Possible Injury	0	0	0	0	0	0	0	0	0	0	0	0
N - Prop Dmg Only	4	0	0	0	0	0	1	0	2	0	0	1
Total	4	0	0	0	0	0	1	0	2	0	0	1

Crash Severity/Number of Vehicles

Crash Severity	Total	0	1	2	3+
K - Fatal	0	0	0	0	0
A - Serious Injury	0	0	0	0	0
B - Minor Injury	0	0	0	0	0
C - Possible Injury	0	0	0	0	0
N - Prop Dmg Only	4	0	1	2	1
Total	4	0	1	2	1

Basic Type Summary

	Total	%
Pedestrian	0	0.0
Bike	0	0.0
Single Vehicle Run Off Road	1	25.0
Single Vehicle Other	0	0.0
Sideswipe Same Direction	0	0.0
Sideswipe Opposing	0	0.0
Rear End	0	0.0
Head On	0	0.0
Left Turn	0	0.0
Angle	2	50.0
Other	1	25.0
Total	4	100.0

First Harmful Event Summary

	Total	%
Pedestrian	0	0.0
Bicyclist	0	0.0
Motor Vehicle In Transport	3	75.0
Parked Motor Vehicle	0	0.0
Train	0	0.0
Deer/Animal	0	0.0
Other - Non Fixed Object	0	0.0
Collision Fixed Object	1	25.0
Non-Collision Harmful Events	0	0.0
Other/Unknown	0	0.0
Total	4	100.0

Relationship to Intersection Summary

	Total	%
Not at Intersection/Interchange	0	0.0
Four-Way Intersection	3	75.0
T or Y Intersection	0	0.0
Five-Way Intersection or More	0	0.0
Roundabout	0	0.0
Intersection Related	1	25.0
Driveway Access Related	0	0.0
At School Crossing	0	0.0
Railway Grade Crossing	0	0.0
Shared Use Path or Trail	0	0.0
Interchange or Ramp	0	0.0
Crossover Related	0	0.0
Acceleration/Deceleration Lane	0	0.0
Other/Unknown	0	0.0
Total	4	100.0

Weather 1 Summary

	Total	%
Clear	4	100.0
Cloudy	0	0.0
Rain	0	0.0
Snow	0	0.0
Sleet, Hail (Freezing Rain/Drizzle)	0	0.0
Fog/Smog/Smoke	0	0.0
Blowing Sand/Soil/Dirt/Snow	0	0.0
Severe Crosswinds	0	0.0
Other/Unknown	0	0.0
Total	4	100.0

Light Condition Summary

	Total	%
Daylight	2	50.0
Sunrise	0	0.0
Sunset	0	0.0
Dark (Str Lights On)	2	50.0
Dark (Str Lights Off)	0	0.0
Dark (No Str Lights)	0	0.0
Dark (Unknown Light)	0	0.0
Other/Unknown	0	0.0
Total	4	100.0

Crash Summary

Biscayne/145th

Time of Day/Day of Week

From To	00:00 01:59	02:00 03:59	04:00 05:59	06:00 07:59	08:00 09:59	10:00 11:59	12:00 13:59	14:00 15:59	16:00 17:59	18:00 19:59	20:00 21:59	22:00 23:59	Total	%
SUN	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
MON	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
TUE	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
WED	0	0	0	0	0	0	0	1	0	1	0	0	2	50.0
THU	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
FRI	0	0	1	0	0	0	0	0	0	0	0	0	1	25.0
SAT	0	0	0	0	0	0	1	0	0	0	0	0	1	25.0
Total	0	0	1	0	0	0	1	1	0	1	0	0	4	100.0
%	0.0	0.0	25.0	0.0	0.0	0.0	25.0	25.0	0.0	25.0	0.0	0.0	100.0	100.0

Driver & Non-Motorist Age/Gender Summary

Age	M	F	NR	No Value	Total	%
<14	0	0	0	0	0	0.0
14	0	0	0	0	0	0.0
15	0	1	0	0	1	12.5
16	0	0	0	0	0	0.0
17	0	0	0	0	0	0.0
18	0	0	0	0	0	0.0
19	0	0	0	0	0	0.0
20	0	0	0	0	0	0.0
21-24	1	0	0	0	1	12.5
25-29	1	1	0	0	2	25.0
30-34	0	2	0	0	2	25.0
35-39	0	0	0	0	0	0.0
40-44	0	0	0	0	0	0.0
45-49	0	1	0	0	1	12.5
50-54	0	0	0	0	0	0.0
55-59	0	0	0	0	0	0.0
60-64	0	0	0	0	0	0.0
65-69	0	0	0	0	0	0.0
70-74	0	0	0	0	0	0.0
75-79	0	1	0	0	1	12.5
80-84	0	0	0	0	0	0.0
85-89	0	0	0	0	0	0.0
90-94	0	0	0	0	0	0.0
95+	0	0	0	0	0	0.0
No Value	0	0	0	0	0	0.0
Total	2	6	0	0	8	100.0
%	25.0	75.0	0.0	0.0	100.0	100.0

Month Summary	Total	%
January	1	25.0
February	0	0.0
March	0	0.0
April	0	0.0
May	0	0.0
June	0	0.0
July	0	0.0
August	0	0.0
September	1	25.0
October	1	25.0
November	0	0.0
December	1	25.0
Total	4	100.0

Physical Condition Summary	Total	%
Apparently Normal (Including No Drugs/Alcohol)	7	87.5
Physical Disability (Short Term or Long Term)	0	0.0
Medical Issue (Ill, Sick or Fainted)	0	0.0
Emotional (Depression, Angry, Disturbed, etc.)	0	0.0
Asleep or Fatigued	0	0.0
Has Been Drinking Alcohol	1	12.5
Has Been Taking Illicit Drugs	0	0.0
Has Been Taking Medications	0	0.0
Other/Unknown	0	0.0
Not Applicable	0	0.0
Total	8	100.0

Selection Filter:

WORK AREA: State - FILTER: Date('04/01/2019','03/31/2024') - SPATIAL FILTER APPLIED

Analyst: Ed Terhaar

Notes:

Crash Summary

CR 42/145th

Crash Severity/Crash Year

Crash Severity	Total	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
K - Fatal	0	0	0	0	0	0	0	0	0	0	0	0
A - Serious Injury	1	0	0	0	0	0	0	1	0	0	0	0
B - Minor Injury	0	0	0	0	0	0	0	0	0	0	0	0
C - Possible Injury	1	0	0	0	0	0	1	0	0	0	0	0
N - Prop Dmg Only	3	0	0	0	0	0	0	0	0	2	1	0
Total	5	0	0	0	0	0	1	1	0	2	1	0

Crash Severity/Number of Vehicles

Crash Severity	Total	0	1	2	3+
K - Fatal	0	0	0	0	0
A - Serious Injury	1	0	0	1	0
B - Minor Injury	0	0	0	0	0
C - Possible Injury	1	0	0	1	0
N - Prop Dmg Only	3	0	0	3	0
Total	5	0	0	5	0

Basic Type Summary

	Total	%
Pedestrian	0	0.0
Bike	0	0.0
Single Vehicle Run Off Road	0	0.0
Single Vehicle Other	0	0.0
Sideswipe Same Direction	0	0.0
Sideswipe Opposing	0	0.0
Rear End	0	0.0
Head On	0	0.0
Left Turn	1	20.0
Angle	3	60.0
Other	1	20.0
Total	5	100.0

First Harmful Event Summary

	Total	%
Pedestrian	0	0.0
Bicyclist	0	0.0
Motor Vehicle In Transport	4	80.0
Parked Motor Vehicle	0	0.0
Train	0	0.0
Deer/Animal	0	0.0
Other - Non Fixed Object	0	0.0
Collision Fixed Object	1	20.0
Non-Collision Harmful Events	0	0.0
Other/Unknown	0	0.0
Total	5	100.0

Relationship to Intersection Summary

	Total	%
Not at Intersection/Interchange	0	0.0
Four-Way Intersection	0	0.0
T or Y Intersection	4	80.0
Five-Way Intersection or More	0	0.0
Roundabout	0	0.0
Intersection Related	1	20.0
Driveway Access Related	0	0.0
At School Crossing	0	0.0
Railway Grade Crossing	0	0.0
Shared Use Path or Trail	0	0.0
Interchange or Ramp	0	0.0
Crossover Related	0	0.0
Acceleration/Deceleration Lane	0	0.0
Other/Unknown	0	0.0
Total	5	100.0

Weather 1 Summary

	Total	%
Clear	5	100.0
Cloudy	0	0.0
Rain	0	0.0
Snow	0	0.0
Sleet, Hail (Freezing Rain/Drizzle)	0	0.0
Fog/Smog/Smoke	0	0.0
Blowing Sand/Soil/Dirt/Snow	0	0.0
Severe Crosswinds	0	0.0
Other/Unknown	0	0.0
Total	5	100.0

Light Condition Summary

	Total	%
Daylight	4	80.0
Sunrise	0	0.0
Sunset	0	0.0
Dark (Str Lights On)	1	20.0
Dark (Str Lights Off)	0	0.0
Dark (No Str Lights)	0	0.0
Dark (Unknown Light)	0	0.0
Other/Unknown	0	0.0
Total	5	100.0

Crash Summary

CR 42/145th

Time of Day/Day of Week

From To	00:00 01:59	02:00 03:59	04:00 05:59	06:00 07:59	08:00 09:59	10:00 11:59	12:00 13:59	14:00 15:59	16:00 17:59	18:00 19:59	20:00 21:59	22:00 23:59	Total	%
SUN	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
MON	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
TUE	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
WED	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
THU	0	0	0	0	0	0	1	1	1	0	0	0	3	60.0
FRI	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
SAT	0	0	0	0	0	0	1	0	0	1	0	0	2	40.0
Total	0	0	0	0	0	0	2	1	1	1	0	0	5	100.0
%	0.0	0.0	0.0	0.0	0.0	0.0	40.0	20.0	20.0	20.0	0.0	0.0	100.0	100.0

Driver & Non-Motorist Age/Gender Summary

Age	M	F	NR	No Value	Total	%
<14	0	0	0	0	0	0.0
14	0	0	0	0	0	0.0
15	0	1	0	0	1	10.0
16	0	1	0	0	1	10.0
17	0	0	0	0	0	0.0
18	1	0	0	0	1	10.0
19	0	0	0	0	0	0.0
20	0	0	0	0	0	0.0
21-24	0	1	0	0	1	10.0
25-29	2	0	0	0	2	20.0
30-34	0	0	0	0	0	0.0
35-39	0	0	0	0	0	0.0
40-44	0	1	0	0	1	10.0
45-49	0	1	0	0	1	10.0
50-54	0	0	0	0	0	0.0
55-59	0	1	0	0	1	10.0
60-64	1	0	0	0	1	10.0
65-69	0	0	0	0	0	0.0
70-74	0	0	0	0	0	0.0
75-79	0	0	0	0	0	0.0
80-84	0	0	0	0	0	0.0
85-89	0	0	0	0	0	0.0
90-94	0	0	0	0	0	0.0
95+	0	0	0	0	0	0.0
No Value	0	0	0	0	0	0.0
Total	4	6	0	0	10	100.0
%	40.0	60.0	0.0	0.0	100.0	100.0

Month Summary	Total	%
January	0	0.0
February	0	0.0
March	0	0.0
April	0	0.0
May	0	0.0
June	1	20.0
July	1	20.0
August	0	0.0
September	0	0.0
October	0	0.0
November	0	0.0
December	3	60.0
Total	5	100.0

Physical Condition Summary	Total	%
Apparently Normal (Including No Drugs/Alcohol)	10	100.0
Physical Disability (Short Term or Long Term)	0	0.0
Medical Issue (Ill, Sick or Fainted)	0	0.0
Emotional (Depression, Angry, Disturbed, etc.)	0	0.0
Asleep or Fatigued	0	0.0
Has Been Drinking Alcohol	0	0.0
Has Been Taking Illicit Drugs	0	0.0
Has Been Taking Medications	0	0.0
Other/Unknown	0	0.0
Not Applicable	0	0.0
Total	10	100.0

Selection Filter:

WORK AREA: State - FILTER: Date('04/01/2019','03/31/2024') - SPATIAL FILTER APPLIED

Analyst: Ed Terhaar

Notes:

Crash Summary

CR 42/Biscayne

Crash Severity/Crash Year

Crash Severity	Total	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
K - Fatal	0	0	0	0	0	0	0	0	0	0	0	0
A - Serious Injury	0	0	0	0	0	0	0	0	0	0	0	0
B - Minor Injury	6	0	0	0	0	0	1	0	0	2	3	0
C - Possible Injury	5	0	0	0	0	0	0	0	2	3	0	0
N - Prop Dmg Only	20	0	0	0	0	0	3	1	4	2	9	1
Total	31	0	0	0	0	0	4	1	6	7	12	1

Crash Severity/Number of Vehicles

Crash Severity	Total	0	1	2	3+
K - Fatal	0	0	0	0	0
A - Serious Injury	0	0	0	0	0
B - Minor Injury	6	0	0	5	1
C - Possible Injury	5	0	0	4	1
N - Prop Dmg Only	20	0	1	19	0
Total	31	0	1	28	2

Basic Type Summary

	Total	%
Pedestrian	0	0.0
Bike	0	0.0
Single Vehicle Run Off Road	1	3.2
Single Vehicle Other	0	0.0
Sideswipe Same Direction	1	3.2
Sideswipe Opposing	0	0.0
Rear End	9	29.0
Head On	0	0.0
Left Turn	2	6.5
Angle	17	54.8
Other	1	3.2
Total	31	100.0

First Harmful Event Summary

	Total	%
Pedestrian	0	0.0
Bicyclist	0	0.0
Motor Vehicle In Transport	30	96.8
Parked Motor Vehicle	0	0.0
Train	0	0.0
Deer/Animal	0	0.0
Other - Non Fixed Object	0	0.0
Collision Fixed Object	1	3.2
Non-Collision Harmful Events	0	0.0
Other/Unknown	0	0.0
Total	31	100.0

Relationship to Intersection Summary

	Total	%
Not at Intersection/Interchange	1	3.2
Four-Way Intersection	23	74.2
T or Y Intersection	0	0.0
Five-Way Intersection or More	0	0.0
Roundabout	0	0.0
Intersection Related	5	16.1
Driveway Access Related	0	0.0
At School Crossing	0	0.0
Railway Grade Crossing	0	0.0
Shared Use Path or Trail	0	0.0
Interchange or Ramp	0	0.0
Crossover Related	0	0.0
Acceleration/Deceleration Lane	1	3.2
Other/Unknown	1	3.2
Total	31	100.0

Weather 1 Summary

	Total	%
Clear	24	77.4
Cloudy	2	6.5
Rain	2	6.5
Snow	1	3.2
Sleet, Hail (Freezing Rain/Drizzle)	2	6.5
Fog/Smog/Smoke	0	0.0
Blowing Sand/Soil/Dirt/Snow	0	0.0
Severe Crosswinds	0	0.0
Other/Unknown	0	0.0
Total	31	100.0

Light Condition Summary

	Total	%
Daylight	24	77.4
Sunrise	1	3.2
Sunset	1	3.2
Dark (Str Lights On)	3	9.7
Dark (Str Lights Off)	2	6.5
Dark (No Str Lights)	0	0.0
Dark (Unknown Light)	0	0.0
Other/Unknown	0	0.0
Total	31	100.0

Crash Summary

CR 42/Biscayne

Time of Day/Day of Week

From To	00:00 01:59	02:00 03:59	04:00 05:59	06:00 07:59	08:00 09:59	10:00 11:59	12:00 13:59	14:00 15:59	16:00 17:59	18:00 19:59	20:00 21:59	22:00 23:59	Total	%
SUN	0	0	0	0	0	0	0	0	1	0	0	0	1	3.2
MON	0	0	0	3	0	1	0	1	1	1	0	0	7	22.6
TUE	0	0	0	2	0	0	0	1	3	0	0	0	6	19.4
WED	0	0	0	0	1	0	1	0	0	0	0	0	2	6.5
THU	0	0	0	0	0	1	1	0	1	1	0	0	4	12.9
FRI	0	0	0	0	2	0	0	0	1	1	1	0	5	16.1
SAT	0	0	0	1	1	1	1	0	2	0	0	0	6	19.4
Total	0	0	0	6	4	3	3	2	9	3	1	0	31	100.0
%	0.0	0.0	0.0	19.4	12.9	9.7	9.7	6.5	29.0	9.7	3.2	0.0	100.0	100.0

Driver & Non-Motorist Age/Gender Summary

Age	M	F	NR	No Value	Total	%
<14	0	0	0	0	0	0.0
14	0	0	0	0	0	0.0
15	0	0	0	0	0	0.0
16	2	3	0	0	5	7.9
17	0	1	0	0	1	1.6
18	2	3	0	0	5	7.9
19	0	1	0	0	1	1.6
20	1	2	0	0	3	4.8
21-24	2	3	0	0	5	7.9
25-29	2	1	0	0	3	4.8
30-34	1	2	0	0	3	4.8
35-39	4	4	0	0	8	12.7
40-44	3	4	0	0	7	11.1
45-49	5	1	0	0	6	9.5
50-54	1	0	0	0	1	1.6
55-59	3	1	0	0	4	6.3
60-64	1	2	0	0	3	4.8
65-69	2	0	0	0	2	3.2
70-74	1	0	0	0	1	1.6
75-79	2	0	0	0	2	3.2
80-84	1	0	0	0	1	1.6
85-89	1	0	0	0	1	1.6
90-94	0	0	0	0	0	0.0
95+	0	0	0	0	0	0.0
No Value	0	0	0	1	1	1.6
Total	34	28	0	1	63	100.0
%	54.0	44.4	0.0	1.6	100.0	100.0

Month Summary

	Total	%
January	3	9.7
February	2	6.5
March	1	3.2
April	0	0.0
May	4	12.9
June	4	12.9
July	1	3.2
August	2	6.5
September	3	9.7
October	4	12.9
November	4	12.9
December	3	9.7
Total	31	100.0

Physical Condition Summary

	Total	%
Apparently Normal (Including No Drugs/Alcohol)	62	100.0
Physical Disability (Short Term or Long Term)	0	0.0
Medical Issue (Ill, Sick or Fainted)	0	0.0
Emotional (Depression, Angry, Disturbed, etc.)	0	0.0
Asleep or Fatigued	0	0.0
Has Been Drinking Alcohol	0	0.0
Has Been Taking Illicit Drugs	0	0.0
Has Been Taking Medications	0	0.0
Other/Unknown	0	0.0
Not Applicable	0	0.0
Total	62	100.0

Selection Filter:

WORK AREA: State - FILTER: Date('04/01/2019','03/31/2024') - SPATIAL FILTER APPLIED

Analyst: Ed Terhaar

Notes:

Crash Summary

Biscayne/Boulder

Crash Severity/Crash Year

Crash Severity	Total	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
K - Fatal	0	0	0	0	0	0	0	0	0	0	0	0
A - Serious Injury	0	0	0	0	0	0	0	0	0	0	0	0
B - Minor Injury	0	0	0	0	0	0	0	0	0	0	0	0
C - Possible Injury	1	0	0	0	0	0	0	0	0	0	1	0
N - Prop Dmg Only	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	0	0	0	0	0	0	0	1	0

Crash Severity/Number of Vehicles

Crash Severity	Total	0	1	2	3+
K - Fatal	0	0	0	0	0
A - Serious Injury	0	0	0	0	0
B - Minor Injury	0	0	0	0	0
C - Possible Injury	1	0	0	1	0
N - Prop Dmg Only	0	0	0	0	0
Total	1	0	0	1	0

Basic Type Summary

	Total	%
Pedestrian	0	0.0
Bike	0	0.0
Single Vehicle Run Off Road	0	0.0
Single Vehicle Other	0	0.0
Sideswipe Same Direction	0	0.0
Sideswipe Opposing	0	0.0
Rear End	1	100.0
Head On	0	0.0
Left Turn	0	0.0
Angle	0	0.0
Other	0	0.0
Total	1	100.0

First Harmful Event Summary

	Total	%
Pedestrian	0	0.0
Bicyclist	0	0.0
Motor Vehicle In Transport	1	100.0
Parked Motor Vehicle	0	0.0
Train	0	0.0
Deer/Animal	0	0.0
Other - Non Fixed Object	0	0.0
Collision Fixed Object	0	0.0
Non-Collision Harmful Events	0	0.0
Other/Unknown	0	0.0
Total	1	100.0

Relationship to Intersection Summary

	Total	%
Not at Intersection/Interchange	0	0.0
Four-Way Intersection	0	0.0
T or Y Intersection	1	100.0
Five-Way Intersection or More	0	0.0
Roundabout	0	0.0
Intersection Related	0	0.0
Driveway Access Related	0	0.0
At School Crossing	0	0.0
Railway Grade Crossing	0	0.0
Shared Use Path or Trail	0	0.0
Interchange or Ramp	0	0.0
Crossover Related	0	0.0
Acceleration/Deceleration Lane	0	0.0
Other/Unknown	0	0.0
Total	1	100.0

Weather 1 Summary

	Total	%
Clear	1	100.0
Cloudy	0	0.0
Rain	0	0.0
Snow	0	0.0
Sleet, Hail (Freezing Rain/Drizzle)	0	0.0
Fog/Smog/Smoke	0	0.0
Blowing Sand/Soil/Dirt/Snow	0	0.0
Severe Crosswinds	0	0.0
Other/Unknown	0	0.0
Total	1	100.0

Light Condition Summary

	Total	%
Daylight	1	100.0
Sunrise	0	0.0
Sunset	0	0.0
Dark (Str Lights On)	0	0.0
Dark (Str Lights Off)	0	0.0
Dark (No Str Lights)	0	0.0
Dark (Unknown Light)	0	0.0
Other/Unknown	0	0.0
Total	1	100.0

Crash Summary

Biscayne/Boulder

Time of Day/Day of Week

From To	00:00 01:59	02:00 03:59	04:00 05:59	06:00 07:59	08:00 09:59	10:00 11:59	12:00 13:59	14:00 15:59	16:00 17:59	18:00 19:59	20:00 21:59	22:00 23:59	Total	%
SUN	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
MON	0	0	0	0	1	0	0	0	0	0	0	0	1	100.0
TUE	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
WED	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
THU	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
FRI	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
SAT	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Total	0	0	0	0	1	0	0	0	0	0	0	0	1	100.0
%	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0

Driver & Non-Motorist Age/Gender Summary

Age	M	F	NR	No Value	Total	%
<14	0	0	0	0	0	0.0
14	0	0	0	0	0	0.0
15	0	0	0	0	0	0.0
16	0	0	0	0	0	0.0
17	0	0	0	0	0	0.0
18	0	0	0	0	0	0.0
19	0	0	0	0	0	0.0
20	0	0	0	0	0	0.0
21-24	0	0	0	0	0	0.0
25-29	0	0	0	0	0	0.0
30-34	0	1	0	0	1	50.0
35-39	1	0	0	0	1	50.0
40-44	0	0	0	0	0	0.0
45-49	0	0	0	0	0	0.0
50-54	0	0	0	0	0	0.0
55-59	0	0	0	0	0	0.0
60-64	0	0	0	0	0	0.0
65-69	0	0	0	0	0	0.0
70-74	0	0	0	0	0	0.0
75-79	0	0	0	0	0	0.0
80-84	0	0	0	0	0	0.0
85-89	0	0	0	0	0	0.0
90-94	0	0	0	0	0	0.0
95+	0	0	0	0	0	0.0
No Value	0	0	0	0	0	0.0
Total	1	1	0	0	2	100.0
%	50.0	50.0	0.0	0.0	100.0	100.0

Month Summary

	Total	%
January	0	0.0
February	0	0.0
March	1	100.0
April	0	0.0
May	0	0.0
June	0	0.0
July	0	0.0
August	0	0.0
September	0	0.0
October	0	0.0
November	0	0.0
December	0	0.0
Total	1	100.0

Physical Condition Summary

	Total	%
Apparently Normal (Including No Drugs/Alcohol)	2	100.0
Physical Disability (Short Term or Long Term)	0	0.0
Medical Issue (Ill, Sick or Fainted)	0	0.0
Emotional (Depression, Angry, Disturbed, etc.)	0	0.0
Asleep or Fatigued	0	0.0
Has Been Drinking Alcohol	0	0.0
Has Been Taking Illicit Drugs	0	0.0
Has Been Taking Medications	0	0.0
Other/Unknown	0	0.0
Not Applicable	0	0.0
Total	2	100.0

Selection Filter:

WORK AREA: State - FILTER: Date('04/01/2019','03/31/2024') - SPATIAL FILTER APPLIED

Analyst: Ed Terhaar

Notes:

Crash Summary

CR 42/Business Pkwy

Crash Severity/Crash Year

Crash Severity	Total	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
K - Fatal	0	0	0	0	0	0	0	0	0	0	0	0
A - Serious Injury	0	0	0	0	0	0	0	0	0	0	0	0
B - Minor Injury	0	0	0	0	0	0	0	0	0	0	0	0
C - Possible Injury	0	0	0	0	0	0	0	0	0	0	0	0
N - Prop Dmg Only	1	0	0	0	0	0	0	1	0	0	0	0
Total	1	0	0	0	0	0	0	1	0	0	0	0

Crash Severity/Number of Vehicles

Crash Severity	Total	0	1	2	3+
K - Fatal	0	0	0	0	0
A - Serious Injury	0	0	0	0	0
B - Minor Injury	0	0	0	0	0
C - Possible Injury	0	0	0	0	0
N - Prop Dmg Only	1	0	1	0	0
Total	1	0	1	0	0

Basic Type Summary

	Total	%
Pedestrian	0	0.0
Bike	0	0.0
Single Vehicle Run Off Road	1	100.0
Single Vehicle Other	0	0.0
Sideswipe Same Direction	0	0.0
Sideswipe Opposing	0	0.0
Rear End	0	0.0
Head On	0	0.0
Left Turn	0	0.0
Angle	0	0.0
Other	0	0.0
Total	1	100.0

First Harmful Event Summary

	Total	%
Pedestrian	0	0.0
Bicyclist	0	0.0
Motor Vehicle In Transport	0	0.0
Parked Motor Vehicle	0	0.0
Train	0	0.0
Deer/Animal	0	0.0
Other - Non Fixed Object	0	0.0
Collision Fixed Object	1	100.0
Non-Collision Harmful Events	0	0.0
Other/Unknown	0	0.0
Total	1	100.0

Relationship to Intersection Summary

	Total	%
Not at Intersection/Interchange	0	0.0
Four-Way Intersection	1	100.0
T or Y Intersection	0	0.0
Five-Way Intersection or More	0	0.0
Roundabout	0	0.0
Intersection Related	0	0.0
Driveway Access Related	0	0.0
At School Crossing	0	0.0
Railway Grade Crossing	0	0.0
Shared Use Path or Trail	0	0.0
Interchange or Ramp	0	0.0
Crossover Related	0	0.0
Acceleration/Deceleration Lane	0	0.0
Other/Unknown	0	0.0
Total	1	100.0

Weather 1 Summary

	Total	%
Clear	1	100.0
Cloudy	0	0.0
Rain	0	0.0
Snow	0	0.0
Sleet, Hail (Freezing Rain/Drizzle)	0	0.0
Fog/Smog/Smoke	0	0.0
Blowing Sand/Soil/Dirt/Snow	0	0.0
Severe Crosswinds	0	0.0
Other/Unknown	0	0.0
Total	1	100.0

Light Condition Summary

	Total	%
Daylight	1	100.0
Sunrise	0	0.0
Sunset	0	0.0
Dark (Str Lights On)	0	0.0
Dark (Str Lights Off)	0	0.0
Dark (No Str Lights)	0	0.0
Dark (Unknown Light)	0	0.0
Other/Unknown	0	0.0
Total	1	100.0

Crash Summary

CR 42/Business Pkwy

Time of Day/Day of Week

From To	00:00 01:59	02:00 03:59	04:00 05:59	06:00 07:59	08:00 09:59	10:00 11:59	12:00 13:59	14:00 15:59	16:00 17:59	18:00 19:59	20:00 21:59	22:00 23:59	Total	%
SUN	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
MON	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
TUE	0	0	0	0	0	0	0	0	1	0	0	0	1	100.0
WED	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
THU	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
FRI	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
SAT	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Total	0	0	0	0	0	0	0	0	1	0	0	0	1	100.0
%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	100.0	100.0

Driver & Non-Motorist Age/Gender Summary

Age	M	F	NR	No Value	Total	%
<14	0	0	0	0	0	0.0
14	0	0	0	0	0	0.0
15	0	0	0	0	0	0.0
16	0	0	0	0	0	0.0
17	0	0	0	0	0	0.0
18	0	0	0	0	0	0.0
19	0	1	0	0	1	100.0
20	0	0	0	0	0	0.0
21-24	0	0	0	0	0	0.0
25-29	0	0	0	0	0	0.0
30-34	0	0	0	0	0	0.0
35-39	0	0	0	0	0	0.0
40-44	0	0	0	0	0	0.0
45-49	0	0	0	0	0	0.0
50-54	0	0	0	0	0	0.0
55-59	0	0	0	0	0	0.0
60-64	0	0	0	0	0	0.0
65-69	0	0	0	0	0	0.0
70-74	0	0	0	0	0	0.0
75-79	0	0	0	0	0	0.0
80-84	0	0	0	0	0	0.0
85-89	0	0	0	0	0	0.0
90-94	0	0	0	0	0	0.0
95+	0	0	0	0	0	0.0
No Value	0	0	0	0	0	0.0
Total	0	1	0	0	1	100.0
%	0.0	100.0	0.0	0.0	100.0	100.0

Month Summary

	Total	%
January	0	0.0
February	1	100.0
March	0	0.0
April	0	0.0
May	0	0.0
June	0	0.0
July	0	0.0
August	0	0.0
September	0	0.0
October	0	0.0
November	0	0.0
December	0	0.0
Total	1	100.0

Physical Condition Summary

	Total	%
Apparently Normal (Including No Drugs/Alcohol)	1	100.0
Physical Disability (Short Term or Long Term)	0	0.0
Medical Issue (Ill, Sick or Fainted)	0	0.0
Emotional (Depression, Angry, Disturbed, etc.)	0	0.0
Asleep or Fatigued	0	0.0
Has Been Drinking Alcohol	0	0.0
Has Been Taking Illicit Drugs	0	0.0
Has Been Taking Medications	0	0.0
Other/Unknown	0	0.0
Not Applicable	0	0.0
Total	1	100.0

Selection Filter:

WORK AREA: State - FILTER: Date('04/01/2019','03/31/2024') - SPATIAL FILTER APPLIED

Analyst: Ed Terhaar

Notes:

Crash Summary

CR 46/Biscayne

Crash Severity/Crash Year

Crash Severity	Total	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
K - Fatal	0	0	0	0	0	0	0	0	0	0	0	0
A - Serious Injury	1	0	0	0	0	0	0	1	0	0	0	0
B - Minor Injury	1	0	0	0	0	0	0	0	0	1	0	0
C - Possible Injury	1	0	0	0	0	0	0	0	0	0	1	0
N - Prop Dmg Only	4	0	0	0	0	0	0	2	0	0	1	1
Total	7	0	0	0	0	0	0	3	0	1	2	1

Crash Severity/Number of Vehicles

Crash Severity	Total	0	1	2	3+
K - Fatal	0	0	0	0	0
A - Serious Injury	1	0	0	1	0
B - Minor Injury	1	0	0	1	0
C - Possible Injury	1	0	0	1	0
N - Prop Dmg Only	4	0	0	4	0
Total	7	0	0	7	0

Basic Type Summary

	Total	%
Pedestrian	0	0.0
Bike	0	0.0
Single Vehicle Run Off Road	0	0.0
Single Vehicle Other	0	0.0
Sideswipe Same Direction	2	28.6
Sideswipe Opposing	0	0.0
Rear End	2	28.6
Head On	0	0.0
Left Turn	0	0.0
Angle	3	42.9
Other	0	0.0
Total	7	100.0

First Harmful Event Summary

	Total	%
Pedestrian	0	0.0
Bicyclist	0	0.0
Motor Vehicle In Transport	7	100.0
Parked Motor Vehicle	0	0.0
Train	0	0.0
Deer/Animal	0	0.0
Other - Non Fixed Object	0	0.0
Collision Fixed Object	0	0.0
Non-Collision Harmful Events	0	0.0
Other/Unknown	0	0.0
Total	7	100.0

Relationship to Intersection Summary

	Total	%
Not at Intersection/Interchange	0	0.0
Four-Way Intersection	6	85.7
T or Y Intersection	0	0.0
Five-Way Intersection or More	0	0.0
Roundabout	0	0.0
Intersection Related	1	14.3
Driveway Access Related	0	0.0
At School Crossing	0	0.0
Railway Grade Crossing	0	0.0
Shared Use Path or Trail	0	0.0
Interchange or Ramp	0	0.0
Crossover Related	0	0.0
Acceleration/Deceleration Lane	0	0.0
Other/Unknown	0	0.0
Total	7	100.0

Weather 1 Summary

	Total	%
Clear	2	28.6
Cloudy	2	28.6
Rain	2	28.6
Snow	1	14.3
Sleet, Hail (Freezing Rain/Drizzle)	0	0.0
Fog/Smog/Smoke	0	0.0
Blowing Sand/Soil/Dirt/Snow	0	0.0
Severe Crosswinds	0	0.0
Other/Unknown	0	0.0
Total	7	100.0

Light Condition Summary

	Total	%
Daylight	6	85.7
Sunrise	0	0.0
Sunset	0	0.0
Dark (Str Lights On)	0	0.0
Dark (Str Lights Off)	0	0.0
Dark (No Str Lights)	0	0.0
Dark (Unknown Light)	1	14.3
Other/Unknown	0	0.0
Total	7	100.0

Crash Summary

CR 46/Biscayne

Time of Day/Day of Week

From To	00:00 01:59	02:00 03:59	04:00 05:59	06:00 07:59	08:00 09:59	10:00 11:59	12:00 13:59	14:00 15:59	16:00 17:59	18:00 19:59	20:00 21:59	22:00 23:59	Total	%
SUN	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
MON	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
TUE	0	0	0	0	1	0	1	0	0	0	0	0	2	28.6
WED	0	0	0	0	0	0	0	1	0	0	0	0	1	14.3
THU	0	0	0	0	1	0	0	1	0	0	0	0	2	28.6
FRI	0	0	1	0	0	0	0	0	0	0	0	0	1	14.3
SAT	0	0	0	0	0	0	0	1	0	0	0	0	1	14.3
Total	0	0	1	0	2	0	1	3	0	0	0	0	7	100.0
%	0.0	0.0	14.3	0.0	28.6	0.0	14.3	42.9	0.0	0.0	0.0	0.0	100.0	100.0

Driver & Non-Motorist Age/Gender Summary

Age	M	F	NR	No Value	Total	%
<14	0	0	0	0	0	0.0
14	0	0	0	0	0	0.0
15	0	0	0	0	0	0.0
16	0	0	0	0	0	0.0
17	0	1	0	0	1	7.1
18	0	0	0	0	0	0.0
19	0	0	0	0	0	0.0
20	0	0	0	0	0	0.0
21-24	0	0	0	0	0	0.0
25-29	0	0	0	0	0	0.0
30-34	2	2	0	0	4	28.6
35-39	1	0	0	0	1	7.1
40-44	0	1	0	0	1	7.1
45-49	1	0	0	0	1	7.1
50-54	2	0	0	0	2	14.3
55-59	0	0	0	0	0	0.0
60-64	1	0	0	0	1	7.1
65-69	1	1	0	0	2	14.3
70-74	1	0	0	0	1	7.1
75-79	0	0	0	0	0	0.0
80-84	0	0	0	0	0	0.0
85-89	0	0	0	0	0	0.0
90-94	0	0	0	0	0	0.0
95+	0	0	0	0	0	0.0
No Value	0	0	0	0	0	0.0
Total	9	5	0	0	14	100.0
%	64.3	35.7	0.0	0.0	100.0	100.0

Month Summary	Total	%
January	0	0.0
February	1	14.3
March	0	0.0
April	0	0.0
May	0	0.0
June	1	14.3
July	0	0.0
August	1	14.3
September	1	14.3
October	1	14.3
November	1	14.3
December	1	14.3
Total	7	100.0

Physical Condition Summary	Total	%
Apparently Normal (Including No Drugs/Alcohol)	14	100.0
Physical Disability (Short Term or Long Term)	0	0.0
Medical Issue (Ill, Sick or Fainted)	0	0.0
Emotional (Depression, Angry, Disturbed, etc.)	0	0.0
Asleep or Fatigued	0	0.0
Has Been Drinking Alcohol	0	0.0
Has Been Taking Illicit Drugs	0	0.0
Has Been Taking Medications	0	0.0
Other/Unknown	0	0.0
Not Applicable	0	0.0
Total	14	100.0

Selection Filter:

WORK AREA: State - FILTER: Date('04/01/2019','03/31/2024') - SPATIAL FILTER APPLIED

Analyst: Ed Terhaar

Notes:

Intersection Safety Screening

Intersection: Biscayne and 145th

Statewide Averages based on 2018-2022 crashes

Crashes by Crash Severity	
Fatal (K)	0
Incapacitating Injury (A)	0
Minor Injury (B)	0
Possible Injury (C)	0
Property Damage (PDO)	1
Total Crashes	1

Intersection Characteristics	
Entering Volume	5,800
Environment	Urban
Lighting	Lit
Traffic Control	All-way Stop

Annual crash cost = $3,000

Statewide comparison = All-way STOP

Total Crash Rate	
Observed	0.094
Statewide Average	0.281
Critical Rate	0.750
Critical Index	**0.13**

Fatal & Serious Injury Crash Rate	
Observed	0.000
Statewide Average	0.233
Critical Rate	6.860
Critical Index	**0.00**

The observed crash rate is the number of crashes per million entering vehicles (MEV). The critical rate is a statistical comparison based on similar intersections statewide. An observed crash rate greater than the critical rate indicates that the intersection operates outside the expected, normal range. The critical index reports the magnitude of this difference (i.e. observed crash rate ÷ critical crash rate).

The observed total crash rate for this period is 0.09 per MEV; this is 87% below the critical rate. Based on similar statewide intersections, an additional 7 crashes over the five years would indicate this intersection operates outside the normal range.

The observed fatal and serious injury crash rate for this period is 0.00 per 100 MEV; this is 100% below the critical rate. The intersection operates within the normal range.

Intersection Safety Screening

Intersection: Biscayne and Boulder

Statewide Averages based on 2018-2022 crashes

Crashes by Crash Severity	
Fatal (K)	0
Incapacitating Injury (A)	0
Minor Injury (B)	0
Possible Injury (C)	1
Property Damage (PDO)	0
Total Crashes	1

Intersection Characteristics	
Entering Volume	3,600
Environment	Urban
Lighting	Lit
Traffic Control	Thru-Stop

Annual crash cost = $26,000

Statewide comparison = Thru/STOP, Urban

Total Crash Rate	
Observed	0.152
Statewide Average	0.138
Critical Rate	0.590
Critical Index	**0.26**

Fatal & Serious Injury Crash Rate	
Observed	0.000
Statewide Average	0.350
Critical Rate	10.910
Critical Index	**0.00**

The observed crash rate is the number of crashes per million entering vehicles (MEV). The critical rate is a statistical comparison based on similar intersections statewide. An observed crash rate greater than the critical rate indicates that the intersection operates outside the expected, normal range. The critical index reports the magnitude of this difference (i.e. observed crash rate ÷ critical crash rate).

The observed total crash rate for this period is 0.15 per MEV; this is 74% below the critical rate. Based on similar statewide intersections, an additional 3 crashes over the five years would indicate this intersection operates outside the normal range.

The observed fatal and serious injury crash rate for this period is 0.00 per 100 MEV; this is 100% below the critical rate. The intersection operates within the normal range.

Intersection Safety Screening

Intersection: CR 42 and 145th

Statewide Averages based on 2018-2022 crashes

Crashes by Crash Severity	
Fatal (K)	0
Incapacitating Injury (A)	1
Minor Injury (B)	0
Possible Injury (C)	1
Property Damage (PDO)	3
Total Crashes	5

Intersection Characteristics	
Entering Volume	16,900
Environment	Urban
Lighting	Lit
Traffic Control	Thru-Stop

Annual crash cost = $195,000

Statewide comparison = Thru/STOP, Urban

Total Crash Rate	
Observed	0.162
Statewide Average	0.138
Critical Rate	0.330
Critical Index	**0.49**

Fatal & Serious Injury Crash Rate	
Observed	3.241
Statewide Average	0.350
Critical Rate	3.340
Critical Index	**0.97**

The observed crash rate is the number of crashes per million entering vehicles (MEV). The critical rate is a statistical comparison based on similar intersections statewide. An observed crash rate greater than the critical rate indicates that the intersection operates outside the expected, normal range. The critical index reports the magnitude of this difference (i.e. observed crash rate ÷ critical crash rate).

The observed total crash rate for this period is 0.16 per MEV; this is 51% below the critical rate. Based on similar statewide intersections, an additional 6 crashes over the five years would indicate this intersection operates outside the normal range.

The observed fatal and serious injury crash rate for this period is 3.24 per 100 MEV; this is 3% below the critical rate. The intersection operates within the normal range.

Intersection Safety Screening

Intersection: CR 42 and Biscayne

Statewide Averages based on 2018-2022 crashes

Crashes by Crash Severity	
Fatal (K)	0
Incapacitating Injury (A)	0
Minor Injury (B)	6
Possible Injury (C)	5
Property Damage (PDO)	20
Total Crashes	31

Intersection Characteristics	
Entering Volume	19,000
Environment	Urban
Lighting	Lit
Traffic Control	Thru-Stop

Annual crash cost = $490,000

Statewide comparison = Thru/STOP, Urban

Total Crash Rate	
Observed	0.894
Statewide Average	0.138
Critical Rate	0.310
Critical Index	**2.88**

Fatal & Serious Injury Crash Rate	
Observed	0.000
Statewide Average	0.350
Critical Rate	3.080
Critical Index	**0.00**

The observed crash rate is the number of crashes per million entering vehicles (MEV). The critical rate is a statistical comparison based on similar intersections statewide. An observed crash rate greater than the critical rate indicates that the intersection operates outside the expected, normal range. The critical index reports the magnitude of this difference (i.e. observed crash rate ÷ critical crash rate).

The observed total crash rate for this period is 0.89 per MEV; this is 2.9 times the critical rate. If crashes were reduced by 21 over five years, this intersection would perform within normal range.

The observed fatal and serious injury crash rate for this period is 0.00 per 100 MEV; this is 100% below the critical rate. The intersection operates within the normal range.

Intersection Safety Screening

Intersection: CR 42 and Business Parkway

Statewide Averages based on 2018-2022 crashes

Crashes by Crash Severity	
Fatal (K)	0
Incapacitating Injury (A)	0
Minor Injury (B)	0
Possible Injury (C)	0
Property Damage (PDO)	1
Total Crashes	1

Intersection Characteristics	
Entering Volume	17,000
Environment	Urban
Lighting	Lit
Traffic Control	Thru-Stop

Annual crash cost = $3,000

Statewide comparison = Thru/STOP, Urban

Total Crash Rate	
Observed	0.032
Statewide Average	0.138
Critical Rate	0.330
Critical Index	**0.10**

Fatal & Serious Injury Crash Rate	
Observed	0.000
Statewide Average	0.350
Critical Rate	3.320
Critical Index	**0.00**

The observed crash rate is the number of crashes per million entering vehicles (MEV). The critical rate is a statistical comparison based on similar intersections statewide. An observed crash rate greater than the critical rate indicates that the intersection operates outside the expected, normal range. The critical index reports the magnitude of this difference (i.e. observed crash rate ÷ critical crash rate).

The observed total crash rate for this period is 0.03 per MEV; this is 90% below the critical rate. Based on similar statewide intersections, an additional 10 crashes over the five years would indicate this intersection operates outside the normal range.

The observed fatal and serious injury crash rate for this period is 0.00 per 100 MEV; this is 100% below the critical rate. The intersection operates within the normal range.

Intersection Safety Screening

Intersection: CR 46 and Biscayne

Statewide Averages based on 2018-2022 crashes

Crashes by Crash Severity	
Fatal (K)	0
Incapacitating Injury (A)	1
Minor Injury (B)	1
Possible Injury (C)	1
Property Damage (PDO)	4
Total Crashes	7

Intersection Characteristics	
Entering Volume	17,000
Environment	Urban
Lighting	Lit
Traffic Control	Thru-Stop

Annual crash cost = $248,000

Statewide comparison = Thru/STOP, Urban

Total Crash Rate	
Observed	0.226
Statewide Average	0.138
Critical Rate	0.330
Critical Index	**0.68**

Fatal & Serious Injury Crash Rate	
Observed	3.221
Statewide Average	0.350
Critical Rate	3.320
Critical Index	**0.97**

The observed crash rate is the number of crashes per million entering vehicles (MEV). The critical rate is a statistical comparison based on similar intersections statewide. An observed crash rate greater than the critical rate indicates that the intersection operates outside the expected, normal range. The critical index reports the magnitude of this difference (i.e. observed crash rate ÷ critical crash rate).

The observed total crash rate for this period is 0.23 per MEV; this is 32% below the critical rate. Based on similar statewide intersections, an additional 4 crashes over the five years would indicate this intersection operates outside the normal range.

The observed fatal and serious injury crash rate for this period is 3.22 per 100 MEV; this is 3% below the critical rate. The intersection operates within the normal range.

Intersection: Biscayne Ave/145th St W
City/State: Rosemount MN
Date: 5/2/2024
ALL-VEHICLE VOLUMES

Time Period	NB Left	NB Thru	NB Right	SB Left	SB Thru	SB Right	EB Left	EB Thru	EB Right	WB Left	WB Thru	WB Right
6:00 AM	3	8	0	5	8	5	1	5	0	0	5	4
6:15 AM	1	10	0	2	5	6	3	4	2	0	8	2
6:30 AM	3	9	1	3	10	12	3	12	3	2	19	4
6:45 AM	7	10	1	1	15	10	3	12	3	1	18	14
7:00 AM	2	13	1	3	16	15	4	16	1	3	31	6
7:15 AM	4	28	1	0	22	17	13	13	0	2	44	7
7:30 AM	2	19	3	3	27	16	21	35	1	2	35	11
7:45 AM	4	41	7	10	37	20	23	22	3	5	35	4
8:00 AM	9	17	4	10	21	21	20	30	4	4	39	3
8:15 AM	2	11	0	6	16	10	21	30	6	4	14	4
8:30 AM	2	11	2	3	14	6	14	13	0	2	12	1
8:45 AM	4	12	2	3	7	12	0	6	0	1	14	2
9:00 AM	5	10	2	5	12	14	8	15	3	2	31	3
9:15 AM	4	9	1	2	18	11	11	18	2	1	33	6
9:30 AM	0	14	2	6	10	12	12	20	5	1	12	8
9:45 AM	4	12	0	4	11	9	4	16	1	2	18	7
10:00 AM	5	12	2	3	17	4	1	9	3	1	14	4
10:15 AM	1	6	0	3	9	11	4	14	3	1	15	3
10:30 AM	4	15	1	3	4	9	2	15	5	2	15	5
10:45 AM	3	9	1	4	8	7	6	8	5	2	16	1
11:00 AM	2	8	2	2	14	11	12	14	3	3	12	0
11:15 AM	1	16	0	2	8	13	9	14	3	1	17	6
11:30 AM	1	11	3	6	18	5	7	16	3	2	16	6
11:45 AM	6	18	0	3	15	14	2	12	5	1	23	1
12:00 PM	5	14	1	2	14	8	7	8	5	2	10	3
12:15 PM	4	10	2	8	9	7	7	16	5	3	14	7
12:30 PM	4	10	3	4	11	7	10	20	1	0	13	6
12:45 PM	2	12	0	6	14	6	6	19	5	3	23	4
1:00 PM	6	13	1	3	11	5	7	16	2	1	22	3
1:15 PM	5	22	3	1	10	9	4	12	4	3	14	5
1:30 PM	5	14	2	8	13	6	8	19	1	1	16	3
1:45 PM	2	20	3	3	9	11	13	19	0	0	19	8
2:00 PM	3	17	4	4	7	8	7	13	2	2	15	6
2:15 PM	2	21	1	10	14	6	15	8	6	2	28	5
2:30 PM	2	31	3	6	20	13	22	24	6	1	23	7
2:45 PM	4	35	4	4	20	13	29	32	2	4	27	3
3:00 PM	10	17	2	8	36	21	17	33	5	5	42	5
3:15 PM	5	15	5	12	21	14	21	36	9	4	31	5
3:30 PM	2	19	2	4	32	14	9	17	6	4	43	5
3:45 PM	0	16	4	6	21	15	23	36	3	4	23	3
4:00 PM	4	23	7	6	24	16	14	28	2	4	25	2
4:15 PM	5	25	0	4	18	11	18	22	3	7	39	6
4:30 PM	6	18	2	6	33	15	15	27	2	1	42	6
4:45 PM	2	28	2	4	12	28	13	26	6	3	46	9
5:00 PM	9	23	2	4	18	12	19	20	3	1	50	0
5:15 PM	6	22	1	4	18	12	6	17	1	4	31	6
5:30 PM	8	25	3	2	16	12	13	14	4	3	40	3
5:45 PM	5	22	3	0	8	8	14	20	1	1	31	2
6:00 PM	3	25	2	3	13	10	10	31	1	4	26	2
6:15 PM	3	13	1	0	13	7	5	24	7	2	44	1
6:30 PM	11	21	3	1	11	9	10	15	1	0	22	2
6:45 PM	6	20	0	2	20	10	11	13	4	1	17	3

Intersection: Biscayne Ave/Boulder Trail
City/State: Rosemount MN
Date: 5/2/2024
ALL-VEHICLE VOLUMES

Time Period	NB Left	NB Thru	NB Right	SB Left	SB Thru	SB Right	EB Left	EB Thru	EB Right	WB Left	WB Thru	WB Right
6:00 AM	3	11	0	0	12	0	0	0	1	0	0	0
6:15 AM	1	20	0	0	17	0	0	0	0	0	0	0
6:30 AM	1	32	0	0	8	2	0	0	0	0	0	0
6:45 AM	3	34	0	0	17	3	0	0	0	0	0	0
7:00 AM	4	30	0	0	18	4	1	0	0	0	0	0
7:15 AM	4	29	0	0	17	2	0	0	0	0	0	0
7:30 AM	4	28	0	0	14	1	1	0	1	0	0	0
7:45 AM	2	33	0	0	32	0	0	0	1	0	0	0
8:00 AM	4	26	0	0	14	0	0	0	2	0	0	0
8:15 AM	1	27	0	0	11	0	0	0	0	0	0	0
8:30 AM	2	20	0	0	6	0	0	0	0	0	0	0
8:45 AM	0	16	0	0	14	2	0	0	0	0	0	0
9:00 AM	1	7	0	0	12	0	1	0	0	0	0	0
9:15 AM	0	12	0	0	9	0	1	0	0	0	0	0
9:30 AM	0	9	0	0	10	1	0	0	0	0	0	0
9:45 AM	0	13	0	0	13	1	0	0	1	0	0	0
10:00 AM	0	10	0	0	7	1	0	0	0	0	0	0
10:15 AM	0	9	0	0	10	0	0	0	0	0	0	0
10:30 AM	0	10	0	0	4	0	0	0	0	0	0	0
10:45 AM	0	6	0	0	12	1	0	0	0	0	0	0
11:00 AM	0	7	0	0	7	2	1	0	0	0	0	0
11:15 AM	1	12	0	0	15	0	0	0	1	0	0	0
11:30 AM	0	14	0	0	14	1	0	0	1	0	0	0
11:45 AM	0	15	0	0	13	2	0	0	1	0	0	0
12:00 PM	0	15	0	0	12	0	1	0	2	0	0	0
12:15 PM	2	15	0	0	11	1	1	0	0	0	0	0
12:30 PM	0	12	0	0	9	1	1	0	1	0	0	0
12:45 PM	1	11	0	0	17	2	2	0	1	0	0	0
1:00 PM	3	6	0	0	7	1	1	0	1	0	0	0
1:15 PM	2	8	0	0	6	0	3	0	0	0	0	0
1:30 PM	0	8	0	0	13	2	0	0	5	0	0	0
1:45 PM	0	19	0	0	5	2	1	0	1	0	0	0
2:00 PM	0	12	0	0	11	0	0	0	1	0	0	0
2:15 PM	2	8	0	0	25	1	0	0	0	0	0	0
2:30 PM	0	13	0	0	19	0	2	0	3	0	0	0
2:45 PM	1	20	0	0	16	1	2	0	2	0	0	0
3:00 PM	0	18	0	0	35	1	0	0	3	0	0	0
3:15 PM	0	14	0	0	25	0	0	0	0	0	0	0
3:30 PM	0	17	0	0	26	0	2	0	2	0	0	0
3:45 PM	0	23	0	0	30	0	3	0	2	0	0	0
4:00 PM	0	28	0	0	32	0	2	0	3	0	0	0
4:15 PM	0	26	0	0	16	0	0	0	0	0	0	0
4:30 PM	1	17	0	0	34	0	0	0	4	0	0	0
4:45 PM	0	19	0	0	39	0	0	0	1	0	0	0
5:00 PM	0	19	0	0	21	0	1	0	3	0	0	0
5:15 PM	0	20	0	0	21	0	0	0	2	0	0	0
5:30 PM	2	24	0	0	29	2	0	0	3	0	0	0
5:45 PM	0	27	0	0	22	0	0	0	0	0	0	0
6:00 PM	0	23	0	0	14	2	1	0	2	0	0	0
6:15 PM	0	12	0	0	11	0	0	0	0	0	0	0
6:30 PM	0	28	0	0	15	0	3	0	0	0	0	0
6:45 PM	0	23	0	0	12	0	0	0	0	0	0	0

Intersection: Biscayne Ave/150th Street W/CR 42
City/State: Rosemount MN
Date: 5/2/2024
ALL-VEHICLE VOLUMES

Time Period	NB Left	NB Thru	NB Right	SB Left	SB Thru	SB Right	EB Left	EB Thru	EB Right	WB Left	WB Thru	WB Right
6:00 AM	0	1	9	0	3	6	8	95	4	6	51	1
6:15 AM	0	3	17	1	3	5	8	117	8	9	45	1
6:30 AM	3	1	23	2	3	9	7	105	3	13	73	0
6:45 AM	2	5	26	3	9	13	8	163	0	11	73	0
7:00 AM	0	2	18	2	5	15	11	115	6	14	85	0
7:15 AM	0	8	21	3	4	20	17	118	1	14	108	1
7:30 AM	2	2	24	0	6	29	27	140	3	9	111	0
7:45 AM	0	8	21	1	6	39	33	118	2	25	113	1
8:00 AM	1	4	20	1	2	23	27	108	3	12	94	2
8:15 AM	0	5	24	3	4	27	7	99	3	17	73	1
8:30 AM	1	4	12	1	1	18	10	106	1	5	84	1
8:45 AM	0	2	14	1	2	9	14	83	3	9	93	0
9:00 AM	1	1	4	0	1	15	13	93	3	9	96	2
9:15 AM	2	5	11	0	2	16	9	78	1	5	86	0
9:30 AM	1	3	9	0	3	11	10	91	1	6	96	0
9:45 AM	0	4	12	0	6	11	14	95	1	8	107	1
10:00 AM	0	1	9	1	3	13	12	88	2	7	89	0
10:15 AM	0	1	6	0	2	11	7	77	0	6	84	0
10:30 AM	1	3	6	1	0	7	16	83	2	4	91	0
10:45 AM	0	3	2	1	2	10	8	50	1	8	95	0
11:00 AM	2	2	6	4	3	10	15	95	2	6	100	1
11:15 AM	1	1	11	3	3	16	15	96	4	10	99	1
11:30 AM	1	6	5	0	6	19	9	109	0	9	128	0
11:45 AM	5	3	8	1	2	17	17	102	6	10	134	3
12:00 PM	2	5	11	0	2	19	18	132	1	10	136	0
12:15 PM	1	1	16	2	5	11	18	138	3	9	103	3
12:30 PM	3	1	15	0	2	10	22	139	3	9	114	0
12:45 PM	1	3	7	1	4	19	11	99	6	8	108	1
1:00 PM	0	3	5	0	2	14	20	111	1	6	109	0
1:15 PM	3	5	3	0	3	20	20	98	0	2	100	0
1:30 PM	0	3	5	0	5	10	23	105	3	7	99	1
1:45 PM	2	6	13	1	1	12	22	79	2	5	120	1
2:00 PM	0	4	9	1	3	5	23	101	3	6	129	1
2:15 PM	2	2	2	2	5	14	21	95	1	18	110	0
2:30 PM	0	5	10	0	4	20	30	96	1	16	117	1
2:45 PM	1	5	14	3	4	17	36	153	1	11	104	4
3:00 PM	1	3	12	2	12	29	29	120	0	24	135	4
3:15 PM	1	0	13	1	6	23	23	106	4	13	132	2
3:30 PM	3	3	14	1	7	35	24	121	2	20	111	1
3:45 PM	2	5	20	0	6	17	22	115	8	12	138	2
4:00 PM	2	3	27	3	6	18	29	134	8	16	168	3
4:15 PM	0	7	19	1	9	27	25	165	3	6	197	1
4:30 PM	2	3	15	0	6	32	33	151	6	27	203	1
4:45 PM	0	5	13	1	3	22	25	146	12	19	168	1
5:00 PM	3	5	12	0	3	18	28	149	5	13	192	2
5:15 PM	0	9	6	0	4	19	23	112	4	15	164	3
5:30 PM	4	5	17	0	11	21	38	166	6	13	154	0
5:45 PM	3	4	17	1	3	13	26	124	3	17	174	2
6:00 PM	2	5	15	0	4	16	29	161	2	10	119	1
6:15 PM	0	4	8	1	3	21	18	127	4	5	118	0
6:30 PM	6	11	10	0	5	12	33	124	5	5	77	1
6:45 PM	4	8	11	2	4	22	19	79	2	5	96	2

Intersection: Biscayne Ave/160th St W/CR 46
City/State: Dakota MN
Date: 5/2/2024
ALL-VEHICLE VOLUMES

Time Period	NB Left	NB Thru	NB Right	SB Left	SB Thru	SB Right	EB Left	EB Thru	EB Right	WB Left	WB Thru	WB Right
6:00 AM	8	0	1	2	0	8	13	70	1	6	56	1
6:15 AM	4	0	3	0	1	7	19	80	1	2	70	2
6:30 AM	3	1	1	1	1	11	28	94	2	3	74	0
6:45 AM	1	1	3	1	1	20	33	97	3	5	70	6
7:00 AM	3	2	4	0	1	15	25	91	6	0	94	5
7:15 AM	6	1	2	0	1	16	27	90	1	0	92	5
7:30 AM	1	0	0	1	0	16	31	129	4	2	91	7
7:45 AM	3	1	4	3	0	26	28	90	5	0	102	3
8:00 AM	2	0	3	1	1	18	26	90	5	1	84	4
8:15 AM	4	1	2	2	1	16	30	95	0	1	88	3
8:30 AM	2	0	3	0	0	7	21	80	5	1	65	1
8:45 AM	3	0	1	1	0	11	13	69	2	0	64	0
9:00 AM	3	2	1	3	0	10	4	60	5	2	57	1
9:15 AM	4	0	1	1	0	9	11	49	2	0	57	2
9:30 AM	1	0	3	0	1	6	9	72	9	5	51	1
9:45 AM	3	2	6	1	0	13	9	60	3	0	60	2
10:00 AM	4	1	0	1	0	5	7	60	6	2	65	1
10:15 AM	5	1	6	0	0	8	6	46	3	2	61	0
10:30 AM	2	0	2	0	0	3	7	44	1	2	84	3
10:45 AM	3	0	3	0	2	10	6	63	2	2	60	0
11:00 AM	1	0	2	2	0	6	7	57	7	4	62	1
11:15 AM	3	0	4	1	1	12	10	65	10	5	59	1
11:30 AM	5	0	10	1	1	10	9	71	2	3	74	2
11:45 AM	5	0	1	2	0	12	13	75	2	2	63	1
12:00 PM	2	1	1	1	0	12	10	78	0	1	62	4
12:15 PM	0	0	1	3	0	7	15	78	2	3	64	1
12:30 PM	1	0	4	0	0	6	8	88	4	1	75	0
12:45 PM	4	1	3	0	0	17	10	75	7	3	96	2
1:00 PM	6	0	4	2	1	6	9	69	4	4	75	0
1:15 PM	3	0	6	0	0	8	7	78	2	1	82	4
1:30 PM	0	0	3	4	2	11	7	76	1	1	89	1
1:45 PM	1	1	4	2	0	7	18	59	2	0	82	0
2:00 PM	1	0	1	2	0	10	10	85	3	4	80	1
2:15 PM	3	0	7	1	0	24	5	67	3	1	85	4
2:30 PM	3	0	1	2	0	17	13	99	5	5	79	0
2:45 PM	2	0	3	4	1	14	18	88	1	1	89	1
3:00 PM	2	0	0	2	0	39	17	107	1	1	90	1
3:15 PM	0	0	3	4	0	19	11	101	0	0	92	0
3:30 PM	1	0	3	1	1	25	14	124	1	0	122	0
3:45 PM	0	0	1	5	0	21	25	109	2	0	102	1
4:00 PM	0	2	2	3	1	28	17	122	1	2	116	3
4:15 PM	2	0	2	1	0	14	24	118	1	0	133	1
4:30 PM	2	0	1	3	1	26	17	114	0	2	139	4
4:45 PM	0	0	0	1	0	23	15	120	0	3	126	0
5:00 PM	2	0	0	2	0	18	19	126	1	1	126	2
5:15 PM	0	1	2	1	0	13	24	99	0	0	127	2
5:30 PM	0	0	0	1	1	27	21	105	1	1	115	9
5:45 PM	1	1	1	1	0	17	22	90	1	1	105	6
6:00 PM	2	0	3	1	1	18	22	77	1	1	86	0
6:15 PM	1	0	0	1	2	9	13	64	2	2	73	2
6:30 PM	0	0	0	1	3	8	20	62	1	1	61	1
6:45 PM	0	1	2	1	2	9	19	46	0	1	65	2

Intersection: Business Pkwy/150th St W/CR 42
City/State: Rosemount MN
Date: 5/2/2024
ALL-VEHICLE VOLUMES

Time Period	NB Left	NB Thru	NB Right	SB Left	SB Thru	SB Right	EB Left	EB Thru	EB Right	WB Left	WB Thru	WB Right
6:00 AM	5	0	33	0	0	4	5	69	9	6	52	0
6:15 AM	2	0	2	1	0	2	1	114	2	2	44	0
6:30 AM	1	0	0	2	0	3	3	111	3	1	78	0
6:45 AM	0	0	2	1	0	6	2	168	15	2	81	3
7:00 AM	2	0	1	1	0	6	2	120	9	7	93	1
7:15 AM	0	0	0	1	1	5	4	137	5	4	121	0
7:30 AM	1	0	2	0	0	6	3	166	7	3	137	0
7:45 AM	4	0	3	2	0	2	1	151	8	5	148	0
8:00 AM	5	0	0	0	1	2	6	141	7	7	108	0
8:15 AM	1	1	3	0	0	3	2	108	2	5	91	1
8:30 AM	2	0	0	0	0	5	5	111	2	4	100	0
8:45 AM	2	0	5	0	0	3	1	103	5	2	98	0
9:00 AM	4	0	1	2	0	4	3	93	10	2	107	1
9:15 AM	1	0	1	0	0	1	4	90	3	2	103	0
9:30 AM	2	0	1	0	0	4	3	102	2	0	105	0
9:45 AM	0	0	0	0	0	4	4	117	4	2	119	1
10:00 AM	1	0	1	0	0	1	3	96	3	1	99	0
10:15 AM	3	0	1	0	0	3	3	82	6	4	88	1
10:30 AM	2	0	2	0	0	3	3	97	1	1	97	0
10:45 AM	2	0	1	0	0	4	3	57	3	2	107	0
11:00 AM	7	0	3	0	0	4	5	112	3	3	112	1
11:15 AM	7	1	1	0	0	2	0	115	12	15	95	1
11:30 AM	5	0	1	0	0	8	2	115	7	13	133	0
11:45 AM	7	1	3	2	0	6	5	123	13	3	150	1
12:00 PM	40	0	16	0	0	5	5	138	4	2	155	1
12:15 PM	3	0	4	0	0	1	5	155	8	2	114	0
12:30 PM	3	0	5	0	0	3	5	165	9	1	124	1
12:45 PM	5	0	0	0	0	2	6	111	5	2	124	1
1:00 PM	11	1	0	0	0	1	2	131	8	5	118	0
1:15 PM	3	1	0	0	0	3	2	116	8	0	122	1
1:30 PM	5	0	1	1	0	6	4	134	5	0	108	0
1:45 PM	7	1	3	0	0	4	1	97	5	1	132	0
2:00 PM	3	1	3	1	0	3	4	125	3	1	130	1
2:15 PM	3	0	3	0	0	1	7	107	5	2	126	2
2:30 PM	6	0	5	0	0	7	3	123	4	3	130	0
2:45 PM	3	0	8	1	0	9	5	178	6	2	117	4
3:00 PM	6	0	5	0	0	3	2	150	1	4	153	1
3:15 PM	6	0	4	1	0	8	3	122	4	2	158	0
3:30 PM	8	0	10	0	0	5	9	138	5	2	146	1
3:45 PM	6	0	7	0	0	6	10	139	4	2	156	1
4:00 PM	3	0	8	2	0	4	9	157	3	4	179	1
4:15 PM	3	0	7	0	0	7	9	185	3	0	220	1
4:30 PM	9	0	11	0	0	7	13	177	3	7	229	2
4:45 PM	3	0	5	0	0	7	8	177	3	2	188	1
5:00 PM	8	0	6	0	0	11	6	181	3	5	207	2
5:15 PM	1	0	6	1	0	6	6	127	1	10	167	2
5:30 PM	3	0	2	0	0	3	4	208	4	17	164	0
5:45 PM	2	0	3	1	0	3	5	147	3	9	178	1
6:00 PM	6	0	31	1	0	10	7	167	2	1	132	2
6:15 PM	2	0	6	0	0	10	4	142	1	1	137	1
6:30 PM	3	0	4	1	0	4	4	155	2	1	92	0
6:45 PM	2	0	0	0	0	1	7	104	1	1	119	2

Intersection: 150th St W/CR 42/145th St W
City/State: Rosemount MN
Date: 5/2/2024
ALL-VEHICLE VOLUMES

Time Period	NB Left	NB Thru	NB Right	SB Left	SB Thru	SB Right	EB Left	EB Thru	EB Right	WB Left	WB Thru	WB Right
6:00 AM	1	104	0	0	52	7	11	0	2	0	0	0
6:15 AM	0	126	0	0	54	8	9	0	1	0	0	0
6:30 AM	1	135	0	0	80	15	15	0	4	0	0	0
6:45 AM	1	197	0	0	80	28	14	0	5	0	0	0
7:00 AM	1	136	0	0	94	24	19	0	5	0	0	0
7:15 AM	0	153	0	0	122	2	7	0	6	0	0	0
7:30 AM	1	155	0	0	108	25	19	0	5	0	0	0
7:45 AM	1	152	0	0	135	28	23	0	2	0	0	0
8:00 AM	1	118	0	0	103	23	26	0	6	0	0	0
8:15 AM	3	134	0	0	79	11	18	0	3	0	0	0
8:30 AM	6	111	0	0	92	6	12	0	4	0	0	0
8:45 AM	4	95	0	0	100	15	13	0	2	0	0	0
9:00 AM	2	95	0	0	97	28	15	0	4	0	0	0
9:15 AM	1	83	0	0	89	19	11	0	2	0	0	0
9:30 AM	1	103	0	0	96	10	10	0	4	0	0	0
9:45 AM	0	103	0	0	109	13	9	0	6	0	0	0
10:00 AM	1	96	0	0	89	13	9	0	6	0	0	0
10:15 AM	3	81	0	0	92	10	14	0	1	0	0	0
10:30 AM	2	90	0	0	94	18	12	0	1	0	0	0
10:45 AM	0	53	0	0	98	14	12	0	4	0	0	0
11:00 AM	2	92	0	0	107	10	12	0	2	0	0	0
11:15 AM	5	107	0	0	101	15	12	0	6	0	0	0
11:30 AM	6	107	0	0	130	16	14	0	4	0	0	0
11:45 AM	2	113	0	0	143	8	10	0	3	0	0	0
12:00 PM	5	131	0	0	133	0	6	0	5	0	0	0
12:15 PM	11	152	0	0	105	13	20	0	6	0	0	0
12:30 PM	4	145	0	0	116	14	21	0	1	0	0	0
12:45 PM	4	112	0	0	121	18	13	0	2	0	0	0
1:00 PM	2	107	0	0	111	21	12	0	2	0	0	0
1:15 PM	2	105	0	0	95	13	8	0	5	0	0	0
1:30 PM	5	99	0	0	105	18	26	0	3	0	0	0
1:45 PM	3	90	0	0	125	19	13	0	0	0	0	0
2:00 PM	8	103	0	0	138	17	15	0	5	0	0	0
2:15 PM	2	95	0	0	115	19	13	0	2	0	0	0
2:30 PM	6	103	0	0	134	23	20	0	2	0	0	0
2:45 PM	7	157	0	0	113	23	15	0	3	0	0	0
3:00 PM	6	127	0	0	162	47	30	0	7	0	0	0
3:15 PM	3	122	0	0	141	24	28	0	4	0	0	0
3:30 PM	9	132	0	0	124	25	16	0	7	0	0	0
3:45 PM	4	128	0	0	149	25	27	0	7	0	0	0
4:00 PM	4	164	0	0	189	27	21	0	5	0	0	0
4:15 PM	13	174	0	0	192	31	15	0	4	0	0	0
4:30 PM	14	153	0	0	218	36	19	0	8	0	0	0
4:45 PM	5	154	0	0	183	44	22	0	3	0	0	0
5:00 PM	7	155	0	0	203	35	17	0	3	0	0	0
5:15 PM	8	109	0	0	179	26	11	0	4	0	0	0
5:30 PM	8	178	0	0	172	36	14	0	2	0	0	0
5:45 PM	19	127	0	0	181	32	13	0	4	0	0	0
6:00 PM	9	166	0	0	126	18	20	0	6	0	0	0
6:15 PM	8	136	0	0	116	27	19	0	5	0	0	0
6:30 PM	7	122	0	0	82	15	8	0	2	0	0	0
6:45 PM	5	92	0	0	99	20	7	0	4	0	0	0

Intersection: S Robert Trail/Haiwatha Pioneer Trl/143rd St W
City/State: Rosemount MN
Date: 5/2/2024
ALL-VEHICLE VOLUMES

Time Period	NB Left	NB Thru	NB Right	SB Left	SB Thru	SB Right	EB Left	EB Thru	EB Right	WB Left	WB Thru	WB Right
7:00 AM	6	164	2	0	92	9	2	0	4	0	0	2
7:15 AM	8	217	5	0	98	21	2	0	3	0	0	5
7:30 AM	8	189	5	0	139	18	4	0	9	0	0	4
7:45 AM	22	129	2	0	106	60	4	0	19	0	0	1
8:00 AM	24	150	7	1	78	82	5	0	47	0	2	6
8:15 AM	5	132	14	0	82	67	13	0	56	1	0	13
8:30 AM	3	104	8	0	63	3	4	0	10	0	0	8
8:45 AM	5	83	0	0	63	11	3	0	3	0	0	1

Intersection: S Robert Trail/Haiwatha Pioneer Trl/143rd St W
City/State: Rosemount MN
Date: 5/2/2024
ALL-VEHICLE VOLUMES

Time Period	NB Left	NB Thru	NB Right	SB Left	SB Thru	SB Right	EB Left	EB Thru	EB Right	WB Left	WB Thru	WB Right
2:00 PM	2	103	0	0	100	5	4	0	4	1	0	0
2:15 PM	1	113	0	0	120	5	5	0	4	0	0	1
2:30 PM	6	123	0	0	214	21	0	0	4	0	0	14
2:45 PM	3	112	0	0	161	23	5	0	4	0	0	5
3:00 PM	8	97	0	0	132	24	6	0	11	0	0	5
3:15 PM	7	113	0	0	137	25	8	0	35	0	0	17
3:30 PM	14	133	1	0	150	13	5	0	3	0	0	1
3:45 PM	7	119	0	0	168	8	6	0	31	0	0	7
4:00 PM	0	127	0	0	185	6	2	0	7	0	0	1
4:15 PM	2	133	0	0	210	11	3	0	4	0	0	2
4:30 PM	2	164	0	0	202	5	1	0	3	0	0	1
4:45 PM	3	146	0	0	203	15	2	0	4	1	0	1
5:00 PM	21	133	0	0	187	52	1	0	3	0	0	3
5:15 PM	14	140	0	0	174	29	3	0	3	0	0	1
5:30 PM	4	132	1	0	152	11	1	0	6	0	0	2
5:45 PM	2	122	0	0	144	10	8	0	17	0	0	0

Intersection: Cameo Ave/143rd St W
City/State: Rosemount MN
Date: 5/2/2024
ALL-VEHICLE VOLUMES

Time Period	NB Left	NB Thru	NB Right	SB Left	SB Thru	SB Right	EB Left	EB Thru	EB Right	WB Left	WB Thru	WB Right
7:00 AM	6	0	1	2	0	0	0	3	3	3	10	2
7:15 AM	17	1	0	2	2	0	0	3	9	5	18	5
7:30 AM	22	3	0	1	2	0	0	12	11	4	17	2
7:45 AM	31	4	1	1	2	1	0	21	37	4	67	2
8:00 AM	64	0	1	0	2	0	0	52	85	3	102	1
8:15 AM	40	8	1	6	10	0	2	68	66	2	74	10
8:30 AM	1	1	1	4	0	0	0	4	7	0	4	2
8:45 AM	4	1	2	3	4	0	0	1	2	4	6	5

Intersection: Cameo Ave/143rd St W
City/State: Rosemount MN
Date: 5/2/2024
ALL-VEHICLE VOLUMES

Time Period	NB Left	NB Thru	NB Right	SB Left	SB Thru	SB Right	EB Left	EB Thru	EB Right	WB Left	WB Thru	WB Right
2:00 PM	2	0	4	2	0	0	0	2	0	3	2	2
2:15 PM	3	0	5	1	4	0	0	2	1	4	1	1
2:30 PM	6	1	1	0	2	0	0	3	10	9	16	2
2:45 PM	16	4	1	4	5	0	0	6	5	7	5	8
3:00 PM	13	4	5	5	3	0	0	7	16	8	17	2
3:15 PM	20	2	5	3	5	0	0	32	61	14	24	2
3:30 PM	27	1	3	0	3	0	0	5	11	5	21	1
3:45 PM	33	0	1	0	3	0	0	35	77	6	9	1
4:00 PM	4	0	0	1	0	0	0	9	19	5	1	0
4:15 PM	2	1	3	0	2	0	0	4	6	7	5	1
4:30 PM	3	0	2	0	0	0	0	1	5	3	3	0
4:45 PM	6	0	1	0	0	0	0	5	7	10	9	0
5:00 PM	31	0	0	1	2	0	0	3	6	4	68	1
5:15 PM	17	2	0	0	0	0	0	6	4	4	39	1
5:30 PM	1	0	0	3	2	1	0	4	5	3	7	5
5:45 PM	0	2	0	3	1	1	0	25	16	2	3	7

August 19, 2024

Planning Commission:

First, I would like to let you know that I know nothing about how this process works but I do have some concerns about the location of this school. Under the "Purpose" of your notification – it states "update the elementary school definition" this is updating it to a "middle school" is that correct?

I am also concerned about the location – just up the street a winery and on a very busy County Road 42 corner. School will not be able to have any walkers which means everyone attending this school will need to be bussed – which will mean more drivers and the transportation department is already very short on drivers.

Also, according to the county there are no current plans to update any county roads in the area. With all the construction going on east of town on County Road 42 – many houses, apartments, and businesses. Seems like there should be plans for updating intersections – traffic lights would be good:

County Road 42 and Hwy 52
County Road 42 and 145th Street
County Road 42 and Biscayne
County Road 42 and Business Parkway
County Road 46 (160th Street) and Biscayne

These intersections have been dangerous traffic areas for quite some time and all this new construction is being added and occupied and now adding a middle school and NO plans for updates.

Thanks for listening. A concerned area resident who travels these intersections frequently.

Ruth Pryor

Ruth Pryor
14755 Bloomfield Circle