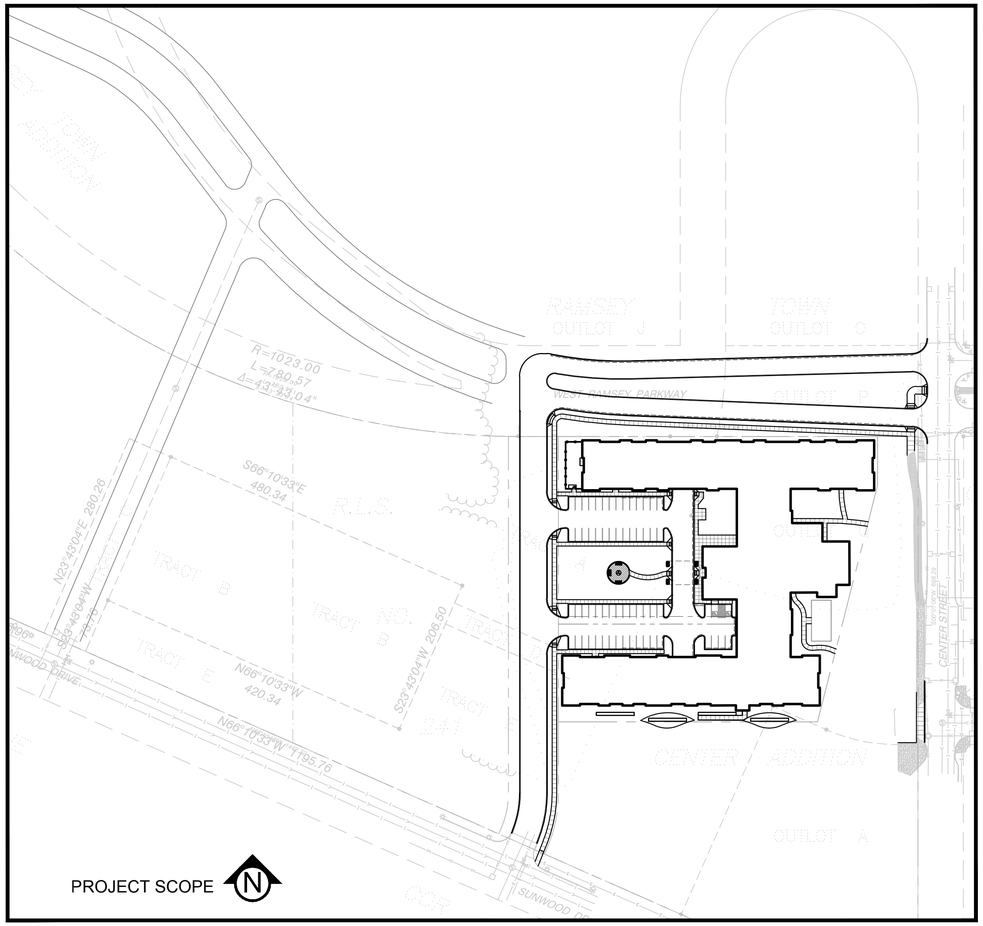
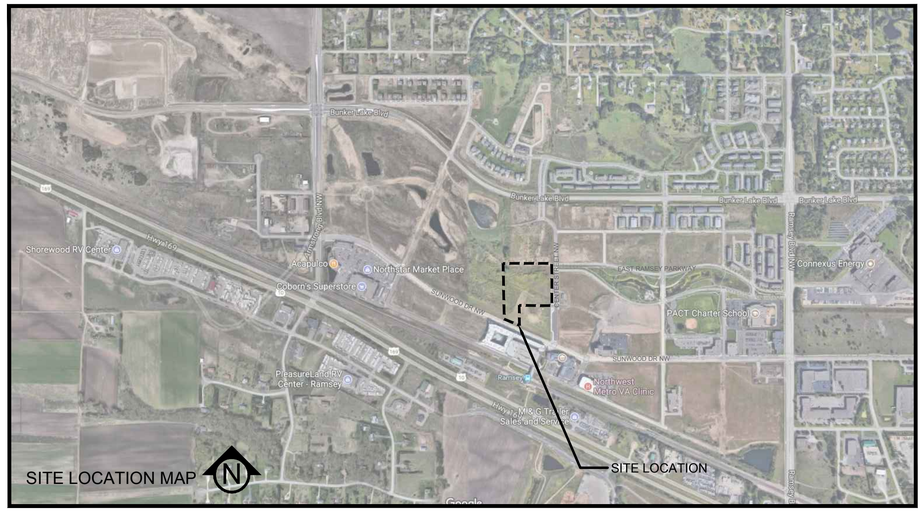
AFFINITY AT RAMSEY

RAMSEY, MINNESOTA

ISSUED FOR: CITY SUBMITTAL





CivilSite GROUP
Civil Engineering • Surveying • Landscape Architecture
4931 W. 35th Street, Suite 200
St. Louis Park, MN 55416
civilsitegroup.com 612-615-0060

kaas wilson architects

Inland Group

PROJECT
AFFINITY AT RAMSEY
RAMSEY, MN 55303

INLAND GROUP
120 W. CATALDO AVE. SUITE 100, SPOKANE, WA 99201

ARCHITECT:

KAAS WILSON ARCHITECTS
1301 AMERICAN BLVD E
BLOOMINGTON, MN 55425
(612)-879-6000

DEVELOPER / PROPERTY OWNER:

AFFINITY AT RAMSEY, LLC
120 W CATALDO AVE, SUITE 100
SPOKANE, WA 99201
(509)-891-5162

ENGINEER / LANDSCAPE ARCHITECT:

ALLIANT ENGINEERING
233 PARK AVE
MINNEAPOLIS, MN 55415
(612)-758-3080

SURVEYOR:

CIVIL SITE GROUP
4931 W 35TH STREET
SUITE 200
ST LOUIS PARK, MN 55416
612-615-0060

GEOTECHNICAL ENGINEER:

CHOSEN VALLEY TESTING INC.
1410 7TH ST NW
ROCHESTER, MN 55901
(507)-281-0968

MASTER LEGEND:

1125	EX. 1' CONTOUR ELEVATION INTERVAL
1137.12	EXISTING SPOT GRADE ELEVATION
1137	1.0' CONTOUR ELEVATION INTERVAL
41.26	SPOT GRADE ELEVATION (GUTTER/FLOW LINE UNLESS OTHERWISE NOTED)
891.00 G	SPOT GRADE ELEVATION TOP OF CURB (GUTTER TOP)
891.00 TC	SPOT GRADE ELEVATION TOP OF WALL
891.00 BS/TS	SPOT GRADE ELEVATION BOTTOM OF WALL
	DRAINAGE ARROW
EOF=1135.52	EMERGENCY OVERFLOW
	SILT FENCE / BIOROLL - GRADING LIMIT
	INLET PROTECTION
	STABILIZED CONSTRUCTION ENTRANCE
SB-1	SOIL BORING LOCATION
TO	CURB AND GUTTER (T.O = TIP OUT)

	PROPOSED MANHOLE STORM
	PROPOSED CATCH BASIN OR CATCH BASIN MANHOLE STORM
	PROPOSED GATE VALVE
	PROPOSED FIRE HYDRANT
	PROPOSED MANHOLE SANITARY
	PROPOSED SIGN
	PROPOSED LIGHT
	PROPOSED SANITARY SEWER
	PROPOSED STORM SEWER
	PROPOSED WATER MAIN
	EXISTING SANITARY SEWER
	EXISTING STORM SEWER
	EXISTING WATER MAIN
	EXISTING GAS MAIN
	EXISTING UNDERGROUND ELECTRIC
	EXISTING UNDERGROUND CABLE

EXISTING MANHOLE	EXISTING STOPBOX	EXISTING LIGHT
EXISTING CATCH BASIN	EXISTING GATE VALVE	EXISTING GAS METER
EXISTING HYDRANT	EXISTING ELECTRIC BOX	EXISTING GAS VALVE

GOPHER STATE ONE CALL
WWW.GOPHERSTATEONECALL.ORG
(800) 252-1166 TOLL FREE
(651) 454-0002 LOCAL

SHEET INDEX

SHEET NUMBER	SHEET TITLE
C0.0	TITLE SHEET
C0.1	SITE SURVEY - PAGE 1
C0.2	SITE SURVEY - PAGE 2
C0.3	FINAL PLAT
C1.0	REMOVALS PLAN
C1.1	STORMSEWER REMOVALS GRAPHIC
C2.0	SITE PLAN
C3.0	GRADING PLAN
C3.1	LAKE RAMSEY, CITY IMPROVEMENTS PLAN
C4.0	UTILITY PLAN
C4.1	DRAINTILE PLAN
C5.0	DETAILS
C5.1	DETAILS
C5.2	DETAILS
C5.3	DETAILS
C5.4	DETAILS
C5.5	DETAILS
L1.0	LANDSCAPE PLAN
L1.1	LANDSCAPE PLAN NOTES & DETAILS
LT1.0	LIGHTING PLAN - PAGE 1
LT1.1	LIGHTING PLAN - PAGE 2
LT1.2	LIGHTING PLAN - PAGE 3
SW1.0	SWPPP - EXISTING CONDITIONS
SW1.1	SWPPP - PROPOSED CONDITIONS
SW1.2	SWPPP - DETAILS
SW1.3	SWPPP - NARRATIVE
SW1.4	SWPPP - ATTACHMENTS
SW1.5	SWPPP - ATTACHMENTS

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. Pavek
DATE 05/02/18 LICENSE NO. 44263

ISSUE/SUBMITTAL SUMMARY

DATE	DESCRIPTION
12/06/17	SITE PLAN SUBMITTAL
03/16/18	WATERSHED SUBMITTAL
03/30/18	CITY SUBMITTAL
05/02/18	CITY RESUBMITTAL

REVISION SUMMARY

DATE	DESCRIPTION
1/15/18	SITE PLAN SUBMITTAL R1

PROJECT NO.: 17226

TITLE SHEET

C0.0

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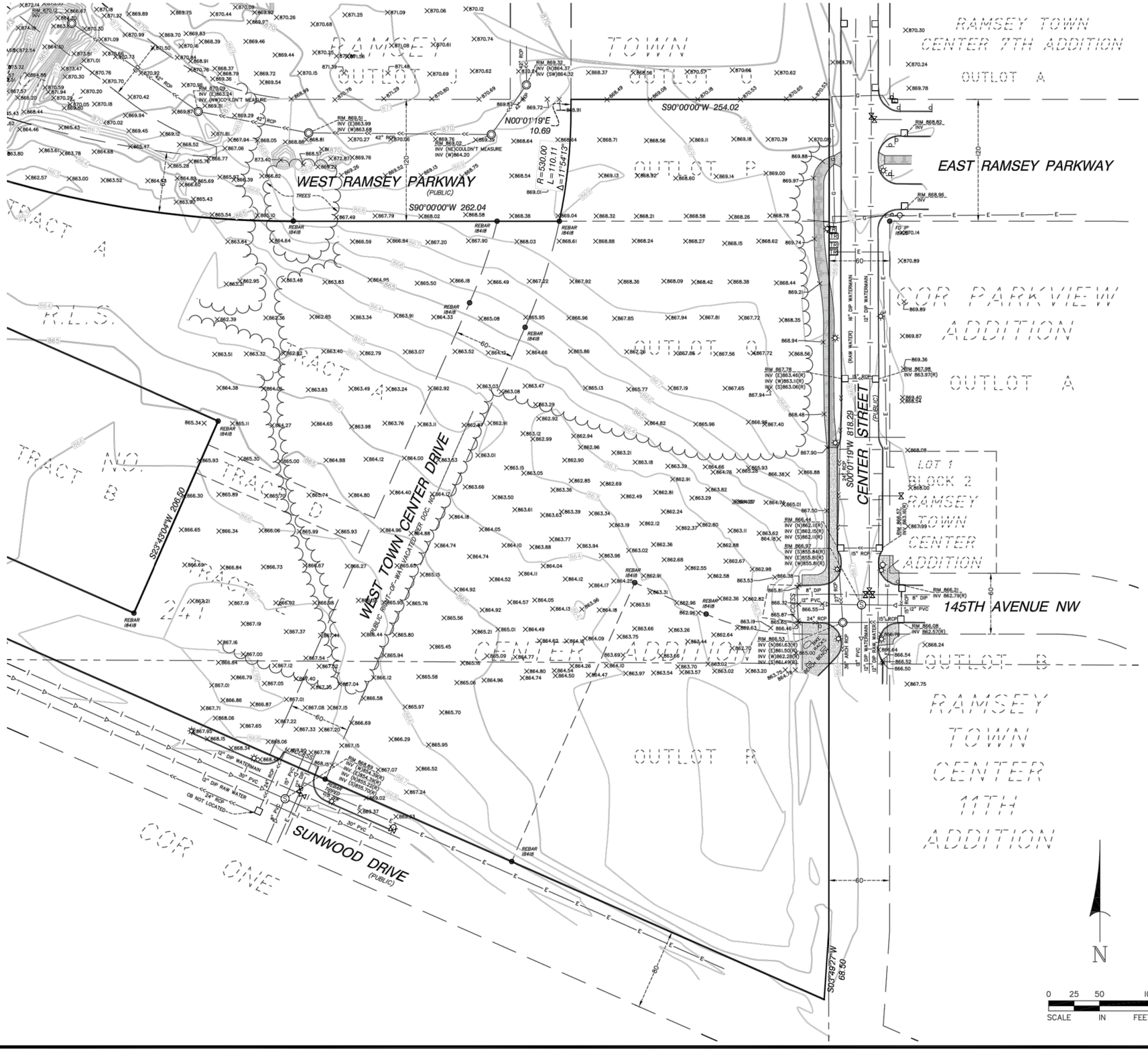

LEGAL DESCRIPTION

Outlot Q, Ramsey Town Center Addition, Anoka County, Minnesota.

Tracts A, D and E, Registered Land Survey No. 241, Anoka County, Minnesota

Torrens Property (Certificate of Title No. 135286)

NOTES

1. This survey and the property description shown here on are based upon information found in the commitment for title insurance prepared by Chicago Title Insurance Company, Commitment No. 23987, dated October 4, 2017. The title commitment does not include all of the surveyed land, i.e. Tracts P and R, and West Town Center Drive.

2. The locations of underground utilities are depicted based on information from Gopher State One Call system for a "Boundary Survey locate". The information was provided by a combination of available maps, proposed plans or city records and field locations which may not be exact. Verify all utilities critical to construction or design.

3. The basis of bearings is assumed.

4. All distances are in feet.

5. The approximate area of surveyed property is 10.3 acres.

6. Benchmark 1: MnDOT monument 0202 B located at the northeast corner of Trunk Highway 10 and County Road 56/Ramsey Boulevard, approximately 2/3 miles southeast of surveyed property, has an elevation of 865.02 feet NAVD 88.

7. Benchmark 2: Top Nut of Hydrant located at the northeast corner of Sunwood Drive and Zeolite Street NW has an elevation of 875.26 feet NAVD 88.

8. Utilities are depicted according to ASCE Quality Level C - Surveying visible above ground utility features and correlating this information with as-built records.

9. Lidar contours were provided by the Minnesota Geospatial Information Office.

LEGEND

- IRON MONUMENT FOUND
- WATER VALVE
- FIBER OPTIC VAULT
- TRANSFORMER
- LIGHT POLE
- SANITARY MANHOLE
- MISC. SIGN
- STREET SIGN
- STORM MANHOLE
- CATCH BASIN
- HYDRANT
- (R) PER RECORD PLAN
- 866.29 SPOT ELEVATION
- SANITARY SEWER
- GAS
- UNDERGROUND ELECTRIC
- WATERMAIN
- STORM SEWER
- EDGE OF BRUSH/TREES
- CONCRETE
- BITUMINOUS TRAIL
- NOT INCLUDED IN TITLE COMMITMENT
- CONTOUR—ALLIANT
- CONTOUR—MNGEO LIDAR

REVISION SUMMARY

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SITE SURVEY
- PAGE1

C0.1

3/618 Added additional topo and Bolton and Menk contours
1/9/18 Labeled "Raw Water" per city comments
1/3/18 Added Lidar contours and title commitment legal description
12/6/17 Added Utility Quality Level note and Outlot P
12/1/17 Revised East Town Center Drive to Center Street

ALLIANT ENGINEERING
233 Park Ave S, Ste 300
Minneapolis, MN 55415
612.758.3080 MAIN
612.758.3099 FAX
www.alliant-inc.com

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.

DENNIS B. OLMSTEAD
Print Name

FOR REVIEW
Signature

Date License Number

AFFINITY AT RAMSEY TOWN CENTER

ADDRESS NOT ASSIGNED

RAMSEY, MINNESOTA

DRAWN BY	DPE
CHECKED BY	DBO
DATE ISSUED	10/20/17
SCALE	1"=50'
JOB NO.	170155
FIELD CREW	EL

SHEET 1 OF 2 SHEETS

Drawing name: X:\2017\170155\survey\alta\170155alta.dwg Mar 06, 2018 - 10:30am

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- WATER VALVE
- FIBER OPTIC VAULT
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- LIGHT POLE
- SANITARY MANHOLE
- MISC. SIGN
- STREET SIGN
- STORM MANHOLE
- CATCH BASIN
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- (R) PER RECORD PLAN
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- EDGE OF BRUSH/TREES
- CONCRETE
- BITUMINOUS TRAIL
- NOT INCLUDED IN TITLE COMMITMENT
- CONTOUR—ALLIANT
- CONTOUR—MNGEO LIDAR

REVISION SUMMARY

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1/15/18	SITE PLAN SUBMITTAL R1

SITE SURVEY
- PAGE 2

C0.2

3/6/18 Added additional topo and Bolton and Menk contours
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1/3/18 Added Lidar contours and title commitment legal description
12/6/17 Added Utility Quality Level note and Outlot P
12/1/17 Revised East Town Center Drive to Center Street

ALLIANT ENGINEERING
233 Park Ave S, Ste 300
Minneapolis, MN 55415
612.758.3080 MAIN
612.758.3099 FAX
www.alliant-inc.com

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.

DENNIS B. OLMSTEAD
Print Name

FOR REVIEW
Signature

Date License Number

AFFINITY AT RAMSEY TOWN CENTER

ADDRESS NOT ASSIGNED

RAMSEY, MINNESOTA

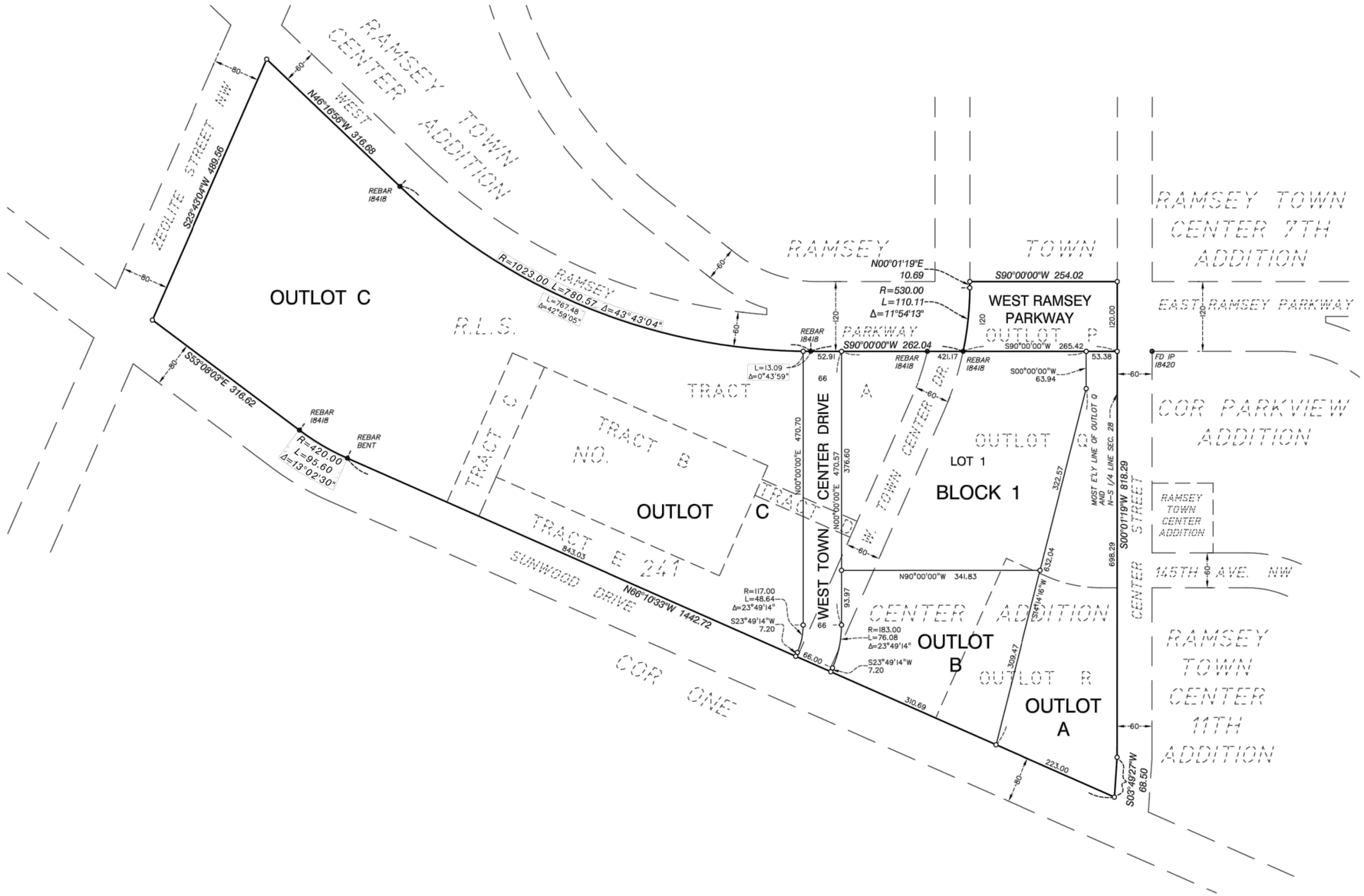
DRAWN BY	DPE
CHECKED BY	DBO
DATE ISSUED	10/20/17
SCALE	1"=50'
JOB NO.	170155
FIELD CREW	EL

Drawing name: X:\2017\170155\survey\alta\170155alta.dwg Mar 06, 2018 - 10:31am

SHEET 2 OF 2 SHEETS

CITY OF RAMSEY
COUNTY OF ANOKA
SEC 28, T.32, R. 25

AFFINITY AT THE COR



THE MOST EASTERLY LINE OF OUTLOT Q, RAMSEY TOWN CENTER ADDITION, ANOKA COUNTY, MINNESOTA IS ASSUMED TO HAVE A BEARING OF S00°01'19"W.

- ● Denotes monument found 1/2 inch iron pipe
- ○ Denotes 1/2 inch x 18 inch iron monument set marked by license no. 18425 unless otherwise shown

REVISION SUMMARY

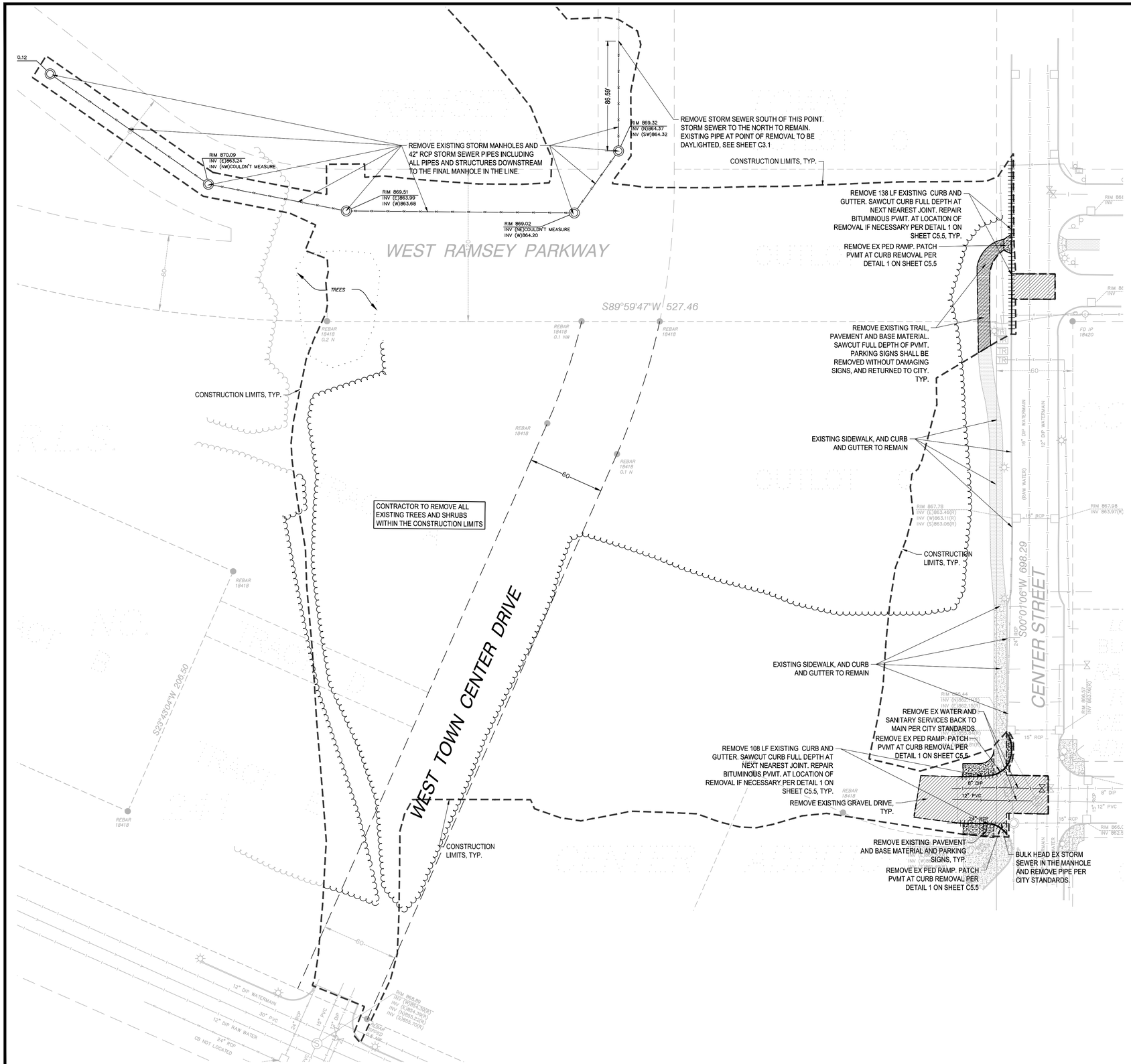
DATE	DESCRIPTION

0 50 100 200
SCALE IN FEET
1 INCH = 100 FEET

FINAL PLAT

C0.3

ALLIANT ENGINEERING



REMOVAL NOTES:

1. SEE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) PLAN FOR CONSTRUCTION STORM WATER MANAGEMENT PLAN.
2. REMOVAL OF MATERIALS NOTED ON THE DRAWINGS SHALL BE IN ACCORDANCE WITH MNDOT, STATE AND LOCAL REGULATIONS.
3. REMOVAL OF PRIVATE UTILITIES SHALL BE COORDINATED WITH UTILITY OWNER PRIOR TO CONSTRUCTION ACTIVITIES.
4. EXISTING PAVEMENTS SHALL BE SAWCUT IN LOCATIONS AS SHOWN ON THE DRAWINGS OR THE NEAREST JOINT FOR PROPOSED PAVEMENT CONNECTIONS.
5. REMOVED MATERIALS SHALL BE DISPOSED OF TO A LEGAL OFF-SITE LOCATION AND IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS.
6. ABANDON, REMOVAL, CONNECTION, AND PROTECTION NOTES SHOWN ON THE DRAWINGS ARE APPROXIMATE. COORDINATE WITH PROPOSED PLANS.
7. EXISTING ON-SITE FEATURES NOT NOTED FOR REMOVAL SHALL BE PROTECTED THROUGHOUT THE DURATION OF THE CONTRACT.
8. PROPERTY LINES SHALL BE CONSIDERED GENERAL CONSTRUCTION LIMITS UNLESS OTHERWISE NOTED ON THE DRAWINGS. WORK WITHIN THE GENERAL CONSTRUCTION LIMITS SHALL INCLUDE STAGING, DEMOLITION AND CLEAN-UP OPERATIONS AS WELL AS CONSTRUCTION SHOWN ON THE DRAWINGS.
9. MINOR WORK OUTSIDE OF THE GENERAL CONSTRUCTION LIMITS SHALL BE ALLOWED AS SHOWN ON THE PLAN AND PER CITY REQUIREMENTS.
10. DAMAGE BEYOND THE PROPERTY LIMITS CAUSED BY CONSTRUCTION ACTIVITY SHALL BE REPAIRED IN A MANNER APPROVED BY THE ENGINEER/LANDSCAPE ARCHITECT OR IN ACCORDANCE WITH THE CITY.
11. PROPOSED WORK (BUILDING AND CIVIL) SHALL NOT DISTURB EXISTING UTILITIES UNLESS OTHERWISE SHOWN ON THE DRAWINGS AND APPROVED BY THE CITY PRIOR TO CONSTRUCTION.
12. SITE SECURITY MAY BE NECESSARY AND PROVIDED IN A MANNER TO PROHIBIT VANDALISM, AND THEFT, DURING AND AFTER NORMAL WORK HOURS, THROUGHOUT THE DURATION OF THE CONTRACT. SECURITY MATERIALS SHALL BE IN ACCORDANCE WITH THE CITY.
13. VEHICULAR ACCESS TO THE SITE SHALL BE MAINTAINED FOR DELIVERY AND INSPECTION ACCESS DURING NORMAL OPERATING HOURS. AT NO POINT THROUGHOUT THE DURATION OF THE CONTRACT SHALL CIRCULATION OF ADJACENT STREETS BE BLOCKED WITHOUT APPROVAL BY THE CITY PRIOR TO CONSTRUCTION ACTIVITIES.
14. ALL TRAFFIC CONTROLS SHALL BE PROVIDED AND ESTABLISHED PER THE REQUIREMENTS OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MMUTCD) AND THE CITY. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO, SIGNAGE, BARRICADES, FLASHERS, AND FLAGGERS AS NEEDED. ALL PUBLIC STREETS SHALL REMAIN OPEN TO TRAFFIC AT ALL TIMES. NO ROAD CLOSURES SHALL BE PERMITTED WITHOUT APPROVAL BY THE CITY.
15. SHORING FOR BUILDING EXCAVATION MAY BE USED AT THE DISCRETION OF THE CONTRACTOR AND AS APPROVED BY THE OWNERS REPRESENTATIVE AND THE CITY PRIOR TO CONSTRUCTION ACTIVITIES.
16. STAGING, DEMOLITION, AND CLEAN-UP AREAS SHALL BE WITHIN THE PROPERTY LIMITS AS SHOWN ON THE DRAWINGS AND MAINTAINED IN A MANNER AS REQUIRED BY THE CITY.

CITY OF RAMSEY REMOVAL NOTES:

1. SAWCUT BITUMINOUS PAVEMENT TO FULL DEPTH PRIOR TO REMOVAL. BARRIERS MUST BE INSTALLED TO PREVENT DRIVERS FROM DRIVING OFF THE SAWCUT EDGE.
2. CURB MUST BE SAWCUT TO FULL DEPTH PRIOR TO REMOVAL.
3. SUNWOOD DRIVE HAS CONCRETE PAVEMENT AND INTEGRAL CURB. PAVEMENT AND CURB SHALL NOT BE DISTURBED WHEN WORKING IN THIS AREA.
4. A TEMPORARY PEDESTRIAN ACCESS ROUTE IS REQUIRED FOR CENTER STREET. THE PLAN MUST BE APPROVED BY THE CITY PRIOR TO CONSTRUCTION.

EROSION CONTROL NOTES:

SEE SWPPP ON SHEETS SW1.0-SW1.5

REMOVALS LEGEND:

- 1125 — EX. 1' CONTOUR ELEVATION INTERVAL
- REMOVAL OF PAVEMENT AND ALL BASE MATERIAL, INCLUDING BIT., CONC., AND GRAVEL PVMTS.
- REMOVAL OF STRUCTURE INCLUDING ALL FOOTINGS AND FOUNDATIONS.
- REMOVE CURB AND GUTTER. IF IN RIGHT-OF-WAY, COORDINATE WITH LOCAL GOVERNING UNIT.

GOPHER STATE ONE CALL
WWW.GOPHERSTATEONECALL.ORG
(800) 252-1166 TOLL FREE
(651) 454-0002 LOCAL

N

1" = 40'-0"
20'-0" 0 40'-0"

CivilSite GROUP
Civil Engineering • Surveying • Landscape Architecture
4931 W. 35th Street, Suite 200
St. Louis Park, MN 55416
civilsitegroup.com 612-615-0060

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PROJECT
AFFINITY AT RAMSEY
RAMSEY, MN 55303

INLAND GROUP
120 W. CATALDO AVE. SUITE 100, SPOKANE, WA 99201

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. Pavek
DATE 05/02/18 LICENSE NO. 44263

ISSUE/SUBMITTAL SUMMARY

DATE	DESCRIPTION
12/06/17	SITE PLAN SUBMITTAL
03/16/18	WATERSHED SUBMITTAL
03/30/18	CITY SUBMITTAL
05/02/18	CITY RESUBMITTAL

REVISION SUMMARY

DATE	DESCRIPTION
1/15/18	SITE PLAN SUBMITTAL R1

PROJECT NO.: 17226

REMOVALS PLAN

C1.0

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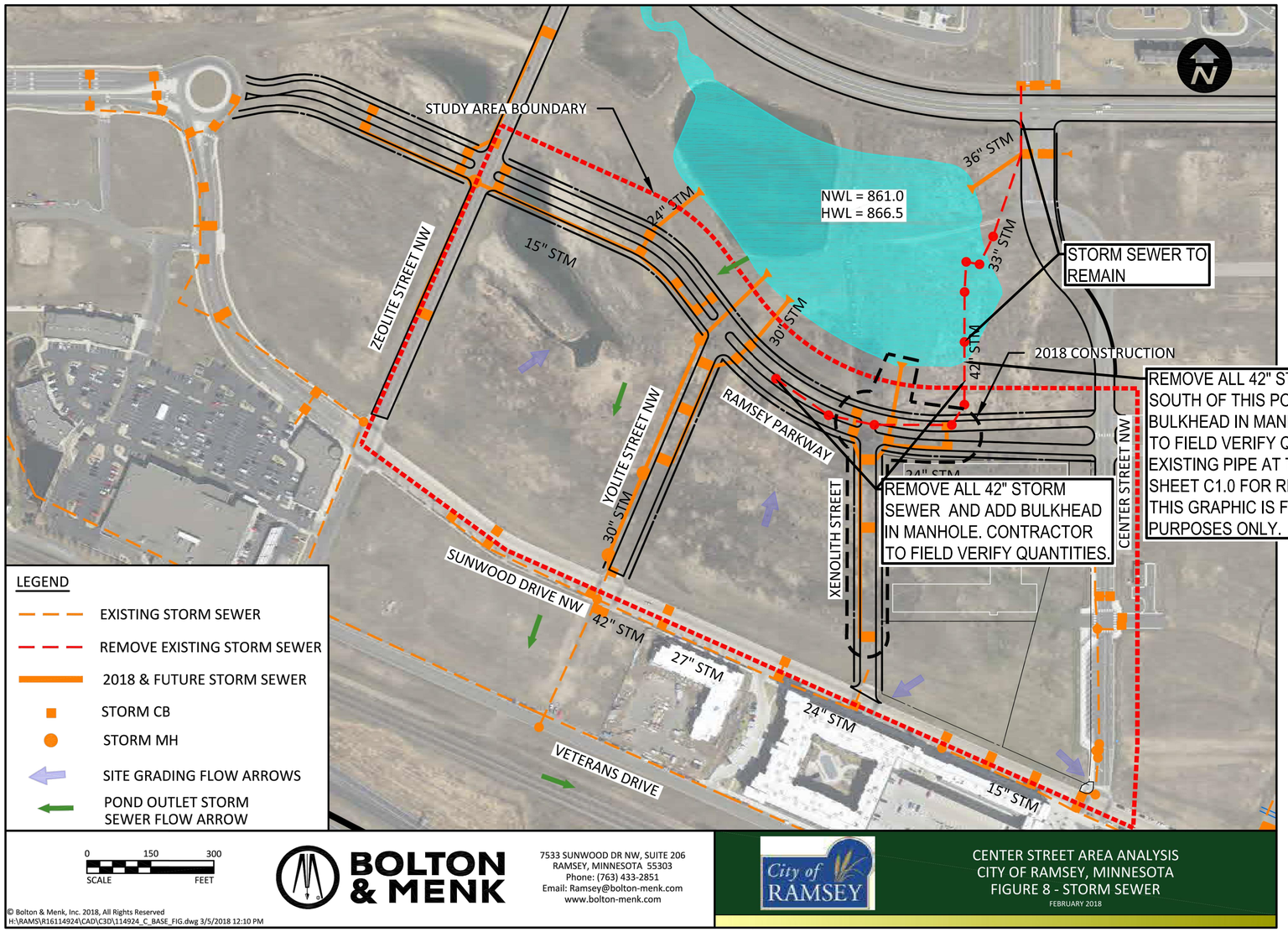

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H:\RAMS\R16114924\CAD\C3D\114924_C_BASE_FIG.dwg 3/5/2018 12:10 PM

BOLTON & MENK
7533 SUNWOOD DR NW, SUITE 206
RAMSEY, MINNESOTA 55303
Phone: (763) 433-2851
Email: Ramsey@bolton-menk.com
www.bolton-menk.com

CENTER STREET AREA ANALYSIS
CITY OF RAMSEY, MINNESOTA
FIGURE 8 - STORM SEWER
FEBRUARY 2018

** CONTRACTOR TO FIELD VERIFY QUANTITIES FOR REMOVAL **

CivilSite GROUP
Civil Engineering • Surveying • Landscape Architecture
4931 W. 35th Street, Suite 200
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REVISION SUMMARY

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STORMSEWER REMOVALS GRAPHIC

C1.1

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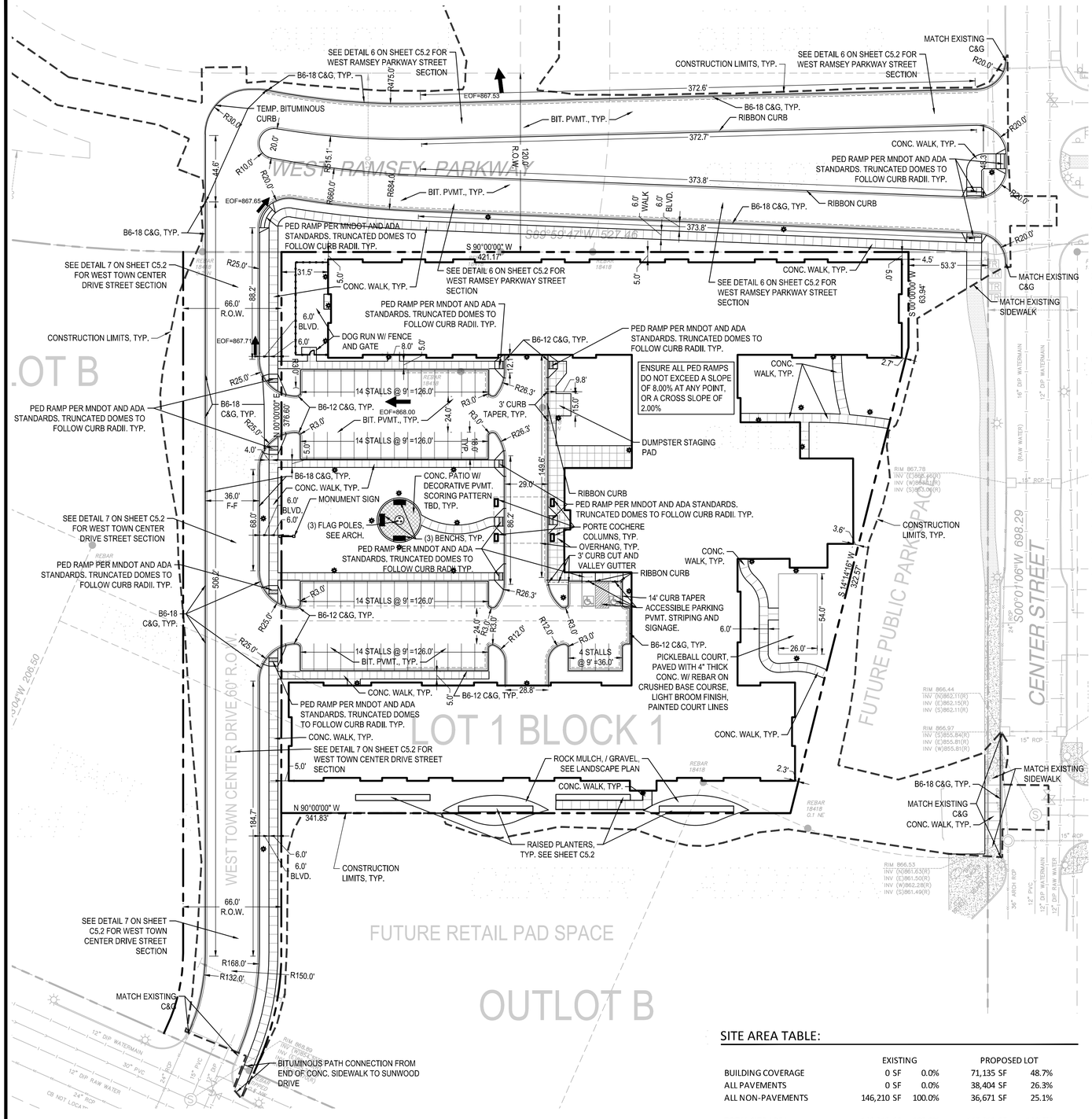

SITE LAYOUT NOTES:

1. CONTRACTOR SHALL VERIFY LOCATIONS AND LAYOUT OF ALL SITE ELEMENTS PRIOR TO BEGINNING CONSTRUCTION, INCLUDING BUT NOT LIMITED TO, LOCATIONS OF EXISTING AND PROPOSED PROPERTY LINES, EASEMENTS, SETBACKS, UTILITIES, BUILDINGS AND PAVEMENTS. CONTRACTOR IS RESPONSIBLE FOR FINAL LOCATIONS OF ALL ELEMENTS FOR THE SITE. ANY REVISIONS REQUIRED AFTER COMMENCEMENT OF CONSTRUCTION, DUE TO LOCATIONAL ADJUSTMENTS SHALL BE CORRECTED AT NO ADDITIONAL COST TO OWNER. ADJUSTMENTS TO THE LAYOUT SHALL BE APPROVED BY THE ENGINEER/LANDSCAPE ARCHITECT PRIOR TO INSTALLATION OF MATERIALS. STAKE LAYOUT FOR APPROVAL.
2. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO CONSTRUCTION, INCLUDING A RIGHT-OF-WAY AND STREET OPENING PERMIT.
3. THE CONTRACTOR SHALL VERIFY RECOMMENDATIONS NOTED IN THE GEO TECHNICAL REPORT PRIOR TO INSTALLATION OF SITE IMPROVEMENT MATERIALS.
4. CONTRACTOR SHALL FIELD VERIFY COORDINATES AND LOCATION DIMENSIONS OF THE BUILDING AND STAKE FOR REVIEW AND APPROVAL BY THE OWNERS REPRESENTATIVE PRIOR TO INSTALLATION OF FOOTING MATERIALS.
5. LOCATIONS OF STRUCTURES, ROADWAY PAVEMENTS, CURBS AND GUTTERS, BOLLARDS, AND WALKS ARE APPROXIMATE AND SHALL BE STAKED IN THE FIELD, PRIOR TO INSTALLATION, FOR REVIEW AND APPROVAL BY THE ENGINEER/LANDSCAPE ARCHITECT.
6. CURB DIMENSIONS SHOWN ARE TO FACE OF CURB. BUILDING DIMENSIONS ARE TO FACE OF CONCRETE FOUNDATION. LOCATION OF BUILDING IS TO BUILDING FOUNDATION AND SHALL BE AS SHOWN ON THE DRAWINGS.
7. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OR SAMPLES AS SPECIFIED FOR REVIEW AND APPROVAL BY THE ENGINEER/LANDSCAPE ARCHITECT PRIOR TO FABRICATION FOR ALL PREFABRICATED SITE IMPROVEMENT MATERIALS SUCH AS, BUT NOT LIMITED TO THE FOLLOWING, FURNISHINGS, PAVEMENTS, WALLS, RAILINGS, BENCHES, FLAGPOLES, LANDING PADS FOR CURB RAMPS, AND LIGHT AND POLES. THE OWNER RESERVES THE RIGHT TO REJECT INSTALLED MATERIALS NOT PREVIOUSLY APPROVED.
8. PEDESTRIAN CURB RAMPS SHALL BE CONSTRUCTED WITH TRUNCATED DOME LANDING AREAS IN ACCORDANCE WITH A.D.A. REQUIREMENTS-SEE DETAIL.
9. CROSSWALK STRIPING SHALL BE 24" WIDE WHITE PAINTED LINE, SPACED 48" ON CENTER PERPENDICULAR TO THE FLOW OF TRAFFIC. WIDTH OF CROSSWALK SHALL BE 5' WIDE. ALL OTHER PAVEMENT MARKINGS SHALL BE WHITE IN COLOR UNLESS OTHERWISE NOTED OR REQUIRED BY ADA OR LOCAL GOVERNING BODIES.
10. SEE SITE PLAN FOR CURB AND GUTTER TYPE. TAPER BETWEEN CURB TYPES-SEE DETAIL.
11. ALL CURB RADII ARE MINIMUM 3' UNLESS OTHERWISE NOTED.
12. CONTRACTOR SHALL REFER TO FINAL PLAT FOR LOT BOUNDARIES, NUMBERS, AREAS AND DIMENSIONS PRIOR TO SITE IMPROVEMENTS.
13. FIELD VERIFY ALL EXISTING SITE CONDITIONS, DIMENSIONS.
14. PARKING IS TO BE SET PARALLEL OR PERPENDICULAR TO EXISTING BUILDING UNLESS NOTED OTHERWISE.
15. ALL PARKING LOT PAINT STRIPPING TO BE WHITE, 4" WIDE TYP.
16. BITUMINOUS PAVING TO BE "LIGHT DUTY" UNLESS OTHERWISE NOTED. SEE DETAIL SHEETS FOR PAVEMENT SECTIONS.
17. ALL TREES THAT ARE TO REMAIN ARE TO BE PROTECTED FROM DAMAGE WITH A CONSTRUCTION FENCE AT THE DRIP LINE. SEE LANDSCAPE DOCUMENTS.
18. MAINTAIN AN ALL-WEATHER ACCESS ROAD TO THE BUILDING FOOTPRINT AS REQUIRED FOR FDP ACCESS.

COR 1 ZONING TABLE:

COR1 Development Standards	Arterial Street	Destination Street	Parkway	Connector Street	Downtown Street	Local Street
Minimum lot size	None	None	None	None	None	None
Minimum lot width	20 feet	20 feet	20 feet	20 feet	20 feet	20 feet
Minimum lot depth	80 feet	80 feet	80 feet	80 feet	80 feet	80 feet
Allowable residential density in dwelling units per acre[1]	>15 DU/AC	>15 DU/AC	>15 DU/AC	>15 DU/AC	>15 DU/AC	>15 DU/AC
Minimum floor area ratio (FAR) for nonresidential uses/vertically mixed buildings/sites	.75	.75	.75	.75	.75	.75
Build to Line						
Front yard[4]	30 feet as measured from building front to right-of-way[2][3] (60% of front facade w/in max.)	5 feet as measured from building front to right-of-way[2] (60% of front facade w/in max.)	5 feet as measured from building front to right-of-way[2] (60% of front facade w/in max.)	5 feet as measured from building front to right-of-way[2] (60% of front facade w/in max.)	5 feet as measured from building front to right-of-way[2] (60% of front facade w/in max.)	5 feet as measured from building front to right-of-way[2] (60% of front facade w/in max.)
Side yard	no req.	no req.	no req.	no req.	no req.	no req.
Rear yard	no req.	no req.	no req.	no req.	no req.	no req.
Driveway length (minimum)	25 feet for residential units	25 feet for residential units	25 feet for residential units	25 feet for residential units	25 feet for residential units	25 feet for residential units
Building height (min. - max.)	2 - 5 stories.	2 - 5 stories.	2 - 5 stories.	2 - 5 stories.	2 - 5 stories.	2 - 5 stories.
Planter Style	N/A	Planter Bed	Boulevard Sod	Boulevard Sod	N/A	Boulevard Sod
Tree Spacing (on center)	N/A	35 feet	35 feet	35 feet	35 feet	35 feet
Boulevard Width	N/A	6 feet	6 feet	6 feet	N/A	6 feet
Sidewalk Width	10 feet	10 feet	6 feet	10 feet	10 feet	10 feet

SITE AREA TABLE:

	EXISTING		PROPOSED LOT	
BUILDING COVERAGE	0 SF	0.0%	71,135 SF	48.7%
ALL PAVEMENTS	0 SF	0.0%	38,404 SF	26.3%
ALL NON-PAVEMENTS	146,210 SF	100.0%	36,671 SF	25.1%
TOTAL SITE AREA	146,210 SF	100.0%	146,210 SF	100.0%
	3.36 AC		3.36 AC	
IMPERVIOUS SURFACE				
EXISTING CONDITION	0 SF	0.0%		
PROPOSED CONDITION LOT	109,539 SF	74.9%	109,539 SF	74.9%
DIFFERENCE (EX. VS PROP.)	109,539 SF	74.9%		
IMPERVIOUS TOTAL	109,539 SF	74.9%		

PARKING TABLE:

PARKING SCHEDULE			
TYPE	COUNT	STANDARD	ADA
Exterior	63	61	2
Interior	175	171	4
Total	238	232	6

CITY OF RAMSEY SITE SPECIFIC NOTES:

1. HOURS OF CONSTRUCTION ARE 7:00AM TO 10:00PM. NO EQUIPMENT MAY BE STARTED BEFORE 7:00 AM. SITE WORK ON SATURDAY REQUIRES 72 HOUR ADVANCE NOTICE FOR APPROVAL. SUNDAY WORK REQUIRES CITY COUNCIL APPROVAL. MEETINGS ARE THE 2ND AND 4TH TUESDAYS. REQUESTS MUST BE SUBMITTED ONE WEEK BEFORE FOR INCLUSION ON THE AGENDA.
2. ALL SIDEWALKS WITHIN THE PUBLIC REALM (WITHIN RIGHT OF WAY) SHALL BE BROOM FINISHED WITH ALTERNATING BRUSH STROKES PER PANEL.

SITE PLAN LEGEND:

- PUBLIC STREET PAVEMENT, SEE DETAIL 8 ON SHEET C5.0
- PRIVATE STREET PAVEMENT, SEE DETAIL 2 ON SHEET C5.0
- CONCRETE PAVEMENT AS SPECIFIED (PAD OR WALK) SEE GEOTECHNICAL REPORT FOR AGGREGATE BASE & CONCRETE DEPTHS, SEE DETAIL.
- PROPERTY LINE
- CONSTRUCTION LIMITS
- CURB AND GUTTER-SEE NOTES (T.O.) TIP OUT GUTTER WHERE APPLICABLE-SEE PLAN
- EMERGENCY OVERFLOW
- TRAFFIC DIRECTIONAL ARROW PAVEMENT MARKINGS
- SIGN AND POST ASSEMBLY. SHOP DRAWINGS REQUIRED. HC = ACCESSIBLE SIGN NP = NO PARKING FIRE LANE ST = STOP CP = COMPACT CAR PARKING ONLY
- EXTERIOR LIGHT. SEE LIGHTING PLAN FOR DETAILS AND SPECS

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Matthew R. Pavek
DATE 05/02/18 LICENSE NO. 44263

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03/30/18	CITY SUBMITTAL
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REVISION SUMMARY

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1/15/18	SITE PLAN SUBMITTAL R1

PROJECT NO.: 17226

SITE PLAN

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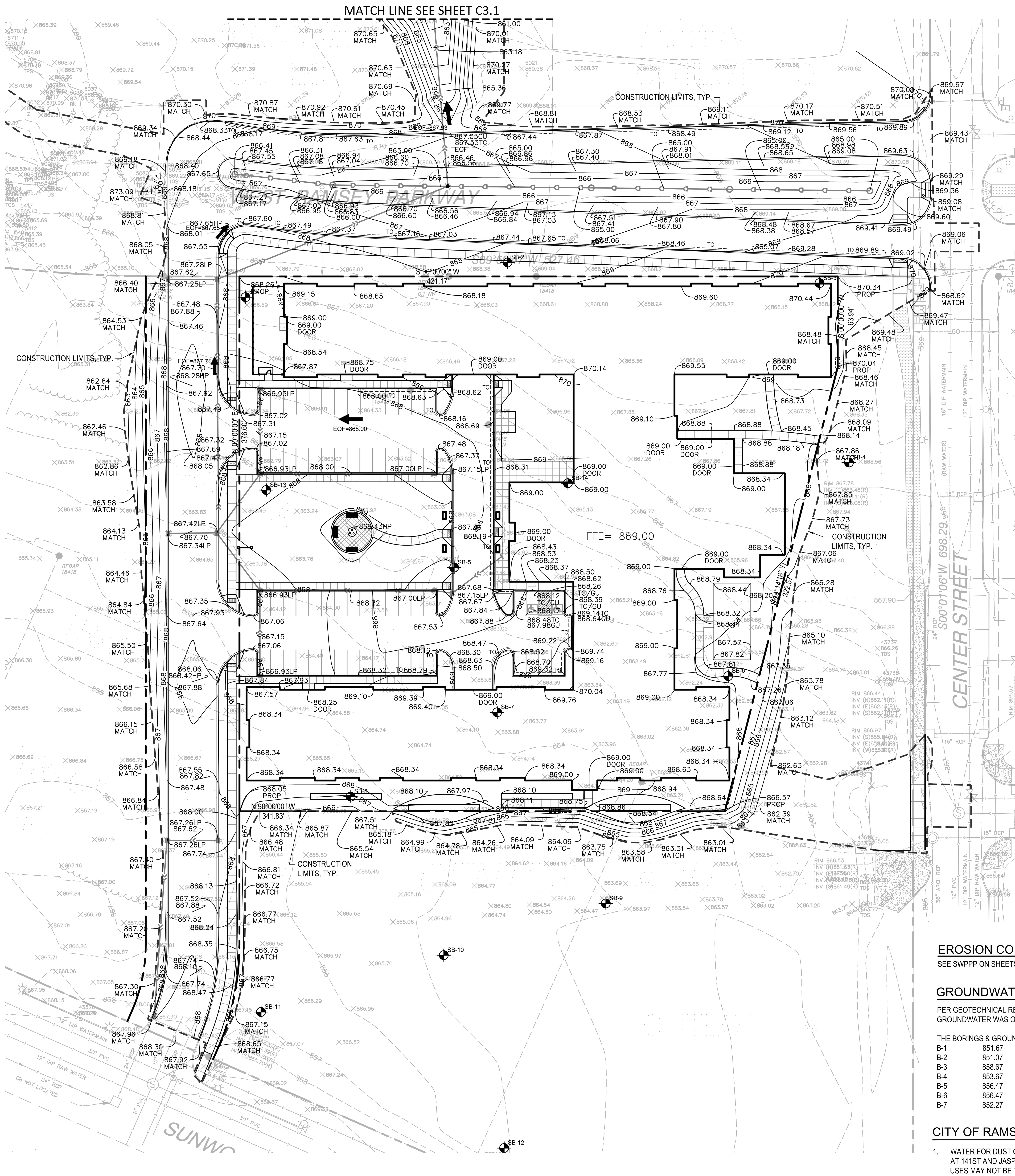

GENERAL GRADING NOTES:

1. SEE SITE PLAN FOR HORIZONTAL LAYOUT & GENERAL GRADING NOTES.
2. THE CONTRACTOR SHALL COMPLETE THE SITE GRADING CONSTRUCTION (INCLUDING BUT NOT LIMITED TO SITE PREPARATION, SOIL CORRECTION, EXCAVATION, EMBANKMENT, ETC.) IN ACCORDANCE WITH THE REQUIREMENTS OF THE OWNER'S SOILS ENGINEER. ALL SOIL TESTING SHALL BE COMPLETED BY THE OWNER'S SOILS ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED SOIL TESTS AND INSPECTIONS WITH THE SOILS ENGINEER.
3. GRADING AND EXCAVATION ACTIVITIES SHALL BE PERFORMED IN ACCORDANCE WITH THE NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT REQUIREMENTS & PERMIT REQUIREMENTS OF THE CITY.
4. PROPOSED SPOT GRADES ARE FLOW-LINE FINISHED GRADE ELEVATIONS, UNLESS OTHERWISE NOTED.
5. GRADES OF WALKS SHALL BE INSTALLED WITH 5% MAX. LONGITUDINAL SLOPE AND 1% MIN. AND 2% MAX. CROSS SLOPE, UNLESS OTHERWISE NOTED.
6. PROPOSED SLOPES SHALL NOT EXCEED 3:1 UNLESS INDICATED OTHERWISE ON THE DRAWINGS. MAXIMUM SLOPES IN MAINTAINED AREAS IS 4:1
7. PROPOSED RETAINING WALLS, FREESTANDING WALLS, OR COMBINATION OF WALL TYPES GREATER THAN 4' IN HEIGHT SHALL BE DESIGNED AND ENGINEERED BY A REGISTERED RETAINING WALL ENGINEER. DESIGN DRAWINGS SHALL BE SUBMITTED FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF GRADE STAKES THROUGHOUT THE DURATION OF CONSTRUCTION TO ESTABLISH PROPER GRADES. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR A FINAL FIELD CHECK OF FINISHED GRADES ACCEPTABLE TO THE ENGINEER/LANDSCAPE ARCHITECT PRIOR TO TOPSOIL AND SODDING ACTIVITIES.
9. IF EXCESS OR SHORTAGE OF SOIL MATERIAL EXISTS, THE CONTRACTOR SHALL TRANSPORT ALL EXCESS SOIL MATERIAL OFF THE SITE TO AN AREA SELECTED BY THE CONTRACTOR, OR IMPORT SUITABLE MATERIAL TO THE SITE.
10. EXCAVATE TOPSOIL FROM AREAS TO BE FURTHER EXCAVATED OR REGRADED AND STOCKPILE IN AREAS DESIGNATED ON THE SITE. THE CONTRACTOR SHALL SALVAGE ENOUGH TOPSOIL FOR RESPREADING ON THE SITE AS SPECIFIED. EXCESS TOPSOIL SHALL BE PLACED IN EMBANKMENT AREAS, OUTSIDE OF BUILDING PADS, ROADWAYS AND PARKING AREAS. THE CONTRACTOR SHALL SUBCUT CUT AREAS, WHERE TURF IS TO BE ESTABLISHED, TO A DEPTH OF 6 INCHES. RESPREAD TOPSOIL IN AREAS WHERE TURF IS TO BE ESTABLISHED TO A MINIMUM DEPTH OF 6 INCHES.
11. FINISHED GRADING SHALL BE COMPLETED. THE CONTRACTOR SHALL UNIFORMLY GRADE AREAS WITHIN LIMITS OF GRADING, INCLUDING ADJACENT TRANSITION AREAS. PROVIDE A SMOOTH FINISHED SURFACE WITHIN SPECIFIED TOLERANCES, WITH UNIFORM LEVELS OR SLOPES BETWEEN POINTS WHERE ELEVATIONS ARE SHOWN, OR BETWEEN SUCH POINTS AND EXISTING GRADES. AREAS THAT HAVE BEEN FINISH GRADED SHALL BE PROTECTED FROM SUBSEQUENT CONSTRUCTION OPERATIONS, TRAFFIC AND EROSION. REPAIR ALL AREAS THAT HAVE BECOME RUTTED BY TRAFFIC OR ERODED BY WATER OR HAS SETTLED BELOW THE CORRECT GRADE. ALL AREAS DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED TO EQUAL OR BETTER THAN ORIGINAL CONDITION OR TO THE REQUIREMENTS OF THE NEW WORK.
12. PRIOR TO PLACEMENT OF THE AGGREGATE BASE, A TEST ROLL WILL BE REQUIRED ON THE STREET AND/OR PARKING AREA SUBGRADE. THE CONTRACTOR SHALL PROVIDE A LOADED TANDEM AXLE TRUCK WITH A GROSS WEIGHT OF 25 TONS. THE TEST ROLLING SHALL BE AT THE DIRECTION OF THE SOILS ENGINEER AND SHALL BE COMPLETED IN AREAS AS DIRECTED BY THE SOILS ENGINEER. THE SOILS ENGINEER SHALL DETERMINE WHICH SECTIONS OF THE STREET OR PARKING AREA ARE UNSTABLE. CORRECTION OF THE SUBGRADE SOILS SHALL BE COMPLETED IN ACCORDANCE WITH THE REQUIREMENTS OF THE SOILS ENGINEER. NO TEST ROLL SHALL OCCUR WITHIN 10' OF ANY UNDERGROUND STORM RETENTION/DETENTION SYSTEMS.
13. TOLERANCES
    - 13.1. THE BUILDING SUBGRADE FINISHED SURFACE ELEVATION SHALL NOT VARY BY MORE THAN 0.30 FOOT ABOVE, OR 0.30 FOOT BELOW, THE PRESCRIBED ELEVATION AT ANY POINT WHERE MEASUREMENT IS MADE.
    - 13.2. THE STREET OR PARKING AREA SUBGRADE FINISHED SURFACE ELEVATION SHALL NOT VARY BY MORE THAN 0.05 FOOT ABOVE, OR 0.10 FOOT BELOW, THE PRESCRIBED ELEVATION OF ANY POINT WHERE MEASUREMENT IS MADE.
    - 13.3. AREAS WHICH ARE TO RECEIVE TOPSOIL SHALL BE GRADED TO WITHIN 0.30 FOOT ABOVE OR BELOW THE REQUIRED ELEVATION, UNLESS DIRECTED OTHERWISE BY THE ENGINEER.
    - 13.4. TOPSOIL SHALL BE GRADED TO PLUS OR MINUS 1/2 INCH OF THE SPECIFIED THICKNESS.
14. MAINTENANCE
    - 14.1. THE CONTRACTOR SHALL PROTECT NEWLY GRADED AREAS FROM TRAFFIC AND EROSION, AND KEEP AREA FREE OF TRASH AND DEBRIS.
    - 14.2. CONTRACTOR SHALL REPAIR AND REESTABLISH GRADES IN SETTLED, ERODED AND RUTTED AREAS TO SPECIFIED TOLERANCES. DURING THE CONSTRUCTION, IF REQUIRED, AND DURING THE WARRANTY PERIOD, ERODED AREAS WHERE TURF IS TO BE ESTABLISHED SHALL BE RESEEDED AND MULCHED.
    - 14.3. WHERE COMPLETED COMPACTED AREAS ARE DISTURBED BY SUBSEQUENT CONSTRUCTION OPERATIONS OR ADVERSE WEATHER, CONTRACTOR SHALL SCARIFY, SURFACE, RESHAPE, AND COMPACT TO REQUIRED DENSITY PRIOR TO FURTHER CONSTRUCTION.

WETLAND NOTES:

NO WETLANDS WERE FOUND ON THE SITE PER WETLAND DELINEATION REPORT BY JACOBSON ENVIRONMENTAL, DATED 12-04-17

EROSION CONTROL NOTES:

SEE SWPPP ON SHEETS SW1.0-SW1.5

GROUNDWATER INFORMATION:

PER GEOTECHNICAL REPORT BY CHOSEN VALLEY TESTING, INC., DATED 10-20-17 GROUNDWATER WAS OBSERVED AT ELEVATIONS RANGING FROM 851.67 TO 858.67

THE BORINGS & GROUNDWATER ARE AS FOLLOWS:

B-1	851.67	B-8	855.27
B-2	851.07	B-9	-
B-3	858.67	B-10	-
B-4	853.67	B-11	-
B-5	856.47	B-12	-
B-6	856.47	B-13	856.97
B-7	852.27	B-14	854.97

CITY OF RAMSEY GRADING NOTES:

1. WATER FOR DUST CONTROL IS AVAILABLE AT THE CITY FILL STATION LOCATED AT 141ST AND JASPAR ST. WATER FOR DUST CONTROL OR CONSTRUCTION USES MAY NOT BE TAKEN FROM HYDRANTS

GRADING PLAN LEGEND:

1125	EX. 1' CONTOUR ELEVATION INTERVAL
1137	1.0' CONTOUR ELEVATION INTERVAL
41.26	SPOT GRADE ELEVATION (GUTTER/FLOW LINE UNLESS OTHERWISE NOTED)
891.00 G	SPOT GRADE ELEVATION GUTTER
891.00 TC	SPOT GRADE ELEVATION TOP OF CURB
891.00 BS/TS	SPOT GRADE ELEVATION BOTTOM OF STAIRS/TOP OF STAIRS
TO	CURB AND GUTTER (T.O = TIP OUT)
EOF=1135.52	EMERGENCY OVERFLOW

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GRADING PLAN

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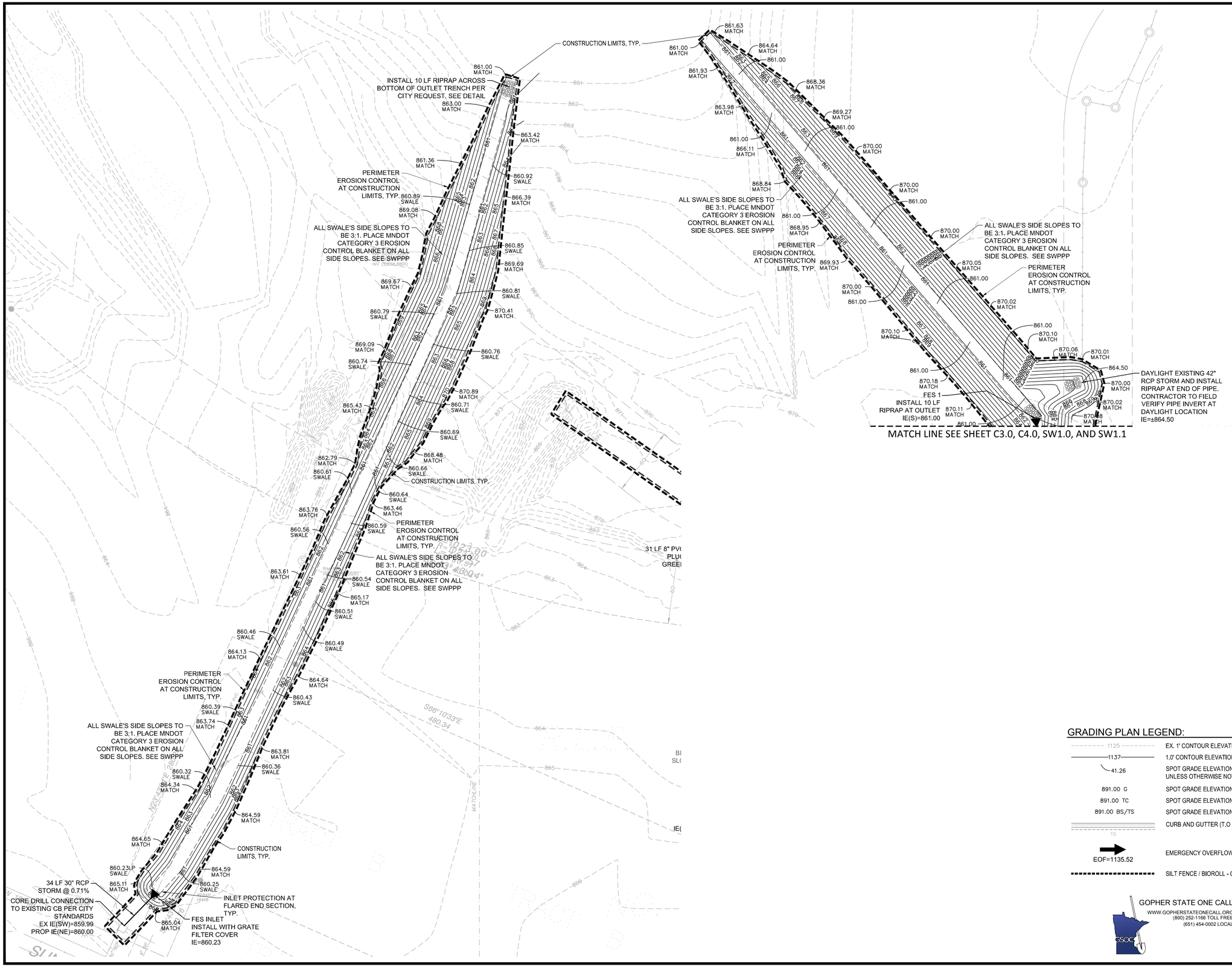

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EOF=1135.52	EMERGENCY OVERFLOW
	SILT FENCE / BIOROLL - GRADING LIMIT

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LAKE RAMSEY, CITY IMPROVEMENTS PLAN

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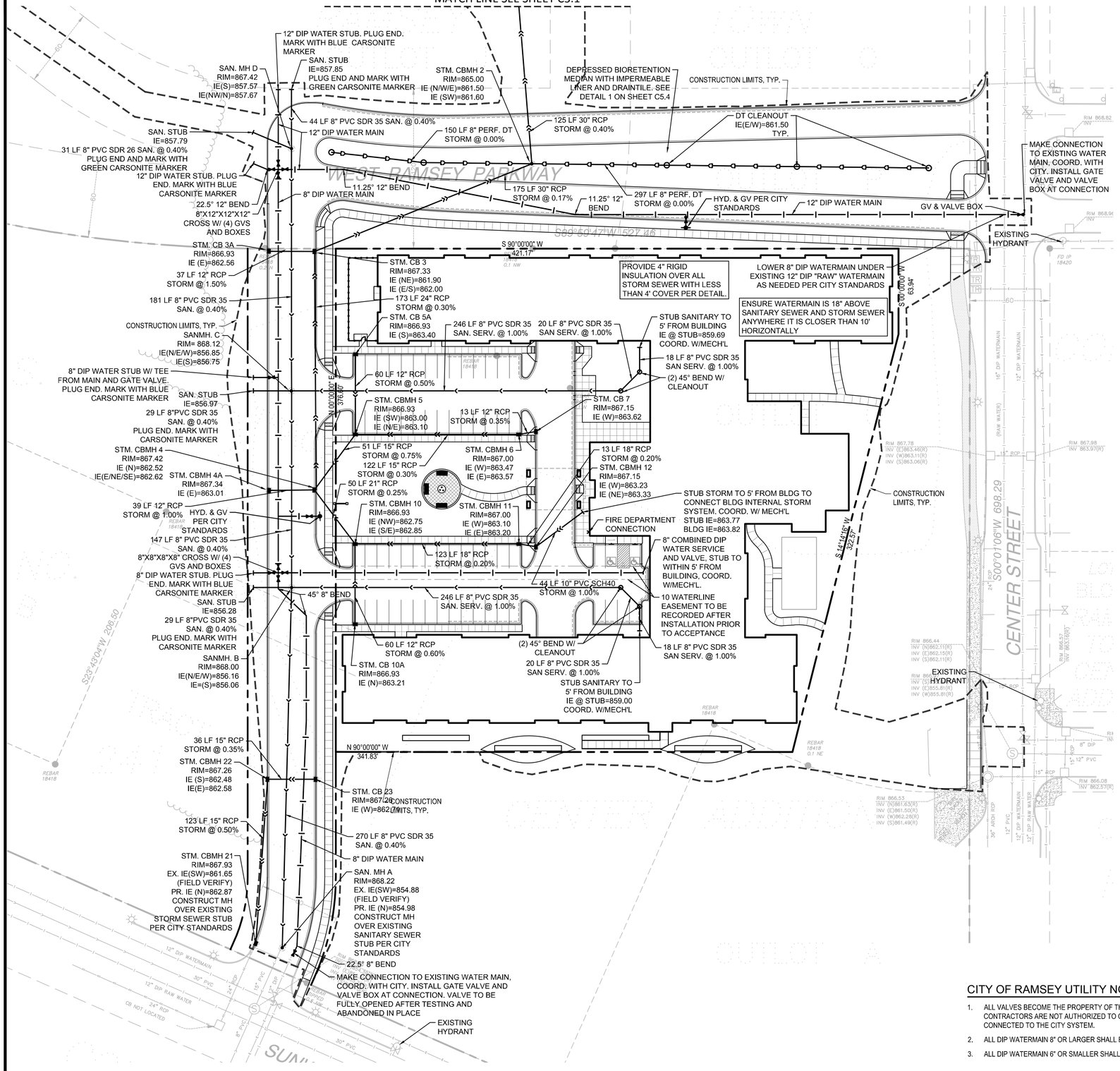

GENERAL UTILITY NOTES:

1. SEE SITE PLAN FOR HORIZONTAL DIMENSIONS AND LAYOUT.
2. CONTRACTOR SHALL FIELD VERIFY LOCATION AND ELEVATION OF EXISTING UTILITIES AND TOPOGRAPHIC FEATURES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF DISCREPANCIES OR VARIATIONS FROM THE PLANS.
3. ALL EXISTING UTILITY LOCATIONS SHOWN ARE APPROXIMATE. CONTACT "GOPHER STATE ONE CALL" (651-454-0002 OR 800-252-1166) FOR UTILITY LOCATIONS, 48 HOURS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY UTILTIES THAT ARE DAMAGED DURING CONSTRUCTION AT NO COST TO THE OWNER.
4. UTILITY INSTALLATION SHALL CONFORM TO THE CURRENT EDITION OF "STANDARD SPECIFICATIONS FOR WATER MAIN AND SERVICE LINE INSTALLATION" AND "SANITARY SEWER AND STORM SEWER INSTALLATION" AS PREPARED BY THE CITY ENGINEERS ASSOCIATION OF MINNESOTA (CEAM), AND SHALL CONFORM WITH THE REQUIREMENTS OF THE CITY AND THE PROJECT SPECIFICATIONS.
5. CASTINGS SHALL BE SALVAGED FROM STRUCTURE REMOVALS AND RE-USED OR PLACED AT THE DIRECTION OF THE OWNER.
6. ALL WATER PIPE SHALL BE CLASS 52 DUCTILE IRON PIPE (DIP) UNLESS OTHERWISE NOTED.
7. ALL SANITARY SEWER SHALL BE SDR 26 POLYVINYL CHLORIDE (PVC) UNLESS OTHERWISE NOTED.
8. ALL STORM SEWER PIPE SHALL BE HDPE UNLESS OTHERWISE NOTED.
9. PIPE LENGTHS SHOWN ARE FROM CENTER TO CENTER OF STRUCTURE OR TO END OF FLARED END SECTION.
10. UTILTIES ON THE PLAN ARE SHOWN TO WITHIN 5' OF THE BUILDING FOOTPRINT. THE CONTRACTOR IS ULTIMATELY RESPONSIBLE FOR THE FINAL CONNECTION TO BUILDING LINES. COORDINATE WITH ARCHITECTURAL AND MECHANICAL PLANS.
11. CATCH BASINS AND MANHOLES IN PAVED AREAS SHALL BE SUMPED 0.04 FEET. ALL CATCH BASINS IN GUTTERS SHALL BE SUMPED 0.15 FEET PER DETAILS. RIM ELEVATIONS SHOWN ON THIS PLAN DO NOT REFLECT SUMPED ELEVATIONS.
12. ALL FIRE HYDRANTS SHALL BE LOCATED 5 FEET BEHIND BACK OF CURB UNLESS OTHERWISE NOTED.
13. HYDRANT TYPE, VALVE, AND CONNECTION SHALL BE IN ACCORDANCE WITH CITY REQUIREMENTS. HYDRANT EXTENSIONS ARE INCIDENTAL.
14. A MINIMUM OF 8 FEET OF COVER IS REQUIRED OVER ALL WATERMAIN, UNLESS OTHERWISE NOTED. EXTRA DEPTH MAY BE REQUIRED TO MAINTAIN A MINIMUM OF 18" VERTICAL SEPARATION TO SANITARY OR STORM SEWER LINES. EXTRA DEPTH WATERMAIN IS INCIDENTAL.
15. A MINIMUM OF 18 INCHES OF VERTICAL SEPARATION AND 10 FEET OF HORIZONTAL SEPARATION IS REQUIRED FOR ALL UTILITIES, UNLESS OTHERWISE NOTED.
16. ALL CONNECTIONS TO EXISTING UTILITIES SHALL BE IN ACCORDANCE WITH CITY STANDARDS AND COORDINATED WITH THE CITY PRIOR TO CONSTRUCTION.
17. CONNECTIONS TO EXISTING STRUCUTRES SHALL BE CORE-DRILLED.
18. COORDINATE LOCATIONS AND SIZES OF SERVICE CONNECTIONS WITH THE MECHANICAL DRAWINGS.
19. COORDINATE INSTALLATION AND SCHEDULING OF THE INSTALLATION OF UTILITIES WITH ADJACENT CONTRACTORS AND CITY STAFF.
20. ALL STREET REPAIRS AND PATCHING SHALL BE PERFORMED PER THE REQUIREMENTS OF THE CITY. ALL PAVEMENT CONNECTIONS SHALL BE SAWCUT. ALL TRAFFIC CONTROLS SHALL BE PROVIDED BY THE CONTRACTOR AND SHALL BE ESTABLISHED PER THE REQUIREMENTS OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MMUTCD) AND THE CITY. THIS SHALL INCLUDE BUT NOT BE LIMITED TO SIGNAGE, BARRICADES, FLASHERS, AND FLAGGERS AS NEEDED. ALL PUBLIC STREETS SHALL BE OPEN TO TRAFFIC AT ALL TIMES. NO ROAD CLOSURES SHALL BE PERMITTED WITHOUT APPROVAL BY THE CITY.
21. ALL STRUCTURES, PUBLIC AND PRIVATE, SHALL BE ADJUSTED TO PROPOSED GRADES WHERE REQUIRED. THE REQUIREMENTS OF ALL OWNERS MUST BE COMPLIED WITH. STRUCTURES BEING RESET TO PAVED AREAS MUST MEET OWNERS REQUIREMENTS FOR TRAFFIC LOADING.
22. CONTRACTOR SHALL CORDINATE ALL WORK WITH PRIVATE UTILITY COMPANIES.
23. CONTRACTOR SHALL COORDINATE CONNECTION OF IRRIGATION SERVICE TO UTILITIES. COORDINATE THE INSTALLATION OF IRRIGATION SLEEVES NECESSARY AS TO NOT IMPACT INSTALLATION OF UTILITIES.
24. CONTRACTOR SHALL MAINTAIN AS-BUILT PLANS THROUGHOUT CONSTRUCTION AND SUBMIT THESE PLANS TO ENGINEER UPON COMPLETION OF WORK.
25. ALL JOINTS AND CONNECTIONS IN STORM SEWER SYSTEM SHALL BE GASTIGHT OR WATERTIGHT. APPROVED RESILIENT RUBBER JOINTS MUST BE USED TO MAKE WATERTIGHT CONNECTIONS TO MANHOLES, CATCHBASINS, OR OTHER STRUCTURES.
26. ALL PORTIONS OF THE STORM SEWER SYSTEM LOCATED WITHIN 10 FEET OF THE BUILDING OR WATER SERVICE LINE MUST BE TESTED IN ACCORDANCE WITH MN RULES, CHAPTER 4714, SECTION 1109.0.

CITY OF RAMSEY UTILITY NOTES:

1. ALL VALVES BECOME THE PROPERTY OF THE CITY AFTER CONNECTION TO THE CITY SYSTEM. CONTRACTORS ARE NOT AUTHORIZED TO OPERATE VALVES AND HYDRANTS AFTER THEY ARE CONNECTED TO THE CITY SYSTEM.
2. ALL DIP WATERMAIN 8" OR LARGER SHALL BE CLASS 52
3. ALL DIP WATERMAIN 6" OR SMALLER SHALL BE CLASS 53

UTILITY LEGEND:

- CATCH BASIN
- MANHOLE
- GATE VALVE AND VALVE BOX
- PROPOSED FIRE HYDRANT
- WATER MAIN
- SANITARY SEWER
- STORM SEWER
- FES AND RIP RAP

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UTILITY PLAN

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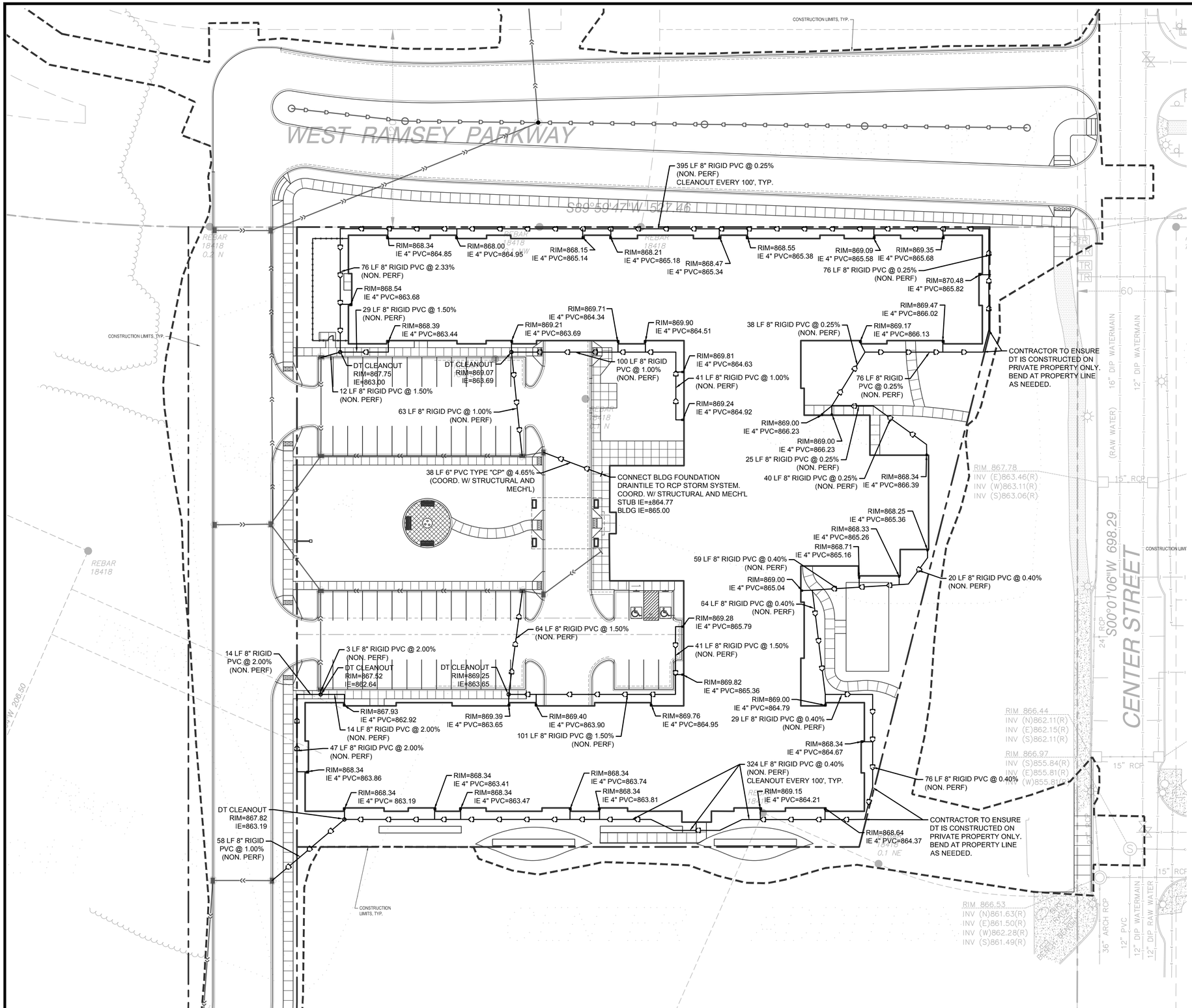

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DRAINTILE PLAN

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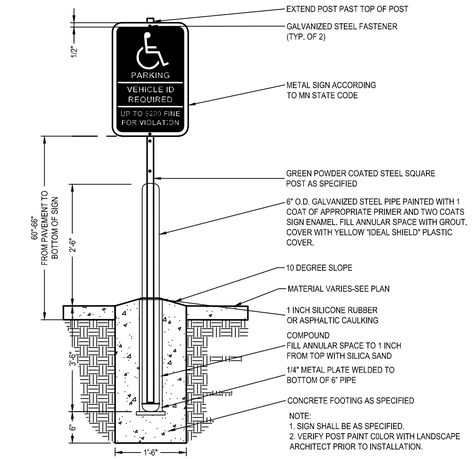
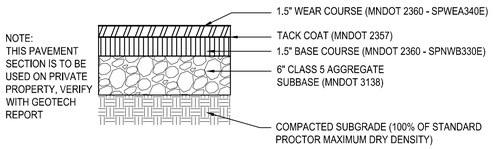
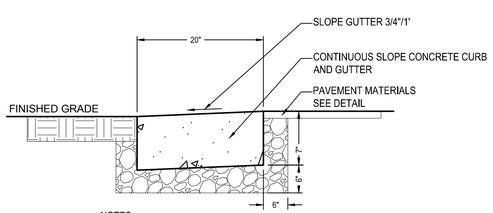


1 ACCESSIBLE SIGN AND POST
NTS

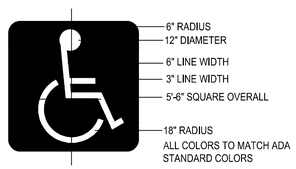


2 ON SITE - LIGHT DUTY BITUMINOUS PAVEMENT
NTS



NOTES:
1. INSTALL CONSTRUCTION JOINTS AT 10'-0" O.C. +/-
2. BASE DEPTH DEPENDANT UPON SOIL CONDITIONS

3 RIBBON CURB
NTS

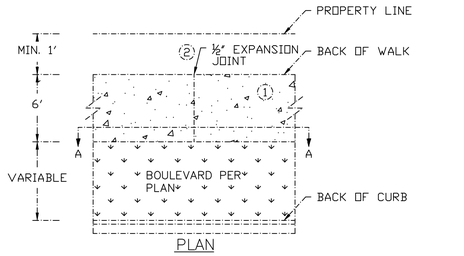


4 ACCESSIBLE PARKING PAVEMENT MARKING
NTS

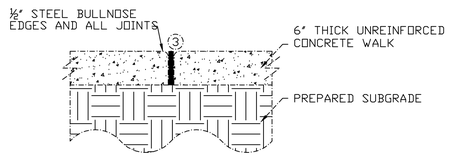
CASTING SCHEDULE		
CATCH BASIN/MANHOLE/RISER	GRATE TYPE (NEENAH)	REMARKS
3, 3A, 4, 4A, 5, 5A 6, 7, 10, 10A, 11, 12, 21, 22, 23	R-3067	STORM CURB INLET
2	R-2501	STORM AREA DRAIN INLET

NOTE:
1. CASTINGS SHALL BE NEENAH FOUNDRY CASTINGS OR APPROVED EQUIVALENT.
2. CASTINGS SHALL BE STAMPED WITH APPROPRIATE UTILITY NAME ("STORM SEWER", "SANITARY SEWER")

5 CASTING SCHEDULE
NTS



PLAN

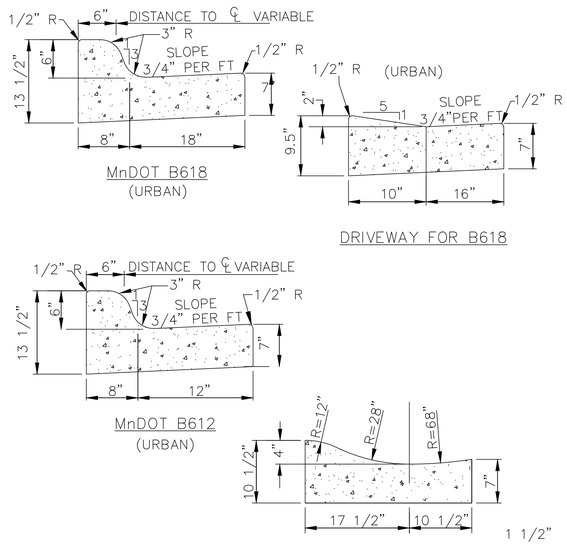


SECTION A–A

NOTE:
1. BROOM FINISH CONCRETE WALK SURFACE WITH ALTERNATING BRUSH STROKES EACH PANEL
2. MAXIMUM 100 FOOT SPACING BETWEEN EXPANSION JOINTS
3. 1/2" EXPANION JOINT MEETING MNDOT SPEC 3702. PROVIDE ONE PIECE OF FILLER FOR THE ENTIRE DEPTH AND WIDTH OF THE JOINT

NOT TO SCALE

6 CONCRETE WALK
NTS

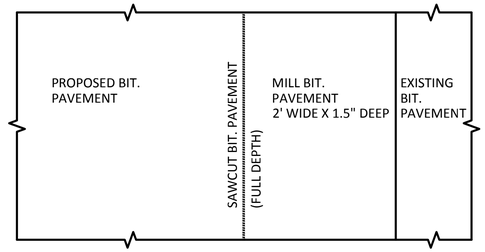


NOTES:
1. ON WEAR COURSE MILL THE EXISTING BITUMINOUS 1.5" BY 24" IN FRONT OF THE REPLACEMENT CURB.
2. ON BASE COURSE SAW CUT AND REMOVE EXISTING BITUMINOUS 18" IN FRONT OF THE REPLACEMENT CURB.

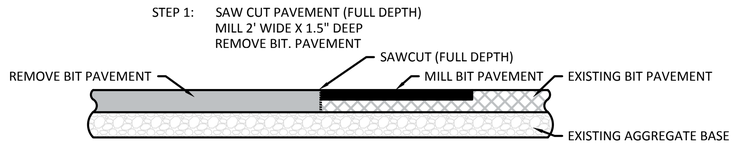
7 CURB AND GUTTER
NTS

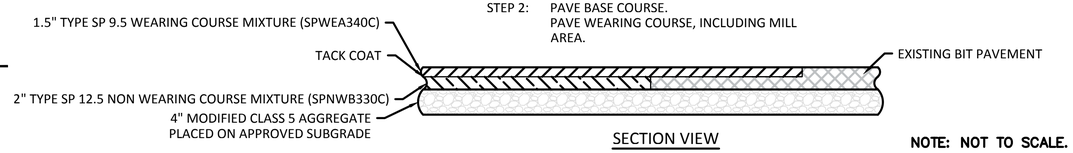
NOTES:

1. **BITUMINOUS SHALL BE SAWCUT AND REMOVED**
2. **CLASS 5 AND BITUMINOUS COURSES SHALL BE MECHANICALLY COMPACTED.**
3. **SEE CITY PLATE STR-26 FOR MODIFIED CLASS 5 SPECIFICATIONS.**



PLAN VIEW

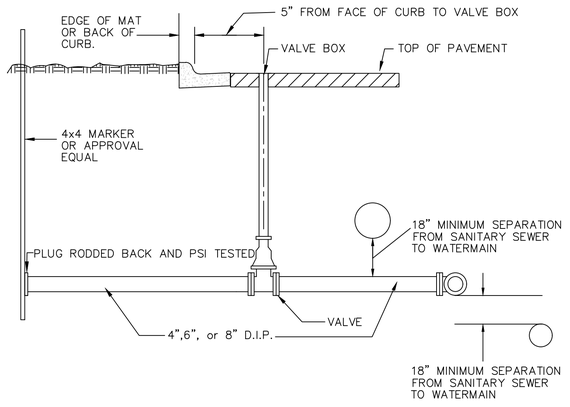




SECTION VIEW

NOTE: NOT TO SCALE.

8 STREET TIE-IN
NTS



NOTES:
1.SHALL BE BLOCKED OR TIED TO THE MAIN WITH 2-3/4" DIAMETER TIE RODS. ALL TIE RODS TO BE COAL TAR COATED AFTER INSTALLATION. RESTRAINED JOINT PIPE AND RETAINING GLANDS MAY BE USED.

9 COMMERCIAL WATER SERVICE
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St. Louis Park, MN 55416
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kaas wilson architects

Inland Group

PROJECT
AFFINITY AT RAMSEY
RAMSEY, MN 55303

INLAND GROUP
120 W. CATALDO AVE. SUITE 100, SPOKANE, WA 99201

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Matthew R. Pavek
DATE 05/02/18 LICENSE NO. 44263

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03/16/18	WATERSHED SUBMITTAL
03/30/18	CITY SUBMITTAL
05/02/18	CITY RESUBMITTAL

REVISION SUMMARY

DATE	DESCRIPTION

PROJECT NO.: 17226

CIVIL DETAILS

C5.0

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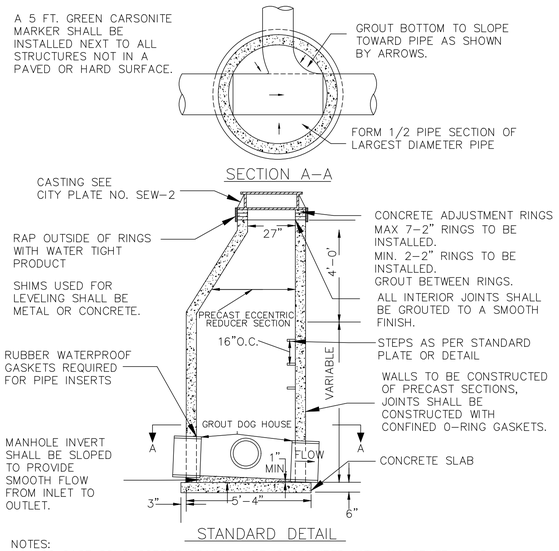
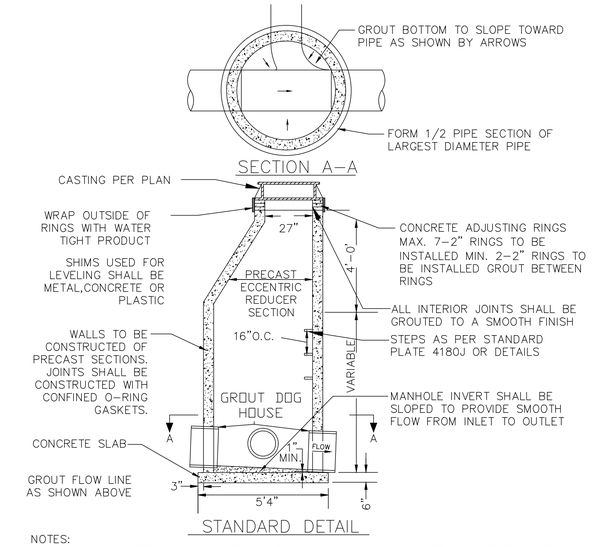


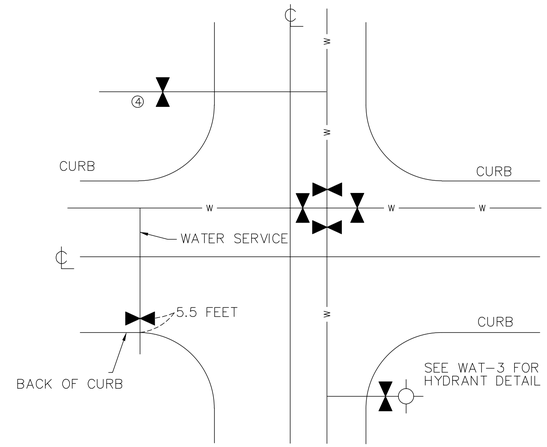
NOTES:
1. A 10 GAGE SOLID COPPER TRACER WIRE IS REQUIRED WITH ALL SEWER LINES.
2. CONDUCTIVITY IS REQUIRED ON ALL TRACER WIRE.
3. TRACER WIRES ARE TO END IN STRUCTURES, AT FINISHED GRADE ON ALL SERVICES AND STUBS.
4. 6" BASE FOR ALL MANHOLES LESS THAN 14 FT. OF DEPTH, INCREASE BASE THICKNESS 2" PER 6 FT. OF DEPTH BEYOND 14 FT.
5. 5" PRECAST BASE MAY BE USED FOR MANHOLES LESS THAN 14 FT. DEEP.
6. ALL INVERTS TO BE 0.10' ABOVE OUTLET,

1 SANITARY SEWER MANHOLE
NTS



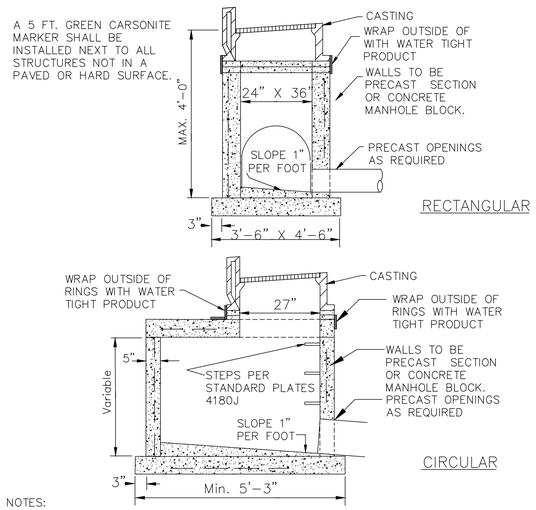
NOTES:
1. MANHOLE INVERT SHALL SLOPED TO PROVIDE A SMOOTH FLOW FROM INLET TO OUTLET
2. INSPECTION OF MANHOLE REQUIRED BEFORE BACKFILLING
3. ALL INLET INVERTS TO BE 0.10 ABOVE OUTLET INVERTS UNLESS OTHERWISE NOTED
4. A 10 GAUGE SOLID COPPER TRACER WIRE IS REQUIRED WITH ALL STORM LINES.
5. CONDUCTIVITY IS REQUIRED ON ALL TRACER WIRE
6. STEPS ARE REQUIRED IF STRUCTURE FROM THE CASTING TO THE INVERT IS GREATER THAN 4 FEET
7. TRACER WIRES ARE TO END IN STRUCTURES, AT FINISHED GRADE ON ALL SERVICES AND STUBS

2 STORM SEWER MANHOLE
NTS



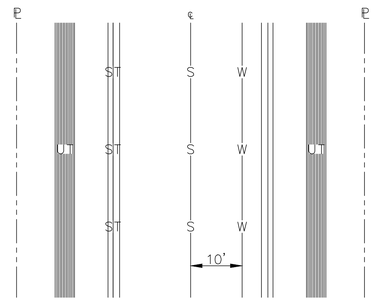
NOTES:
1. VALVES TO BE CLUSTERED AT CROSS ON THE TEE BY PLACING IMMEDIATELY ADJACENT TO FITTINGS.
2. WATERMAIN TO BE LOCATED ON NORTH AND EAST SIDES OF STREET 10 FEET FROM CENTERLINE.
3. ALL SERVICE VALVES IN ROAD WAY SHALL BE 5.5 FEET FROM BACK OF CONCRETE CURB.
4. ALL VALVES NOT IN BITUMINOUS PAVEMENT SHALL BE MARKED WITH A BLUE 5 FOOT CARSONITE MARKER.

3 WATERMAIN VALVE CONNECTION
NTS



NOTES:
1. MANHOLE INVERT SHALL SLOPED TO PROVIDE A SMOOTH FLOW FROM INLET TO OUTLET
2. CONCRETE BASE SHALL BE 6" POURED IN PLACE OR 5" PRECAST SLAB.
3. CONCRETE ADJUSTING RINGS TO BE INSTALLED MAX.7–2" RINGS, MIN 2–2" RINGS
4. GROUT BETWEEN RINGS,SHIMS SHALL BE METAL, CONCRETE OR PLASTIC
5. INSPECTION OF MANHOLE REQUIRED BEFORE BACKFILLING
6. A 10 GAUGE SOLID COPPER TRACER WIRE IS REQUIRED WITH ALL STORM LINES.
7. CONDUCTIVITY IS REQUIRED ON ALL TRACER WIRE
8. STEPS ARE REQUIRED IF STRUCTURE FROM THE CASTING TO THE INVERT IS GREATER THAN 4 FEET
9. TRACER WIRES ARE TO END IN STRUCTURES, AT FINISHED GRADE ON ALL SERVICES AND STUBS

4 CATCH BASIN
NTS



LEGEND
- S — SANITARY SEWER
- ST — STORM SEWER
- W — WATERMAIN
- UT — UTILITY TRENCH
- ℄ — PROPERTY LINE
- ℄ — CENTERLINE OF STREET

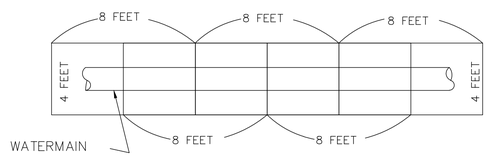
NOTES:
1. WATERMAIN SHALL BE LOCATED NORTH & EAST OF CENTERLINE
2. UTILITY TRENCH SHALL BE A COMMON BURY FOR ELECTRIC, GAS, COMMUNICATIONS & CABLE TV.
3. THE COMMON BURY TRENCH SHALL BE LOCATED IN THE CENTER OF THE BOULEVARD BETWEEN BACK OF CURB & PROPERTY LINE.
4. STORM SEWER SHALL BE LOCATED BENEATH THE CURB ON THE STREET SIDE OPPOSITE TO THE WATERMAIN.
5. SEE DETAILS FOR MINUMUM DEPTH LOCATIONS.

UTILITY LOCATIONS
N.T.S.

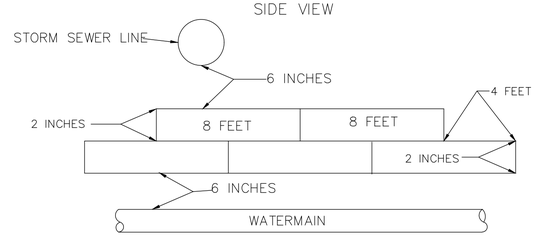
APPROVED		STANDARD DETAILS UTILITY LOCATIONS
DATE 7–96		CITY PLATE No. UTL–1

5 TYPICAL UTILITY LOCATIONS
NTS

TOP VIEW



SIDE VIEW



NOTES: 1) SHEETS ARE 2 INCHES BY 4 FEET BY 8 FEET
2) SURFACE PREPARATION SHALL BE SMOOTH AND ROCK FREE
3) JOINTS WILL BE OVERLAPPED BY 4 FEET
4) POLYSTYRENE INSULATION OR APPROVED EQUAL

6 UTILITY INSULATION
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CivilSite GROUP
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4931 W. 35th Street, Suite 200
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civilsitegroup.com 612-615-0060

kaas wilson architects

Inland Group

PROJECT
AFFINITY AT RAMSEY
RAMSEY, MN 55303

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120 W. CATALDO AVE. SUITE 100, SPOKANE, WA 99201

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CIVIL DETAILS

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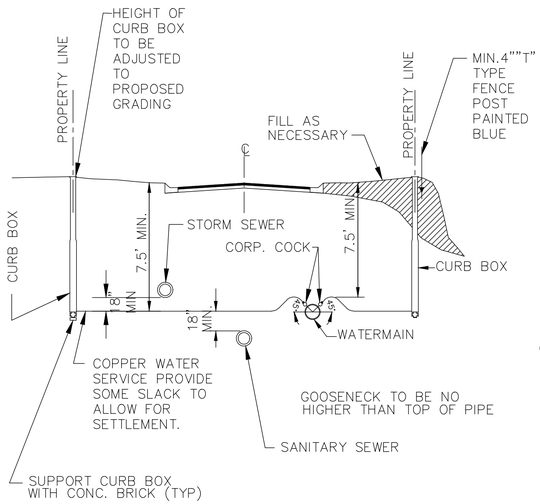
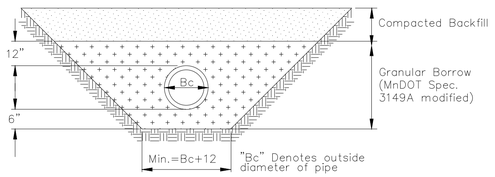


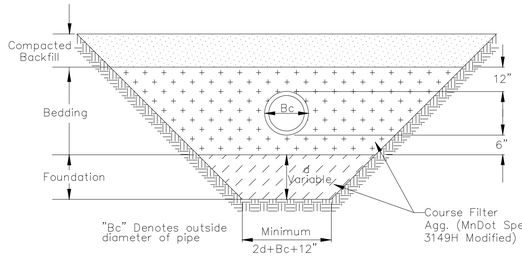
WATER SERVICE

NTS

1 WATERMAIN VALVE CONNECTION
NTS

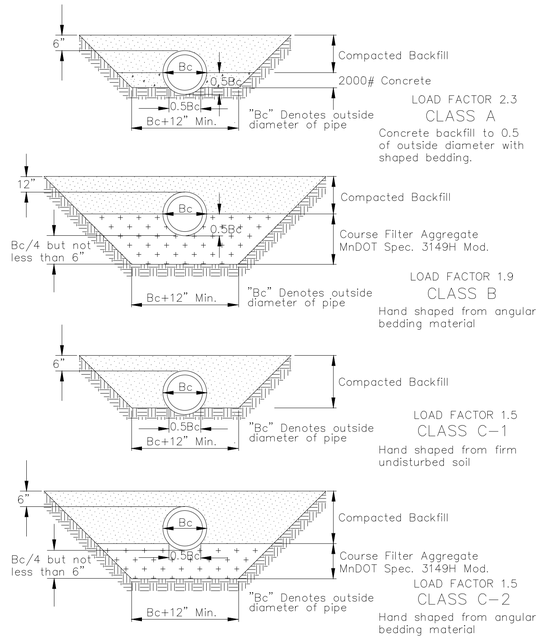


PIPE FOUNDATION & BEDDING IN GOOD SOILS

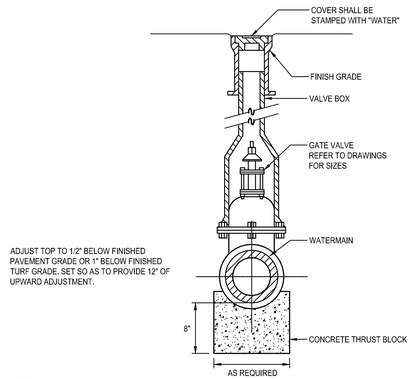


PIPE FOUNDATION & BEDDING IN POOR SOILS

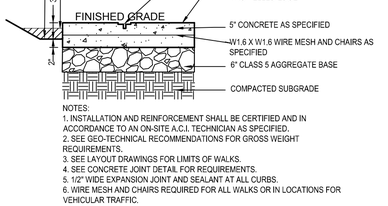
2 PIPE BEDDING - PVC
NTS



3 PIPE BEDDING - RCP & DIP
NTS

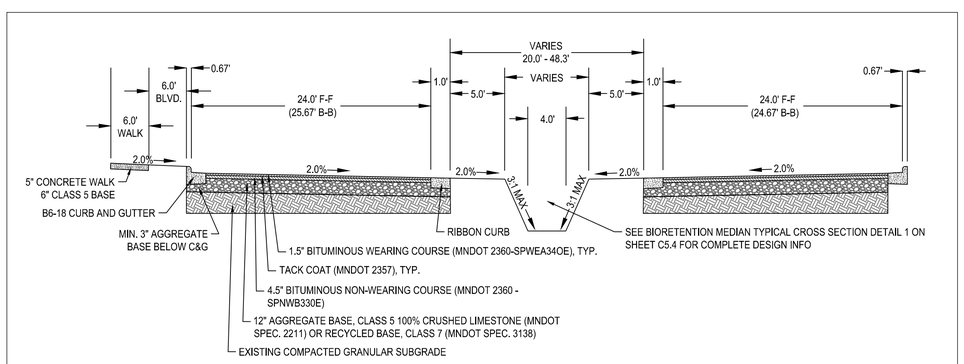


4 GATE VALVE BOX
NTS



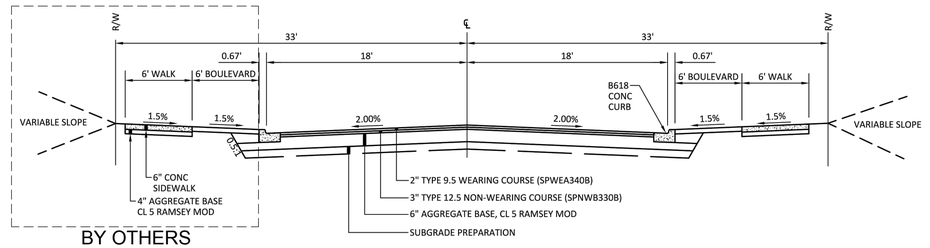
NOTES:
1. INSTALLATION AND REINFORCEMENT SHALL BE CERTIFIED AND IN ACCORDANCE TO AN ON-SITE A.C.I. TECHNICIAN AS SPECIFIED.
2. SEE GEO-TECHNICAL RECOMMENDATIONS FOR GROSS WEIGHT REQUIREMENTS.
3. SEE LAYOUT DRAWINGS FOR LIMITS OF WALKS.
4. SEE CONCRETE JOINT DETAIL FOR REQUIREMENTS.
5. 1/2" WIDE EXPANSION JOINT AND SEALANT AT ALL CURBS.
6. WIRE MESH AND CHAIRS REQUIRED FOR ALL WALKS OR IN LOCATIONS FOR VEHICULAR TRAFFIC.

5 LIGHT DUTY CONCRETE WALK/PAD
NTS



6 TYPICAL WEST RAMSEY PARKWAY STREET SECTION
NTS

SEGMENT C & E / WEST TOWN CENTER DRIVE & YOLITE STREET NW



BY OTHERS

7

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RAMSEY, MINNESOTA 55303
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Email: Ramsey@bolton-menk.com
www.bolton-menk.com

CENTER STREET AREA ANALYSIS
CITY OF RAMSEY, MINNESOTA
FIGURE 17 - TYPICAL SECTIONS
DECEMBER 2017

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Civil Engineering • Surveying • Landscape Architecture
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kaas wilson architects
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CIVIL DETAILS

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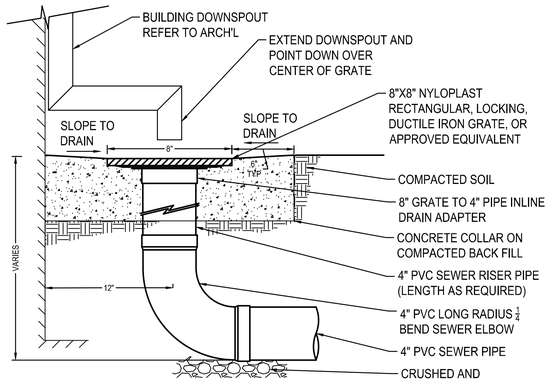
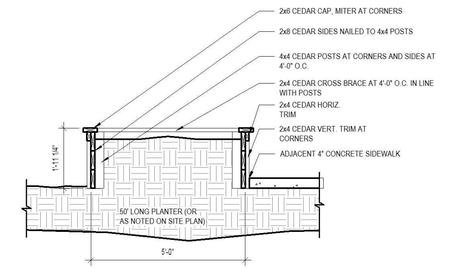
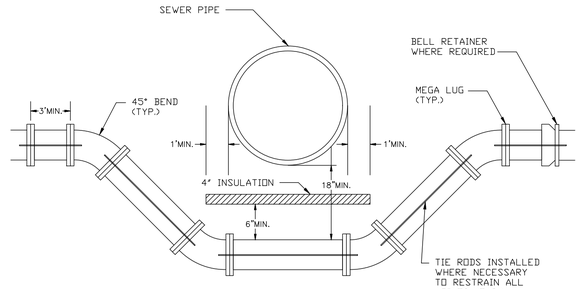


1 DOWNSPOUT TO PIPE CONNECTION
NTS

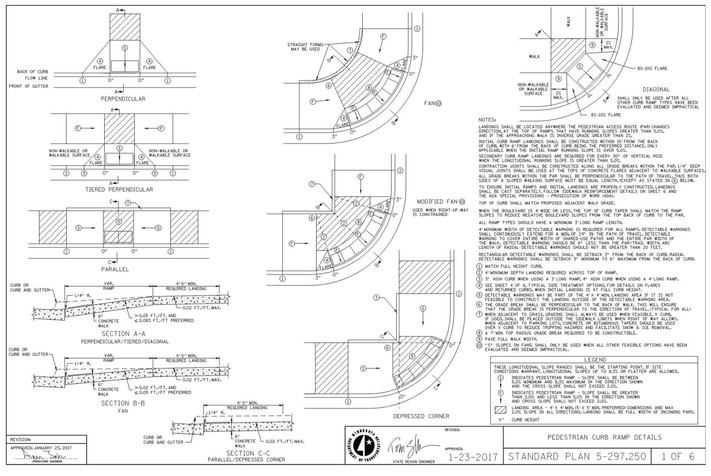


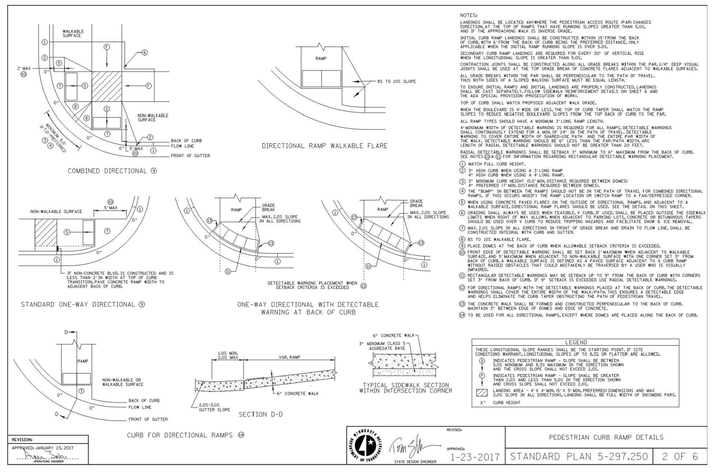
4 Site Detail - Planter Box 3
1/2" = 1'-0"

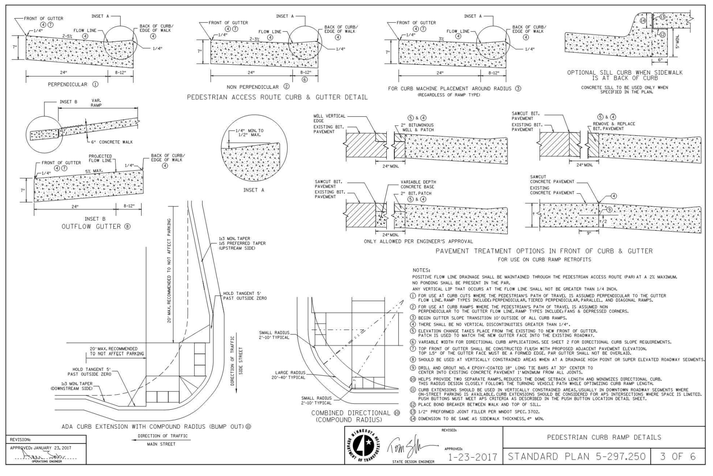


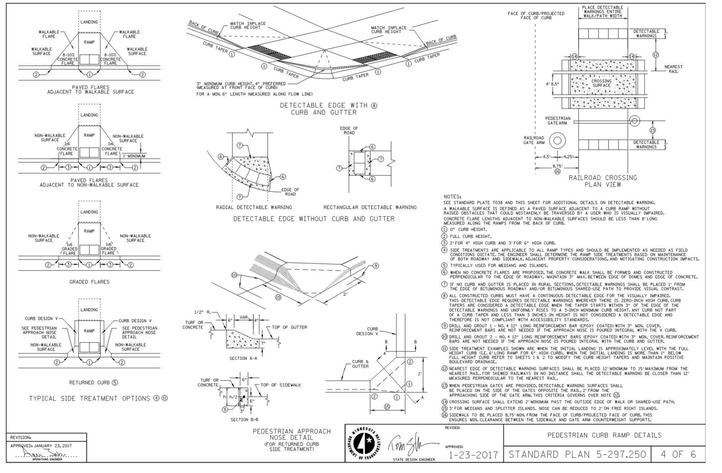
NOTE:
1. PROVIDE MEGA LUGS OR APPROVED EQUAL AT ALL JOINT'S ON BENDS AND AS SHOWN ON THIS STANDARD PLATE.
2. USE 2 - 3/4" DIAMETER TIE RODS. ALL TIE RODS TO BE COAL TAR COATED AFER INSTALLATION.
3. PROVIDE SAND CUSHION BETWEEN TOP OF WATERMAIN AND BOTTOM OF INSULATION, MIN. DIMENSIONS AS SHOWN ON THIS STANDARD PLATE.

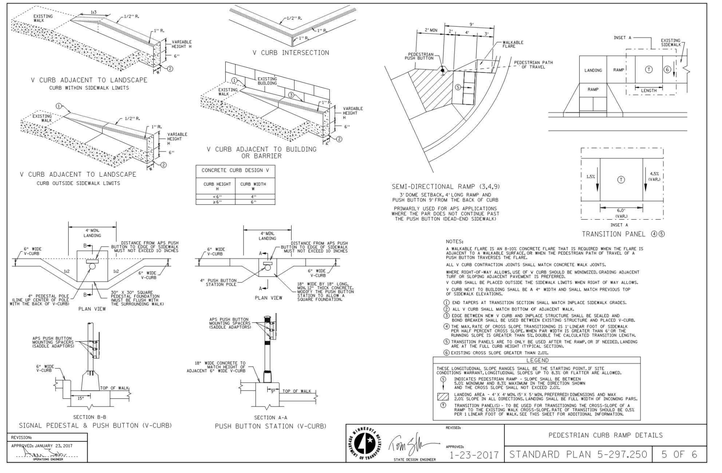
NOTE: SEE STANDARD PLATE WAT-5 FOR UTILITY INSULATION REQUIREMENTS.

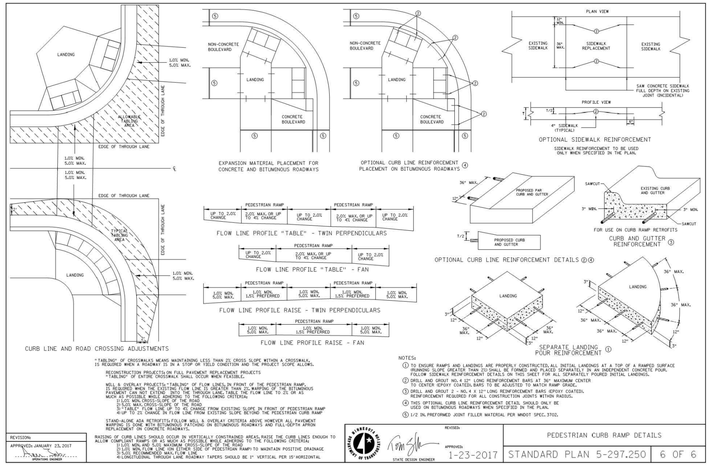












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Matthew R. Pavek
DATE 05/02/18 LICENSE NO. 44263

ISSUE/SUBMITTAL SUMMARY

DATE	DESCRIPTION
12/06/17	SITE PLAN SUBMITTAL
03/16/18	WATERSHED SUBMITTAL
03/30/18	CITY SUBMITTAL
05/02/18	CITY RESUBMITTAL

REVISION SUMMARY

DATE	DESCRIPTION

PROJECT NO.: 17226

CIVIL DETAILS

C5.3

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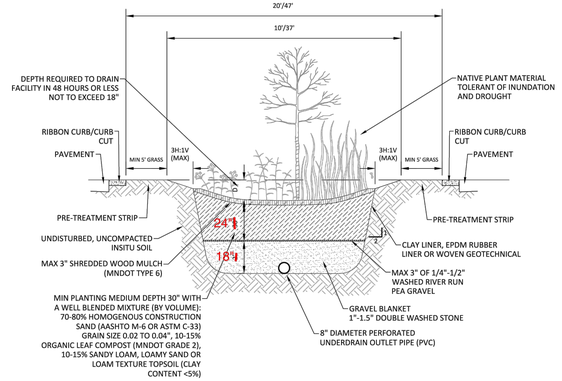


** DETAIL REVISED BY CSG. DEPTHS OF PLANTING MEDIUM AND GRAVEL BLANKET REVISED IN ORDER TO PROVIDE CONSTRUCTABILITY FOR THE STORMSEWER SYSTEM. REVISED DEPTHS WILL STILL PROVIDE ADEQUATE WATER TREATMENT

BIORETENTION FACILITY
CROSS-SECTION A-A
NOT TO SCALE

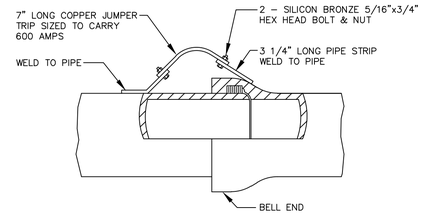
1 DEPRESSED MEDIAN TYPICAL CROSS SECTION
NTS

TABLE A
MODIFIED CLASS 5 SPECIFICATIONS
% PASSING

1"	100
3/4"	90 – 100
3/8"	50 – 80
No.4	35 – 70
No.10	20 – 60
No.40	10 – 35
No.200	5 – 10

NOTES:
1. THE AGGREGATE BASE CONSTRUCTION WILL BE ACCEPTED FOR PAYMENT IN ACCORDANCE WITH THE PROVISIONS IN TABLE A.
2. IF THE AGGREGATE BASE FAILS TO MEET THE REQUIREMENTS OF TABLE A THE MATERIAL CAN BE CORRECTED IN PLACE OR REMOVED AND REPLACED WITH MATERIAL THAT MEET THE REQUIREMENTS OF TABLE A.
3. IN THE EVENT THAT RECYCLED MATERIAL IS USE IT MUST MEET MNDOT REQUIREMENTS FOR RECYCLED BASE.

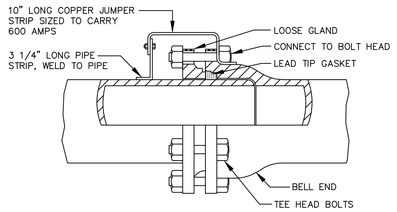
2 MODIFIED CLASS 5
NTS



PUSH ON JOINT

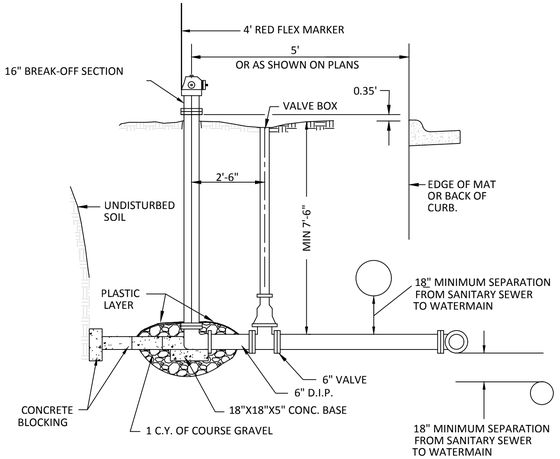
NOTE: DO NOT PASS CURRENT THROUGH PIPE UNLESS PIPE IS FULL OF WATER.

ALTERNATE METHOD BY AMERICAN CAST –IRON USING 4 COPPER CONTACT STRIPS IS AN APPROVED EQUAL TO ABOVE



MECHANICAL JOINT

3 JOIN CONNECTION
NTS

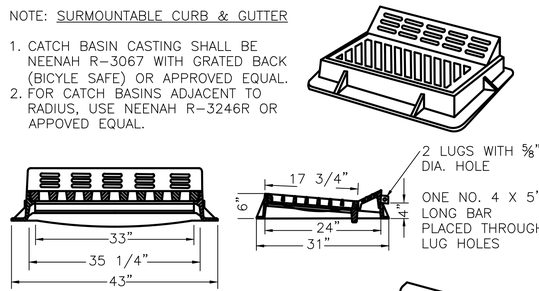


NOTES:
1. HYDRANT SHALL BE 5-1/4" WB67 WATEROUS PACER.
2. HYDRANTS TO BE ORDERED FOR 8'-0" BURY. IN AREAS OF EXTRA DEPTH ON THE WATERMAIN, HYDRANTS EXTENSIONS MAY BE REQUIRED.
3. HYDRANTS SHALL BE BLOCKED OR TIED TO THE TEE AT MAIN WITH 2-3/4" DIAMETER TIE RODS. ALL TIE RODS TO BE COAL TAR COATED AFTER INSTALLATION. RESTRAINED JOINT PIPE AND RETAINING GLANDS MAY BE USED.
4. TOP NUT OF HYDRANT 2.5' ABOVE TOP BACK OF CURB OR BITUMINOUS SURFACE.
5. HYDRANTS BURIED BELOW WATER TABLE, DRAIN HOLES NEED TO BE PLUGGED AND HYDRANT MARKED BY PAINTING 5" CAP YELLOW.
6. BRUSH PAINT ALL HYDRANTS AFTER INSTALLATION IS COMPLETE.

4 HYDRANT
NTS

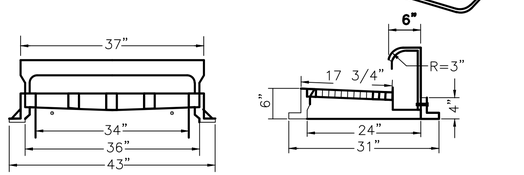
NOTE: SURMOUNTABLE CURB & GUTTER

1. CATCH BASIN CASTING SHALL BE NEENAH R–3067 WITH GRATED BACK (BICYLE SAFE) OR APPROVED EQUAL.
2. FOR CATCH BASINS ADJACENT TO RADIUS, USE NEENAH R–3246R OR APPOVED EQUAL.



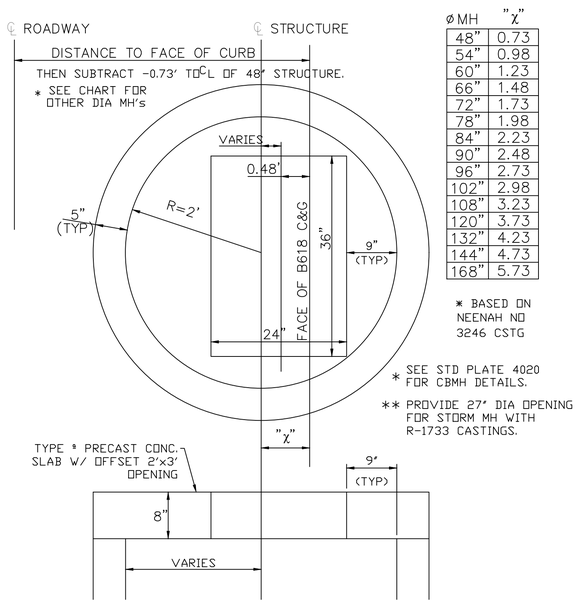
NOTE: B 618 CURB & GUTTER

1. CATCH BASIN CASTING SHALL BE NEENAH R–3246R OR APPROVED EQUAL.



STANDARD CATCHBASIN CASTING

5 CATCH BASIN CASTING
NTS



ØMH	"X"
48"	0.73
54"	0.98
60"	1.23
66"	1.48
72"	1.73
78"	1.98
84"	2.23
90"	2.48
96"	2.73
102"	2.98
108"	3.23
120"	3.73
132"	4.23
144"	4.73
168"	5.73

* BASED ON NEENAH NO 3246 CSTG

* SEE STD PLATE 4020 FOR CBMH DETAILS.

** PROVIDE 27' DIA OPENING FOR STORM MH WITH R-1733 CASTINGS.

6 SLAB TOP MANHOLE COVER
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Matthew R. Pavek
DATE 05/02/18 LICENSE NO. 44263

ISSUE/SUBMITTAL SUMMARY

DATE	DESCRIPTION
12/06/17	SITE PLAN SUBMITTAL
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03/30/18	CITY SUBMITTAL
05/02/18	CITY RESUBMITTAL

REVISION SUMMARY

DATE	DESCRIPTION

PROJECT NO.: 17226

CIVIL DETAILS

C5.4

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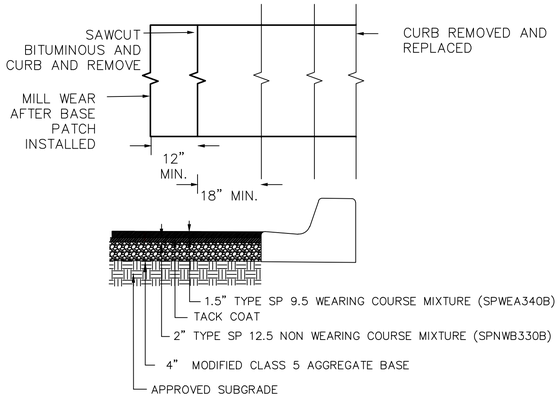
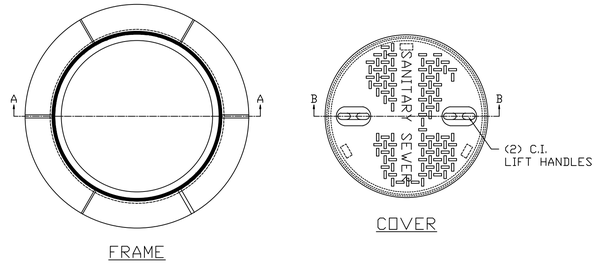
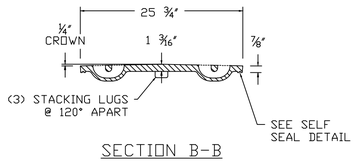
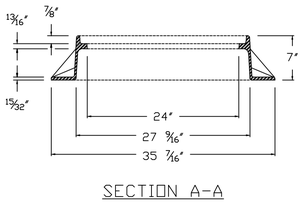


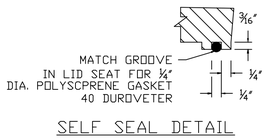
NOTES:
1. BITUMNOUS SHALL BE SAWCUT AND REMOVED AFTER CURB IS REPLACED.
2. CLASS 5 AND BITUMINOUS COURSES SHALL BE MECHNICALLY COMPACTED.
3. SEE CITY PLATE STR-26 FOR MODIFIED CLASS 5 SPECIFICATIONS.

1 WATERTIGHT CASTING
NTS









NOTE: NOT TO SCALE

2 WATERTIGHT CASTING
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Matthew R. Pavek
DATE 05/02/18 LICENSE NO. 44263

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REVISION SUMMARY

DATE	DESCRIPTION

PROJECT NO.: 17226

CIVIL DETAILS

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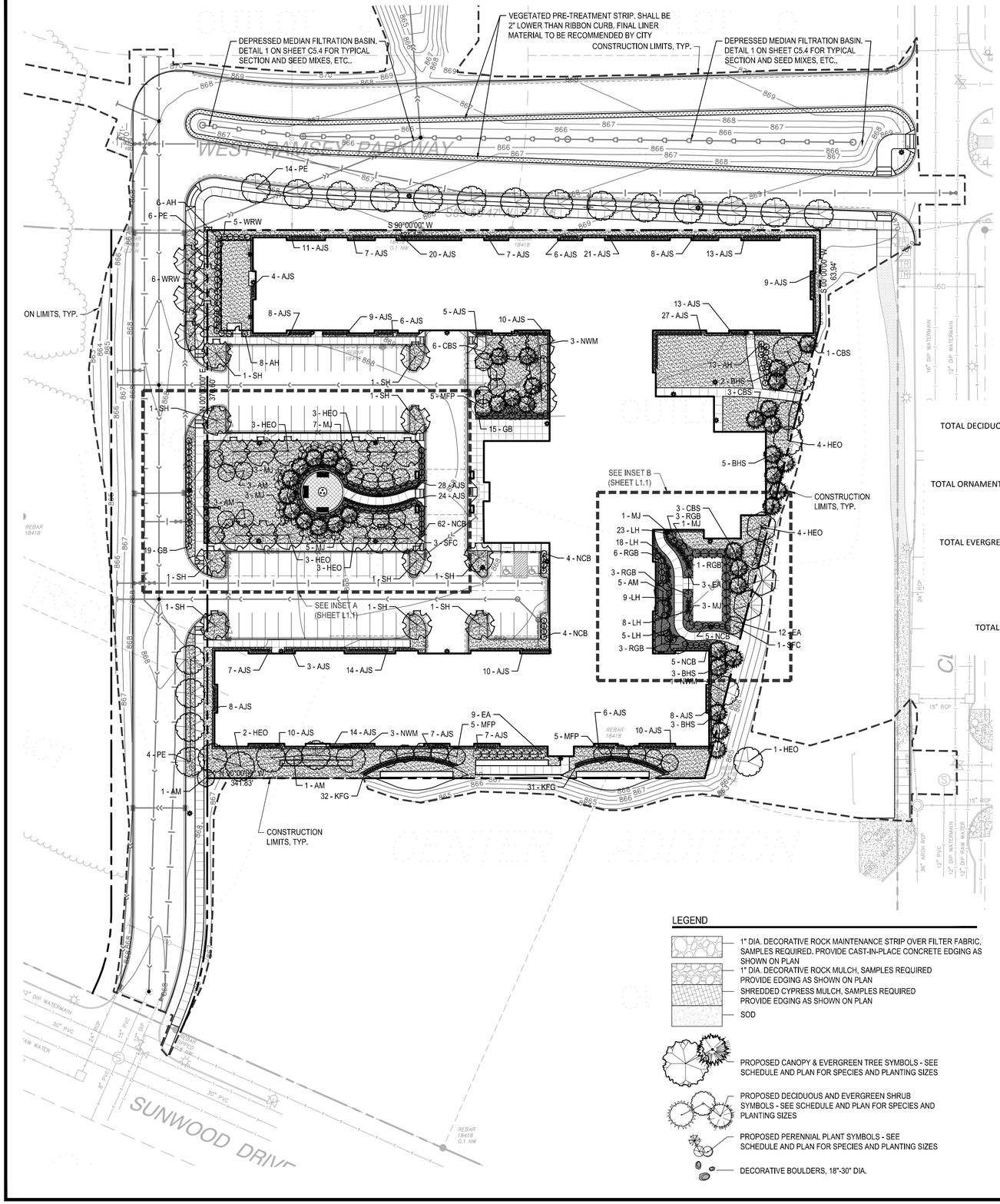

LANDSCAPE CALCULATIONS

PROPOSED LANDSCAPE:
1 TREE/ 1,000 SF OF "BUILDING FOOTPRINT"
64,432.0 SF / 1000 = 65 DECIDIOUS/EVERGREEN TREES REQUIRED
SEE PLANT SCHEDULE

1 TREE/ 35' OF PUBLIC ROAD FRONTAGE
832 SF / 35 = 24 TREES REQUIRED
SEE PLANT SCHEDULE

1 SHRUB/1000 SF OF "BUILDING FOOTPRINT"
64,432.0 SF / 300 = 215 SHRUBS REQUIRED
SEE PLANT SCHEDULE

CITY OF RAMSEY SITE SPECIFIC NOTES:

1. BOULEVARD TREES SHALL NOT HAVE BRANCHING BEGINNING AT A HEIGHT LESS THAN SIX (6) FEET FROM GRADE.
2. IRRIGATION SYSTEM SHALL HAVE A RAIN SENSOR AND AT LEAST ONE (1) WATER EFFICIENT TECHNOLOGY (E.G. SOIL MOISTURE SENSORS, SMART CONTROLLER, ET SENSOR, ETC.)
3. CITY REQUIRES A LANDSCAPE MAINTENANCE SURETY THAT ENSURES PLANTS ARE ALIVE AND HEALTHY AFTER TWO (2) YEARS.
4. ALL DISTURBED AREAS NOT OTHERWISE IMPROVED WITH IMPERVIOUS SURFACING SHALL RECEIVE FOUR (4) INCHES OF TOPSOIL MEETING THE CITY'S SPECIFICATION.

PLANT SCHEDULE - ENTIRE SITE

TOTAL DECIDUOUS TREES: 68
TOTAL ORNAMENTAL TREES: 36
TOTAL EVERGREEN TREES: 58
TOTAL SHRUBS: 215

SYM	QUANT.	COMMON NAME	BOTANICAL NAME	SIZE	ROOT	COMMENTS
		DECIDUOUS TREES				
NWM	13	NEW WORLD RED MAPLE	Acer rubrum 'Northwood'	2.5" CAL.	B&B	STRAIGHT LEADER. FULL FORM
SH	8	SKYLINE HONEYLOCUST	Gleditsia triacanthos 'Skycole'	2.5" CAL.	B&B	STRAIGHT LEADER. FULL FORM
PE	24	PRINCETON ELM	Ulmus americana 'Princeton'	2.5" CAL.	B&B	STRAIGHT LEADER. FULL FORM
HEO	23	SWAMP WHITE OAK	Quercus 'Bicolor'	2.5" CAL.	B&B	STRAIGHT LEADER. FULL FORM
		ORNAMENTAL TREES				
MFP	15	SHADBLOW SERVICEBERRY	Amelanchier canadensis	2" CAL.	B&B	STRAIGHT LEADER. FULL FORM
SFC	8	STARLITE FLOWERING CRAB	Malus 'Jetflite'	2" CAL.	B&B	STRAIGHT LEADER. FULL FORM
AM	13	AUTUMN BRILLIANCE SERVICEBERRY	Amelanchier x grandifolia	2" CAL.	B&B	STRAIGHT LEADER. FULL FORM
		EVERGREEN TREES				
BHS	31	BLACK HILLS SPRUCE	Picea glauca 'Densata'	6' HT.	B&B	STRAIGHT LEADER. FULL FORM
CBS	27	COLORADO SPRUCE	Picea pungens	6' HT.	B&B	STRAIGHT LEADER. FULL FORM
		SHRUBS - CONIFEROUS & EVERGREEN				
EA	24	EMERALD ARBORVITAE	Thuja occidentalis 'Smaragd'	24" HT.	CONT.	
MJ	23	MEDORA JUNIPER	Juniperus scopulorum	24" HT.	CONT.	
		SHRUBS - DECIDUOUS				
NCB	80	NORTHERN CHARM BOXWOOD	Buxus 'Wilson'	24" HT.	CONT.	
AH	27	ANNABELLE HYDRANGEA	Hydrangea arborescens 'Anabelle'	24" HT.	CONT.	
WRW	11	WINE AND ROSES WEIGELA	Weigela florida 'Wine and Roses'	24" HT.	CONT.	
GB	34	GLOSSY BLACK CHOKEBERRY	Aronia melonocarpa	24" HT.	CONT.	
RGB	16	ROUNDLEAF SERVICEBERRY	Amelanchier sanguinea	24" HT.	CONT.	
		PERENNIALS & GRASSES				
AJS	353	AUTUMN JOY SEDUM	Calamagrostis x acutiflora "Karl Foerster"	#1	CONT.	
LH	63	LOYALIST HOSTA	Hosta 'Loyalist'	#1	CONT.	
KFG	72	KARL FOERSTER FEATHER REED GRASS	Calmagrostis x acutiflora 'Karl Foester'	#1	CONT.	

LANDSCAPE NOTES:

1. WHERE SHOWN, SHRUB BEDS SHALL BE MULCHED WITH 4" DEPTH (MINIMUM AFTER INSTALLATION AND/OR TOP DRESSING OPERATIONS) OF SHREDDED CYPRESS MULCH.
2. ALL TREES SHALL BE MULCHED WITH SHREDDED CYPRESS MULCH TO OUTER EDGE OF SAUCER OR TO EDGE OF PLANTING BED, IF APPLICABLE. ALL MULCH SHALL BE KEPT WITHIN A MINIMUM OF 2" FROM TREE TRUNK.
3. IF SHOWN ON PLAN, RANDOM SIZED LIMESTONE BOULDERS COLOR AND SIZE TO COMPLIMENT NEW LANDSCAPING. OWNER TO APPROVE BOULDER SAMPLES PRIOR TO INSTALLATION.
4. PLANT MATERIALS SHALL CONFORM WITH THE AMERICAN ASSOCIATION OF NURSERYMEN STANDARDS AND SHALL BE OF HARDY STOCK, FREE FROM DISEASE, DAMAGE AND DISFIGURATION. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING PLUMPNESS OF PLANT MATERIAL FOR DURATION OF ACCEPTANCE PERIOD.
5. UPON DISCOVERY OF A DISCREPANCY BETWEEN THE QUANTITY OF PLANTS SHOWN ON THE SCHEDULE AND THE QUANTITY SHOWN ON THE PLAN, THE PLAN SHALL GOVERN.
6. CONDITION OF VEGETATION SHALL BE MONITORED BY THE LANDSCAPE ARCHITECT THROUGHOUT THE DURATION OF THE CONTRACT. LANDSCAPE MATERIALS PART OF THE CONTRACT SHALL BE WARRANTED FOR ONE (1) FULL GROWING SEASONS FROM SUBSTANTIAL COMPLETION DATE.
7. ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES SHALL RECEIVE 4" LAYER TOPSOIL LOAM AND SOD AS SPECIFIED UNLESS OTHERWISE NOTED ON THE DRAWINGS.
8. COORDINATE LOCATION OF VEGETATION WITH UNDERGROUND AND OVERHEAD UTILITIES, LIGHTING FIXTURES, DOORS AND WINDOWS. CONTRACTOR SHALL STAKE IN THE FIELD FINAL LOCATION OF TREES AND SHRUBS FOR REVIEW AND APPROVAL BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
9. ALL PLANT MATERIALS SHALL BE WATERED AND MAINTAINED UNTIL ACCEPTANCE.
10. REPAIR AT NO COST TO OWNER ALL DAMAGE RESULTING FROM LANDSCAPE CONTRACTOR'S ACTIVITIES.
11. SWEEP AND MAINTAIN ALL PAVED SURFACES FREE OF DEBRIS GENERATED FROM LANDSCAPE CONTRACTOR'S ACTIVITIES.
12. REPAIR AT NO COST TO THE OWNER IRRIGATION SYSTEM DAMAGED FROM LANDSCAPE CONSTRUCTION ACTIVITIES.
13. PROVIDE SITE WIDE IRRIGATION SYSTEM DESIGN AND INSTALLATION. SYSTEM SHALL BE FULLY PROGRAMMABLE AND CAPABLE OF ALTERNATE DATE WATERING. THE SYSTEM SHALL PROVIDE HEAD TO HEAD OR DRIP COVERAGE AND BE CAPABLE OF DELIVERING ONE INCH OF PRECIPITATION PER WEEK. SYSTEM SHALL EXTEND INTO THE PUBLIC RIGHT-OF-WAY TO THE EDGE OF PAVEMENT/BACK OF CURB.
14. CONTRACTOR SHALL SECURE APPROVAL OF PROPOSED IRRIGATION SYSTEM INCLUDING PRICING FROM OWNER, PRIOR TO INSTALLATION.

LEGEND

- 1" DIA. DECORATIVE ROCK MAINTENANCE STRIP OVER FILTER FABRIC, SAMPLES REQUIRED. PROVIDE CAST-IN-PLACE CONCRETE EDGING AS SHOWN ON PLAN
- 1" DIA. DECORATIVE ROCK MULCH, SAMPLES REQUIRED PROVIDE EDGING AS SHOWN ON PLAN
- SHREDDED CYPRESS MULCH, SAMPLES REQUIRED PROVIDE EDGING AS SHOWN ON PLAN
- SOD
- PROPOSED CANOPY & EVERGREEN TREE SYMBOLS - SEE SCHEDULE AND PLAN FOR SPECIES AND PLANTING SIZES
- PROPOSED DECIDUOUS AND EVERGREEN SHRUB SYMBOLS - SEE SCHEDULE AND PLAN FOR SPECIES AND PLANTING SIZES
- PROPOSED PERENNIAL PLANT SYMBOLS - SEE SCHEDULE AND PLAN FOR SPECIES AND PLANTING SIZES
- DECORATIVE BOULDERS, 18"-30" DIA.

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1" = 40'-0"
20'-0" 0 40'-0"

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Patrick J. Sarver
DATE 05/02/18 LICENSE NO. 24904

ISSUE/SUBMITTAL SUMMARY

DATE	DESCRIPTION
12/06/17	SITE PLAN SUBMITTAL
03/16/18	WATERSHED SUBMITTAL
03/30/18	CITY SUBMITTAL
05/02/18	CITY RESUBMITTAL

REVISION SUMMARY

DATE	DESCRIPTION
1/15/18	SITE PLAN SUBMITTAL R1

PROJECT NO.: 17226

LANDSCAPE PLAN

L1.0

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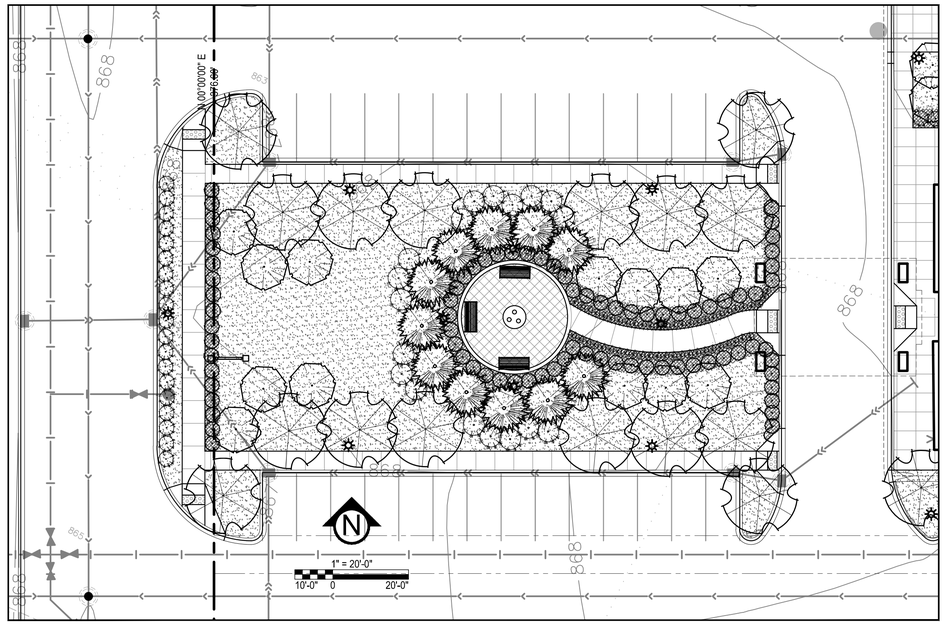
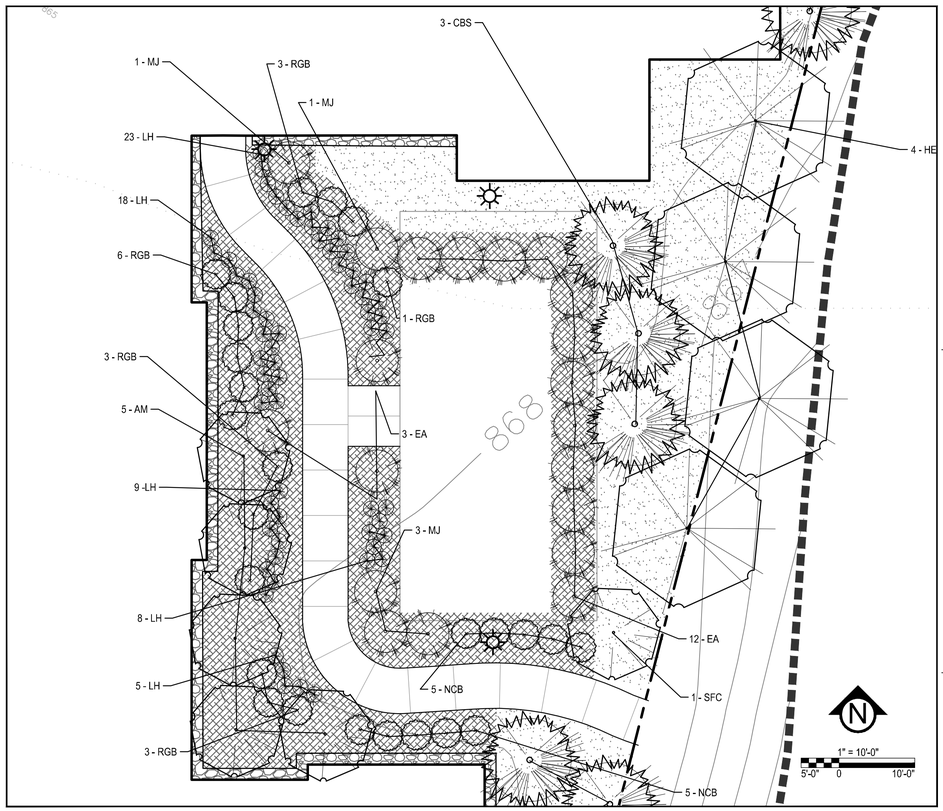
INSET A

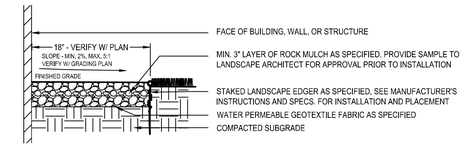


INSET B

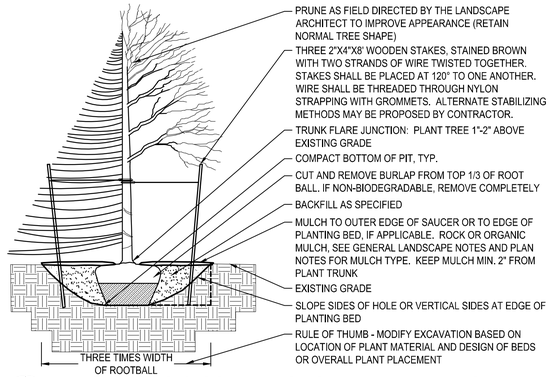


CITY NOTES:

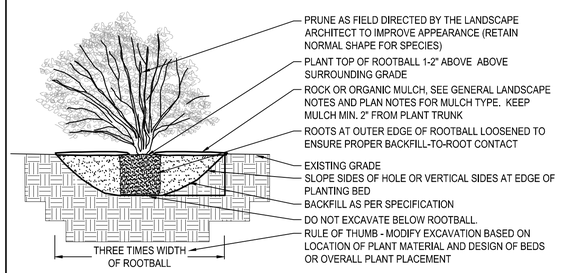
1. IRRIGATION SYSTEM MUST BE EQUIPPED WITH BOTH A RAIN SENSOR AND AT LEAST ONE WATER EFFICIENT TECHNOLOGY SUCH AS A SOIL MOISTURE SENSOR(S), SMART CONTROLLER, ET SENSOR, ETC.
2. CONTRACTOR SHALL ONLY PRUNE DEAD/BROKEM/MISSHAPEN BRANCHES.
3. ONCE THE LANDSCAPE PLAN IS APPROVED BY THE CITY THERE SHALL BE NO MODIFICATIONS TO THE PLANT SCHEDULE WITHOUT FIRST OBTAINING APPROVAL FROM THE CITY.
4. A "PRE-PLANTING MEETING WITH CITY STAFF SHALL OCCUR ON-SITE, PRIOR TO ANY INSTALLATION OF BOULEVARD TREES. CONTRACTOR SHALL CONTACT THE CITY AT LEAST FORTY-EIGHT (48) HOURS IN ADVANCE TO SCHEDULE THIS MEETING.
5. THE CITY REQUIRES A TWO (2) YEAR WARRANTY PERIOD FROM THE DATE THAT THE CITY ACCEPTS THE PLANTINGS AS INSTALLED PER THE APPROVED LANDSCAPING PLAN.
6. FOUR (4) INCHES OF TOPSOIL MEETING THE CITIES SPECIFICATION SHALL BE APPLIED TO ALL DISTURBED AREAS, INCLUDING BOULEVARDS, NOT OTHERWISE IMPROVED WITH IMPERVIOUS SURFACES (BUILDING, PARKING LOT,WALKWAYS, ETC.)



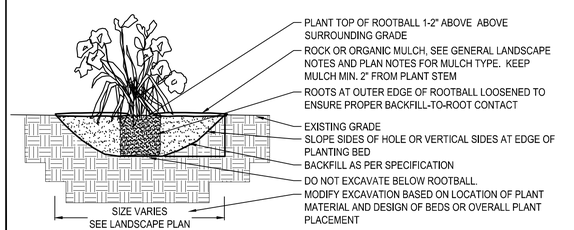
1 AGGREGATE MAINTANENCE STRIP
NTS



2 DECIDUOUS & CONIFEROUS TREE PLANTING
NTS



3 DECIDUOUS & CONIFEROUS SHRUB PLANTING
NTS



4 PERENNIAL BED PLANTING
NTS

IRRIGATION NOTES:

1. ENTIRE SITE SHALL BE FULLY IRRIGATED. THE CONTRACTOR SHALL SUBMIT IRRIGATION SHOP DRAWINGS FOR REVIEW AND APPROVAL BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
2. SEE MECHANICAL AND ELECTRICAL PLANS AND SPECIFICATIONS FOR IRRIGATION WATER, METER, AND POWER CONNECTIONS.
3. CONTRACTOR TO VERIFY LOCATION OF ALL UNDERGROUND/ABOVE GROUND FACILITIES PRIOR TO ANY EXCAVATION/INSTALLATION. ANY DAMAGE TO UNDERGROUND/ABOVE GROUND FACILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND COSTS ASSOCIATED WITH CORRECTING DAMAGES SHALL BE BORNE ENTIRELY BY THE CONTRACTOR.
4. SERVICE EQUIPMENT AND INSTALLATION SHALL BE PER LOCAL UTILITY COMPANY STANDARDS AND SHALL BE PER NATIONAL AND LOCAL CODES. EXACT LOCATION OF SERVICE EQUIPMENT SHALL BE COORDINATED WITH THE LANDSCAPE ARCHITECT OR EQUIVALENT AT THE JOB SITE.
5. CONTRACTOR SHALL COORDINATE WITH LOCAL UTILITY COMPANY FOR THE PROPOSED ELECTRICAL SERVICE AND METERING FACILITIES.
6. IRRIGATION WATER LINE CONNECTION SIZE IS 1-½" AT BUILDING. VERIFY WITH MECHANICAL PLANS.COVAGE.
7. ALL MAIN LINES SHALL BE 18" BELOW FINISHED GRADE.
8. ALL LATERAL LINES SHALL BE 12" BELLOW FINISHED GRADE.
9. ALL EXPOSED PVC RISERS, IF ANY, SHALL BE GRAY IN COLOR.
10. CONTRACTOR SHALL LAY ALL SLEEVES AND CONDUIT AT 2'-0" BELOW THE FINISHED GRADE OF THE TOP OF PAVEMENT. EXTEND SLEEVES TO 2'-0" BEYOND PAVEMENT.
11. CONTRACTOR SHALL MARK THE LOCATION OF ALL SLEEVES AND CONDUIT WITH THE SLEEVING MATERIAL "ELLED" TO 2'-0" ABOVE FINISHED GRADE AND CAPPED.
12. FABRICATE ALL PIPE TO MANUFACTURE'S SPECIFICATIONS WITH CLEAN AND SQUARE CUT JOINTS. USE QUALITY GRADE PRIMER AND SOLVENT CEMENT FORMULATED FOR INTENDED TYPE OF CONNECTION.
13. BACKFILL ALL TRENCHES WITH SOIL FREE OF SHARP OBJECTS AND DEBRIS.
14. ALL VALVE BOXES AND COVERS SHALL BE BLACK IN COLOR.
15. GROUP VALVE BOXES TOGETHER FOR EASE WHEN SERVICE IS REQUIRED. LOCATE IN PLANT BED AREAS WHENEVER POSSIBLE.
16. IRRIGATION CONTROLLER LOCATION SHALL BE VERIFIED ON-SITE WITH OWNER'S REPRESENTATIVE.
17. CONTROL WIRES: 14 GAUGE DIRECT BURIAL, SOLID COPPER IRRIGATION WIRE. RUN UNDER MAIN LINE. USE MOISTURE-PROOF SPLICES AND SPLICE ONLY AT VALVES OR PULL BOXES. RUN SEPARATE HOT AND COMMON WIRE TO EACH VALVE AND ONE (1) SPARE WIRE AND GROUND TO FURTHEST VALVE FROM CONTROLLER. LABEL OR COLOR CODE ALL WIRES.
18. AVOID OVER SPRAY ON BUILDINGS, PAVEMENT, WALLS AND ROADWAYS BY INDIVIDUALLY ADJUSTING RADIUS OR ARC ON SPRINKLER HEADS AND FLOW CONTROL ON AUTOMATIC VALVE.
19. ADJUST PRESSURE REGULATING VALVES FOR OPTIMUM PRESSURE ON SITE.
20. USE SCREENS ON ALL HEADS.
21. A SET OF AS-BUILT DRAWINGS SHALL BE MAINTAINED ON-SITE AT ALL TIMES IN AN UPDATED CONDITION.
22. ALL PIPE 3" AND OVER SHALL HAVE THRUST BLOCKING AT EACH TURN.
23. ALL AUTOMATIC REMOTE CONTROL VALVES WILL HAVE 3" MINIMUM DEPTH OF 3/4" WASHED GRAVEL UNDERNEATH VALVE AND VALVE BOX. GRAVEL SHALL EXTENT 3" BEYOND PERIMETER OF VALVE BOX.
24. THERE SHALL BE 3" MINIMUM SPACE BETWEEN BOTTOM OF VALVE BOX COVER AND TOP OF VALVE STRUCTURE.
25. IRRIGATION SYSTEM MUST BE EQUIPPED WITH BOTH A RAIN SENSOR AND AT LEAST ONE WATER EFFICIENT TECHNOLOGY SUCH AS A SOIL MOISTURE SENSOR(S), SMART CONTROLLER, ET SENSOR, ETC.

LEGEND

- SEED TYPE 1 - MNDOT 34-262 WET PRAIRIE, PER MNDOT SEEDING MANUAL SPECIFICATIONS (2014)
- SEED TYPE 2 - MNDOT 35-221 DRY PRAIRIE GENERAL, PER MNDOT SEEDING MANUAL SPECIFICATIONS (2014)
- 1" DIA. DECORATIVE ROCK MULCH OVER FILTER FABRIC, SAMPLES REQUIRED
- SHREDDED HARDWOOD MULCH OVER FILTER FABRIC, SAMPLES REQUIRED
- SOD
- PROPOSED CANOPY & EVERGREEN TREE SYMBOLS - SEE SCHEDULE AND PLAN FOR SPECIES AND PLANTING SIZES
- PROPOSED DECIDUOUS AND EVERGREEN SHRUB SYMBOLS - SEE SCHEDULE AND PLAN FOR SPECIES AND PLANTING SIZES
- PROPOSED PERENNIAL PLANT SYMBOLS - SEE SCHEDULE AND PLAN FOR SPECIES AND PLANTING SIZES
- DECORATIVE BOULDERS, 18"-30" DIA.

GOPHER STATE ONE CALL
WWW.GOPHERSTATEONECALL.ORG
(800) 252-1166 TOLL FREE
(651) 454-0002 LOCAL

CivilSite GROUP
Civil Engineering • Surveying • Landscape Architecture
4931 W. 35th Street, Suite 200
St. Louis Park, MN 55416
civilsitegroup.com 612-615-0060

kaas wilson architects

Inland Group

PROJECT
AFFINITY AT RAMSEY
RAMSEY, MN 55303

INLAND GROUP
120 W. CATALDO AVE. SUITE 100, SPOKANE, WA 99201

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.

Patrick J. Sarver
DATE 05/02/18 LICENSE NO. 24904

ISSUE/SUBMITTAL SUMMARY

DATE	DESCRIPTION
12/06/17	SITE PLAN SUBMITTAL
03/16/18	WATERSHED SUBMITTAL
03/30/18	CITY SUBMITTAL
05/02/18	CITY RESUBMITTAL

REVISION SUMMARY

DATE	DESCRIPTION
1/15/18	SITE PLAN SUBMITTAL R1

PROJECT NO.: 17226

LANDSCAPE PLAN NOTES & DETAILS

L1.1

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LIGHTING LEGEND

- RECESSED 2x4 FLUORESCENT FIXTURE
- RECESSED 2x2 FLUORESCENT FIXTURE
- INDICATES NIGHTLIGHT FIXTURE
- INDICATES EMERGENCY FIXTURE
- INDICATES EMERGENCY/NIGHTLIGHT FIXTURE
- SURFACE MOUNT 1x4 FLUORESCENT FIXTURE
- HIGH BAY 2x4 FLUORESCENT FIXTURE
- SURFACE WALL MOUNTED FLUORESCENT FIXTURE
- SURFACE CEILING MOUNT FLUORESCENT FIXTURE
- RECESSED DOWNLIGHT
- SURFACE WALL MOUNTED FIXTURE
- SURFACE MOUNTED FIXTURE
- SURFACE MOUNTED PENDANT FIXTURE
- OUTSIDE POLE-MOUNT LIGHT FIXTURE
- EXTERIOR GROUND MOUNTED LIGHT FIXTURE
- EMERGENCY LIGHTING FIXTURE
- LED EXIT SIGN-SHADED AREA INDICATES ILLUMINATED FACE
- LED EXIT/EMERGENCY SIGN-SHADED AREA INDICATES ILLUMINATED FACE
- EXTERIOR EMERGENCY EGRESS LIGHT

- $ — SINGLE POLE SWITCH
- $_2$ — 2-POLE SWITCH
- $_3$ — 3-WAY SWITCH
- $_4$ — 4-WAY SWITCH
- $_P$ — SWITCH W/PILOT LIGHT
- WSS — WALL MOUNTED SINGLE LEVEL OCCUPANCY SENSOR
- WDS — WALL MOUNTED DUAL LEVEL OCCUPANCY SENSOR
- CSS — CEILING MOUNTED OCCUPANCY SENSOR
- NL — INDICATES FIXTURE TO REMAIN ON FOR SECURITY PURPOSES
- A,B — INDICATES LIGHT FIXTURE SWITCH-LEGS
- P-X — INDICATES PANEL AND CIRCUIT NUMBER
- (1) — INDICATES LIGHT FIXTURE TYPE
- EX — INDICATES EXISTING FIXTURE
- RL — INDICATES RELOCATED FIXTURE
- TC — INDICATES FIXTURE CONTROLLED BY TIMECLOCK
- EM — INDICATES EMERGENCY FIXTURE

SITE NOTES

1. THE CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY FOR A COMPLETE AND FUNCTIONAL ELECTRICAL SYSTEM.
2. MATERIALS AND INSTALLATION SHALL COMPLY WITH CODES, UTILITY REQUIREMENTS, LAWS AND ORDINANCES OF FEDERAL, STATE, OSHA AND LOCAL GOVERNING BODIES HAVING JURISDICTION.
3. THE CONTRACTOR SHALL COMPLY WITH ALL CODES AND STANDARDS APPLICABLE TO THIS PROJECT THAT ARE LISTED BUT NOT LIMITED TO: NEC, NFPA, NEMA, ANSI, IES, IEEE, NFPA LIFE SAFETY 101, ASHRAE 90.1, IECC ENERGY CODE AND IBC BUILDING CODE.
4. PRIOR TO ANY DIGGING, TRENCHING, ETC. CONTACT ALL LOCAL UTILITY COMPANIES AND MUNICIPALITIES AND CONFIRM EXACT LOCATIONS OF ALL EXISTING UTILITIES.
5. MATERIALS AND EQUIPMENT SHALL BE LISTED AND/OR LABELED BY UL OR ANOTHER NATIONALLY RECOGNIZED TESTING LABORATORY.
6. ALL MATERIAL, EQUIPMENT, WIRING DEVICES, ETC SHALL BE NEW, UNLESS SPECIFICALLY NOTED AS EXISTING TO BE REUSED.
7. ALL MATERIALS AND EQUIPMENT SHALL BE STORED, HANDLED, ERECTED, INSTALLED, CONNECTED, CLEANED, ADJUSTED, TESTED, CONDITIONED AND PLACED IN SERVICE IN ACCORDANCE WITH THE MANUFACTURERS DIRECTIONS AND RECOMMENDATIONS.
8. COORDINATE THE UTILITY COMPANY SERVICE FEEDS AND INSTALLATION.
9. ALL POLE FIXTURES TO BE LOCATED 4' AWAY FROM EDGE OF CURB.
10. ALL EXTERIOR LIGHT FIXTURES TO BE CONNECTED TO A COMMON EQUIPMENT GROUND. USE #8, TYPE THHN.
11. ALL CIRCUIT TO BE PLACED IN 1" CONDUITS UNLESS OTHERWISE NOTED. CIRCUIT TO USE COPPER WIRE, TYPE THHN.
12. THE CONTROLLING LIGHTING CONTACTORS SHALL BE MOUNTED INSIDE THE BUILDING WITH TIME-CLOCK CONTROL & REMOTE PHOTOCELLS LOCATED ON THE EXTERIOR SIDE OF THE BUILDING WALL. INSTALL PHOTOCELLS AT LOCATIONS WHERE BUILDING OR OTHER OBSTRUCTIONS WILL NOT INTERFERE WITH THEIR PROPER OPERATION. FINAL BRANCH CIRCUIT SUPPLY CONNECTIONS WILL BE PROVIDED BY THE BUILDING ELECTRICAL CONTRACTORS.
13. MIN. BURIAL DEPTH FOR THE LIGHTING CIRCUIT SHALL BE 24". A SLIGHT DECREASE IN DEPTH IS ALLOWED WITHIN 10' OF THE POLES.
14. VERIFY CONSTRUCTION AREAS ON OTHER SITE PLANS FOR POTENTIAL OBSTACLES AND CONSTRUCTION LIMITS.

ELECTRIC GENERAL NOTES

1. ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH NATIONAL, STATE AND LOCAL ELECTRICAL CODES.
2. ENERGY CODE WILL BE IN ACCORDANCE WITH ASHRAE 90.1 2010.
3. COORDINATE WORK WITH ALL OTHER TRADES.
4. EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
5. ALL WIRING SHALL BE INSTALLED IN APPROVED RACEWAYS.
6. ALL EQUIPMENT GROUNDING CONDUCTORS SHALL BE INSTALLED AT ALL LOCATIONS.
7. ALL MEASUREMENTS TO TOP OF BOX. RECEPTACLES SHALL BE 20" A.F.F. SWITCHES SHALL BE 48" A.F.F.
8. GFI PROTECT ALL RECEPTACLES WITHIN 6' OF EVERY SINK.

LIGHTING FIXTURE SCHEDULE

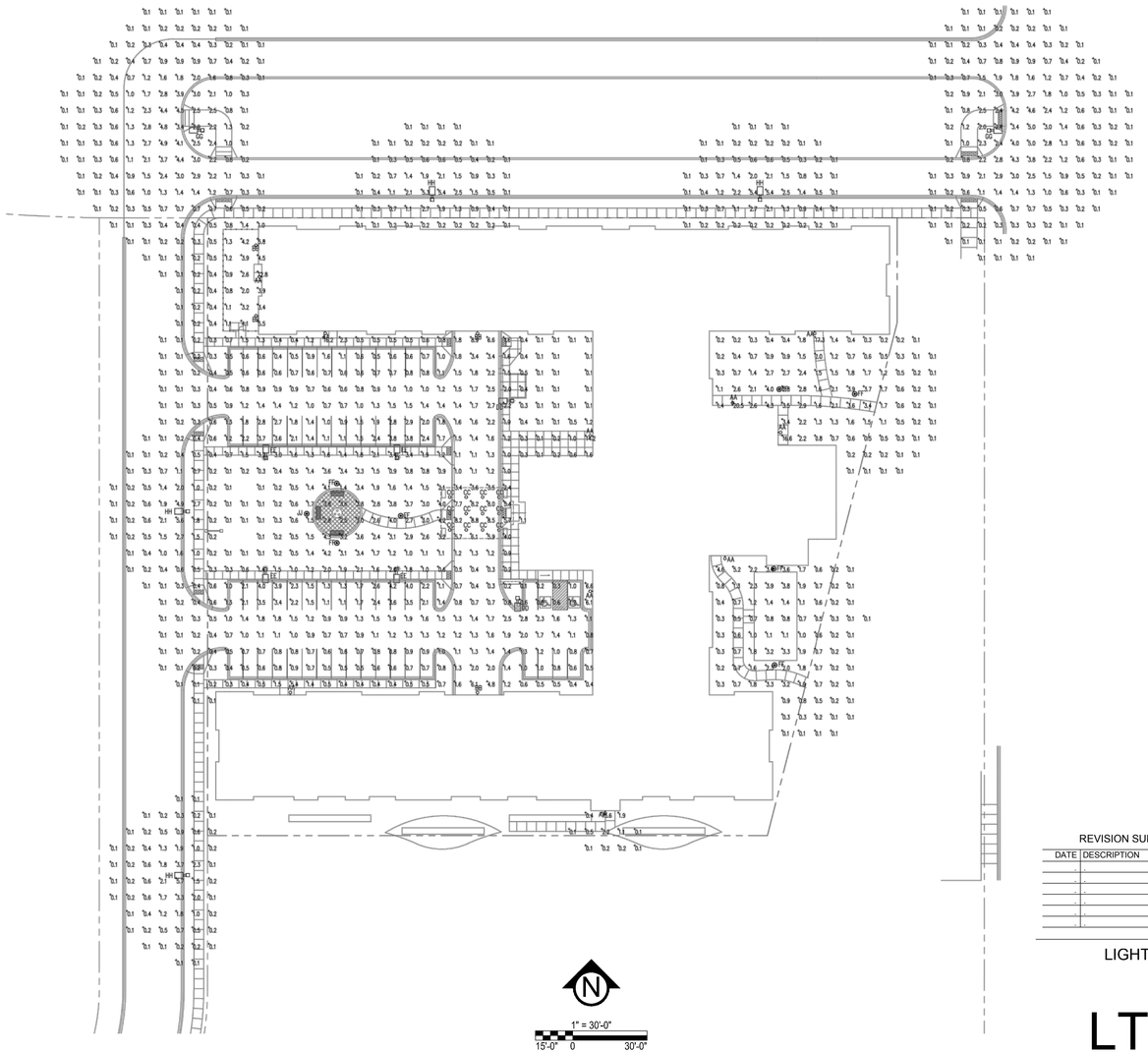
TYPE	LAMPS	WATTAGE	DESCRIPTION	NOTES
AA	LED	18	SMALL WALL PACK	–
BB	LED	26	MEDIUM WALL PACK	–
CC	LED	18	EXTERIOR RECESSED DOWNLIGHT	–
DD	LED	78	POLE MOUNT FIXTURE, TYPE III OPTICS, 20' POLE	–
EE	LED	78	POLE MOUNT FIXTURE, TYPE IV OPTICS, 20' POLE	–
FF	LED	70	DECORATIVE POST MOUNT FIXTURE, TYPE V OPTICS, 12' POLE	–
JJ	LED	18	FLAG LIGHT FIXTURE	–

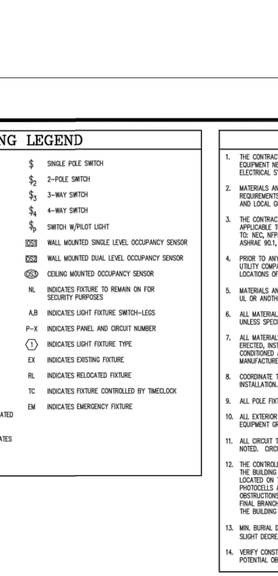
NOTES:

STREET LIGHTING FIXTURE SCHEDULE

TYPE	LAMPS	WATTAGE	DESCRIPTION	NOTES
GG	LED	125	POLE MOUNT FIXTURE, TYPE III OPTICS, 24' POLE	–
HH	LED	44	POLE MOUNT FIXTURE, TYPE II OPTICS, 14' POLE	–

NOTES:





NOTE:
1.) USE MFGR'S DIMENSIONS FOR EXACT ANCHOR BOLT AND COVER PLACEMENT.
2.) INSTALL INLINE FUSES IN EACH UNGROUNDED CONDUCTOR WITHIN POLE BASE HAND HOLE.
3.) TROWEL FINISH EXPOSED PORTION OF BASE TO REMOVE/COVER FORM MARKS.

2 / E1.1 POLE BASE DETAIL
NOT TO SCALE

N

1" = 30'-0"
15'-0" 0 30'-0"

REVISION SUMMARY

DATE	DESCRIPTION

LIGHTING PLAN
PAGE 1

LT1.0

DRAWN BY: DJK
CHECKED BY: TJA
DATE: 11/30/17
DWG FILE:
REF FILE:
JOB NUMBER:

REVISION: DESCRIPTION: NAME: DATE:

BERD! ELECTRIC LLC
3108 Southridge Drive St. Cloud, MN 56301
Phone: 320-656-0947
FAX: 320-656-0312

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3600 13th Street
Rosemount, MN 55068
Ph: 651-322-1370
Fx: 715-926-5445

A·C/a Auth Consulting/associates

PROJECT:
PROPOSED PROJECT FOR:
AFFINITY
RAMSEY, MN

ELECTRICAL SITE PLAN

TYPE AA

WPLED18

RAB LIGHTING

Ultra-high efficiency LED 18 Watt wallpack. Patent Pending thermal management system. 100,000 hour L70 lifespan. 5 Year Warranty.

Color: Bronze — Weight: 7.5 lbs

Project: Type:

Prepared By: Date:

Driver Info		LED Info	
Type:	Constant Current	Watts:	18W
120V:	0.17A	Color Temp:	5000K
208V:	0.11A	Color Accuracy:	66 CRI
240V:	0.09A	L70 Lifespan:	100000
277V:	0.08A	Lumens:	2,044
Input Watts:	20W	Efficacy:	103 LPW
Efficiency:	91%		

Technical Specifications

Listings

UL Listing: Suitable for wet locations. Suitable for mounting within 1.2m (4ft) of the ground.

IESNA LM-79 & LM-80 Testing: RAB LED luminaires have been tested by an independent laboratory in accordance with IESNA LM-79 and LM-80, and have received the Department of Energy "Lighting Facts" label.

Dark Sky Approved: The International Dark Sky Association has approved this product as a full cutoff, fully shielded luminaire.

DLC Listed: This product is on the Design Lights Consortium (DLC) Qualified Products List and is eligible for rebates from DLC Member Utilities. DLC Product Code: P0000175I

LED Characteristics

Lifespan: 100,000-hour LED lifespan based on IES LM-80 results and TM-21 calculations.

LED: Multi-chip, high-output, long-life LED

Color Consistency: 7-step MacAdam Ellipse binning to achieve consistent fixture-to-fixture color.

Color Stability: LED color temperature is warrantied to shift no more than 200K in CCT over a 5 year period.

Color Uniformity: RAB's range of CCT (Correlated Color Temperature) follows the guidelines of the American National Standard for Specifications for the Chromaticity of Solid State Lighting (SSL) Products, ANSI C78.377-2015.

Electrical

Driver: Constant Current, Class 2, 100-277V, 50/60 Hz, 4 kV surge protection, 500mA, 100-240VAC: 0.3-0.15A, 277VAC: 0.15A, Power Factor: 99%

THD: 10.3% at 120V

Construction

Maximum Ambient Temperature: Suitable for use in 104°F (40°C) ambient temperatures

Cold Weather Starting: The minimum starting temperature is -40°C/-40°F

Thermal Management: Superior heat sinking with external Air-Flow fins

Finish: Our environmentally friendly polyester powder coatings are formulated for high-durability and long-lasting color, and contain no VOC or toxic heavy metals.

Reflector: Semi-specular, vacuum-metalized polycarbonate

Gaskets: High-temperature silicone gaskets

Housing: Die-cast aluminum housing, lens frame and mounting arm

Mounting: Heavy-duty mounting arm with "O" ring seal & stainless steel screws

Green Technology: Mercury and UV free. RoHS compliant components. Polyester powder coat finish formulated without the use of VOC or toxic heavy metals.

Other

California Title 24: WPLED18 with available photocell options comply with 2013 California Title 24 building and electrical codes as a commercial outdoor non-pole-mounted fixture ≤ 30 Watts. Add /PC, /PC2, /PCS or /PCS2 to RAB catalog number to add a photocell.

For Use on LEED Buildings: IDA Dark Sky Approval means that this fixture can be used to achieve LEED Credits for Light Pollution Reduction.

Patents: The design of WPLED18 is protected by US patent D608,040, Canada patent 138280, and China patent CN301649064S.

Warranty: RAB warrants that our LED products will be free from defects in materials and workmanship for a period of five (5) years from the date of delivery to the end user, including coverage of light output, color stability, driver performance and fixture finish.

Country of Origin: Designed by RAB in New Jersey and assembled in Taiwan.

Trade Agreements Act Compliant: This product is a product of Taiwan and a "designated country" end product that complies with the Trade Agreements Act.

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WPLED18

RAB LIGHTING

Technical Specifications (continued)

Other

GSA Schedule: Suitable in accordance with FAR Subpart 25.4.

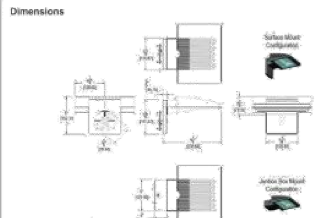
Optical

BUG Rating: B1 U0 G0

BUG Rating: B1 U0 G0

Replacement: Replaces 150W Metal Halide.

Dimensions



Features

- Ultra-high efficiency LED 18 Watt wallpack
- Replaces 150W Metal Halide Wallpacks
- 100,00-Hour LED Lifespan
- 5-Year Warranty

Ordering Matrix

Family	Watts	Color Temp	Finish	Photocell
WPLED	18 = 18W	Blank = 5000K (Cool) Y = 3000K (Warm) N = 4000K (Neutral)	Blank = Bronze W = White	Blank = No Photocell /PC = 120V Button /PC2 = 277V Button

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TYPE BB

WPLED26

RAB LIGHTING

LED 26W Wallpacks. Patent Pending thermal management system. 100,000 hour L70 lifespan. 5 Year Warranty.

Color: Bronze — Weight: 7.5 lbs

Project: Type:

Prepared By: Date:

Driver Info		LED Info	
Type:	Constant Current	Watts:	26W
120V:	0.26A	Color Temp:	5000K
208V:	0.16A	Color Accuracy:	70 CRI
240V:	0.14A	L70 Lifespan:	100000
277V:	0.12A	Lumens:	2,662
Input Watts:	30W	Efficacy:	90 LPW
Efficiency:	88%		

Technical Specifications

Listings

UL Listing: Suitable for wet locations. Suitable for mounting within 1.2m (4ft) of the ground.

Dark Sky Approved: The International Dark Sky Association has approved this product as a full cutoff, fully shielded luminaire.

DLC Listed: This product is on the Design Lights Consortium (DLC) Qualified Products List and is eligible for rebates from DLC Member Utilities. DLC Product Code: P0000170I

LED Characteristics

Lifespan: 100,000-hour LED lifespan based on IES LM-80 results and TM-21 calculations.

Color Consistency: 7-step MacAdam Ellipse binning to achieve consistent fixture-to-fixture color.

Color Stability: LED color temperature is warrantied to shift no more than 200K in CCT over a 5 year period.

Color Uniformity: RAB's range of CCT (Correlated Color Temperature) follows the guidelines of the American National Standard for Specifications for the Chromaticity of Solid State Lighting (SSL) Products, ANSI C78.377-2015.

Construction

IP Rating: Ingress Protection rating of IP66 for dust and water

Finish: Our environmentally friendly polyester powder coatings are formulated for high-durability and long-lasting color, and contains no VOC or toxic heavy metals.

Ambient Temperature: Suitable for use in 40°C ambient temperatures.

Cold Weather Starting: The minimum starting temperature is -40°C.

Thermal Management: Cast aluminum Thermal Management system for optimal heat sinking. The LPACK is designed for cool operation, most efficient output and maximum LED life by minimizing LED junction temperature.

Green Technology: Mercury and UV free. RoHS compliant components. Polyester powder coat finish formulated without the use of VOC or toxic heavy metals.

For use on LEED Buildings: IDA Dark Sky Approval means that this fixture can be used to achieve LEED Credits for Light Pollution Reduction.

Electrical

Driver: Multi-chip 26W high output long life LED Driver Constant Current, 720mA, Class 2, 6kV Surge Protection, 100V-277V, 50-60 Hz, 100-240V.4 Amps

THD: 7.5% at 120V, 11% at 277V

Other

California Title 24: See WPLED26/PC for a 2013 California Title 24 compliant model.

Patents: The WPLED design is protected by U.S. Pat. D634878, Canada Pat 134878, China Pat. CN301649064S.

Country of Origin: Designed by RAB in New Jersey and assembled in the USA by RAB's IBEW Local 3 workers.

Country of Origin: Designed by RAB in New Jersey and assembled in Taiwan.

Trade Agreements Act Compliant: This product is a product of Taiwan and a "designated country" end product that complies with the Trade Agreements Act.

GSA Schedule: Suitable in accordance with FAR Subpart 25.4.

Equivalency: Equivalent to 175W Metal Halide.

Optical

BUG Rating: B1 U0 G0

BUG Rating: B1 U0 G0

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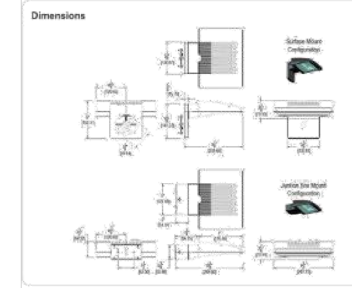
WPLED26

RAB LIGHTING

Dimensions



Features

- High performance LED light engine
- Maintains 70% of initial lumens at 100,000 hours
- Weatherproof high temperature silicone gaskets
- Superior heat sinking with die cast aluminum housing and external fins
- 100 up to 277 Volts
- 5-year warranty

Ordering Matrix

Family	Watts	Color Temp	Sensor	Finish	Photocell	Dimming
WPLED	26 = 26W	Blank = 5000K (Cool) Y = 3000K (Warm) N = 4000K (Neutral)	Blank = No Sensor MS = Mini Sensor	Blank = Bronze W = White	Blank = No Photocell /PC = 120V Button /PCS = 120V Swivel /PC2 = 277V Button	Blank = No Dimming /D10 = Dimmable

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TYPE CC

NORA | NSPEC®

ILLUMINATING THE FUTURE...SINCE 1989

Type ____ Project ____ Catalog No. ____ Lamp/Wattage ____

NLOPAC-R6509

AC Opal LED Series Surface Mounted LED — Source: 1050 Lumen / 15 Watt

PRODUCT DESCRIPTION

The AC Opal Series LED fixture is designed to surface mount over a standard J-Box The Opal produces even illumination. The low profile dimmable unit is cULus wet listed and produces 1050 lumens at 90+ CRI.

FEATURES

- High color rendition: 90+ CRI
- AC LED (No Driver)
- Dimmable
- Mount on standard 4" Junction box

CONSTRUCTION

One piece aluminum die formed housing and trim. Aluminum body dissipates heat and extends life.

OPTICS:

Nora specified and designed precision molded lens for optimal lumen output and even distribution.

ELECTRICAL SYSTEM

Input: 120V
Lumen Output: 1050lm
CRI: 90+
Power Consumption: 15 Watts
Dimmable
CCT: 2700K, 3000K, 4000K

MOUNTING:

Suitable for installation on most 4" square, octagon or round electrical junction boxes. Can be used with 4" fire-rated electrical junction boxes.

Optional Mounting: Can be mounted on 5" or 6" recessed housing using optional torsion spring kit. (See below)

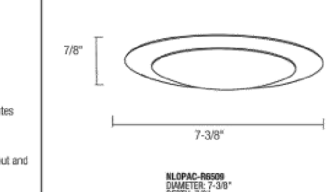
RATINGS:

IC rated when used with 4" electrical junction boxes rated for direct contact with insulation.

DIMMING:

Click Here or check complete dimmer list at www.NoraLighting.com in the "Compatibility" page under "Resources" tab.

DIMENSIONS



NLOPAC-R6509 DIAMETER: 7-3/8" DEPTH: 7/8"

LABELS & LISTINGS:

Energy Star Listed.
cULus Wet Listed.
5 Year Limited Warranty on the Opal Series.

Catalog No.	CCT	Finish
☐ NLOPAC-R6509	☐27A = 2700K ☐30A = 3000K ☐40A = 4000K	☐ W = White ☐ BZ = Bronze ☐ N = Natural Metal

NLOPAC-56RECKIT - Torsion spring kit for mounting to 5" or 6" recessed housing.

Example: NLOPAC-R650930AW - AC OPAL, 30K White

TYPE DD - SINGLE HEAD

ALED3T78

RAB LIGHTING

Specification grade area lights available with IES Type III distribution. For use for roadway, general parking and other area lighting applications where a larger pool of lighting is required. Patent pending thermal management system. 5 Year Warranty.

Color: Bronze — Weight: 30.4 lbs

Project: Type:

Prepared By: Date:

Driver Info		LED Info	
Type:	Constant Current	Watts:	78W
120V:	0.66A	Color Temp:	5100K
208V:	0.41A	Color Accuracy:	67 CRI
240V:	0.35A	L70 Lifespan:	100000
277V:	0.30A	Lumens:	6,911
Input Watts:	78W	Efficacy:	88 LPW
Efficiency:	99%		

Technical Specifications

Optical

Lifespan: 100,000-hour LED lifespan based on IES LM-80 results and TM-21 calculations.

BUG Rating: B1 U0 G2

Replacement: Replaces 250W Metal Halide.

Construction

IES Classification: The Type III distribution is ideal for roadway, general parking and other area lighting applications where a larger pool of lighting is required. It is intended to be located near the side of the area, allowing the light to project outward and fill the area.

IP Rating: Ingress Protection rating of IP66 for dust and water

Ambient Temperature: Suitable for use in 40°C ambient temperatures.

Cold Weather Starting: The minimum starting temperature is -40°C/-40°F

Thermal Management: Superior heat sinking with external Air-Flow fins.

Effective Projected Area: EPA = 0.75

Housing: Die cast aluminum housing, lens frame and mounting arm.

Reflector: Specular vacuum-metallized polycarbonate

Gaskets: High temperature silicone gaskets.

Finish: Our environmentally friendly polyester powder coatings are formulated for high-durability and long-lasting color, and contain no VOC or toxic heavy metals.

Green Technology: Mercury and UV free. RoHS compliant components. Polyester powder coat finish formulated without the use of VOC or toxic heavy metals.

For use on LEED Buildings: IDA Dark Sky Approval means that this fixture can be used to achieve LEED Credits for Light Pollution Reduction.

LED Characteristics

LEDs: Six (6) multi-chip, 13W, high-output, long-life LEDs.

Color Consistency: 3-step MacAdam Ellipse binning to achieve consistent fixture-to-fixture color.

Color Stability: LED color temperature is warrantied to shift no more than 200K in CCT over a 5 year period.

Color Uniformity: RAB's range of CCT (Correlated Color Temperature) follows the guidelines of the American National Standard for Specifications for the Chromaticity of Solid State Lighting (SSL) Products, ANSI C78.377-2015.

Electrical

Driver: Constant Current, Class 2, 2000mA, 100-277V, 50-60Hz, 1.1A, Power Factor 99%

THD: 5.3% at 120V, 13.3% at 277V

Surge Protection: 4kV

Surge Protector: ALED78 is available with a 6kV surge protector (SP6). SP6 available.

Listings

IESNA LM-79 & IESNA LM-80 Testing: RAB LED luminaires have been tested by an independent laboratory in accordance with IESNA LM-79 and 80, and have received the Department of Energy "Lighting Facts" label.

Dark Sky Approved: The International Dark Sky Association has approved this product as a full cutoff, fully shielded luminaire.

UL Listing: Suitable for wet locations as a downlight.

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ALED3T78

RAB LIGHTING

Technical Specifications (continued)

Listings

DLC Listed: This product is on the Design Lights Consortium (DLC) Qualified Products List and is eligible for rebates from DLC Member Utilities. DLC Product Code: P0000179S

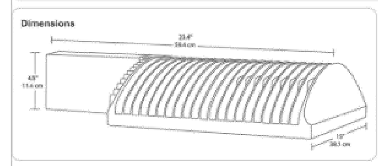
Other

California Title 24: See ALED3T78/D10, ALED3T78/BL, ALED3T78/PCS, ALED3T78/PCS2, or ALED3T78/PCT for a 2013 California Title 24 compliant product. Any additional component requirements will be listed in the Title 24 section under technical specifications on the product page.

Warranty: RAB warrants that our LED products will be free from defects in materials and workmanship for a period of five (5) years from the date of delivery to the end user, including coverage of light output, color stability, driver performance and fixture finish.

Patents: The ALED design is protected by patents in the U.S. Pat. 668,370, Canada Pat. 144956, China ZL201230100154.X, and Mexico Pat. 38423. Pending patents in Taiwan.

Dimensions



Features

- 66% energy cost savings vs. HID
- 100,000-hour LED lifespan
- Type III distribution
- 5-year warranty

Ordering Matrix

Family	Distribution	Watts	Mount	Color Temp	Finish	Voltage	Photocell	Dimming	Bi-Level
ALED	2T = Type II 3T = Type III 4T = Type IV	360 = 360W 260 = 260W 150 = 150W 125 = 125W 105 = 105W 78 = 78W	Blank = Arm SF = Slipfitter	Blank = 5000K (Cool) Y = 3000K (Warm) N = 4000K (Neutral)	Blank = Bronze W = White RG = Gray	Blank = 120-277V /480 = 480V (Only 360W & 260W)	Blank = No Photocell /PC = 120V Button /PC2 = 277V Button /PCS = 120V Swivel /PCS2 = 277V Swivel /PCT = 120-277V Twistlock /PCS4 = 480V Swivel /PCT4 = 480V Twistlock	Blank = No Dimming /D10 = Dimmable	Blank = No Bi-Level /BL = Bi-Level

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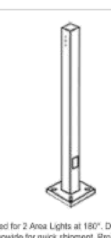
FIELD MODIFY TO 19' HEIGHT

PS4-11-20D2

RAB LIGHTING



Square steel poles drilled for 2 Area Lights at 180°. Designed for ground mounting. Poles are stocked nationwide for quick shipment. Protective packaging ensures poles arrive at the job site good as new.

Color: Bronze — Weight: 137.0 lbs

Project: Type:

Prepared By: Date:

Lamp Info		Ballast Info	
Type:	N/A	Type:	N/A
Watts:	0W	120V:	N/A
Shape/Size:	N/A	208V:	N/A
Base:	N/A	240V:	N/A
ANSI:	N/A	277V:	N/A
Hours:	N/A	Input Watts:	0W
Lamp Lumens:	N/A		
Efficacy:	N/A		

Technical Specifications

Listings

CSA Listed: Suitable for wet locations.

Construction

Shaft: 46,000 p.s.i. minimum yield.

Hand Holes: Reinforced with grounding lug and removable cover.

Base Plates: Slotted base plates 36,000 p.s.i.

Shipping Protection: All poles are shipped in individual corrugated cartons to prevent finish damage.

Color: Bronze powder coating.

Height: 20 FT.

Weight: 137 lbs.

Gauge: 11

Wall Thickness: 1/8".

Shaft Size: 4".

Hand Hole Dimensions: 3" x 5".

Bolt Circle: 8 1/2".

Base Dimension: 8".

Anchor Bolt: Galvanized anchor bolts and galvanized hardware and anchor bolt template. All bolts have a 3" hook.

Anchor Bolt Templates: WARNING Template must be printed on 11" x 17" sheet for actual size. CHECK SCALE BEFORE USING. Templates shipped with anchor bolts and available.

Pre-Shipped Anchor Bolts: Bolts can be pre-shipped upon request for additional freight charge.

MaxEPA's/Max Weights:
70MPH 8.3 ft_/240 lb
80MPH 5.6 ft_/165 lb
90MPH 3.6 ft_/110 lb
100MPH 2.2 ft_/75 lb
110MPH 1.0 ft_/45 lb
120MPH 0.2 ft_/20 lb

Other

Terms of Sale: Pole Terms of Sale is available.

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TYPE EE - SINGLE HEAD

ALED4T78

RAB LIGHTING

Specification grade area lights available in IES Type IV distributions. Suited for mounting on the sides of buildings and walls, and for illuminating the perimeter of parking areas. Patent pending management system. 5 Year Warranty.

Color: Bronze — Weight: 31.0 lbs

Project: Type:

Prepared By: Date:

Driver Info		LED Info	
Type:	Constant Current	Watts:	78W
120V:	0.66A	Color Temp:	5000K
208V:	0.41A	Color Accuracy:	71 CRI
240V:	0.35A	L70 Lifespan:	100000
277V:	0.30A	Lumens:	10157
Input Watts:	77W	Efficacy:	132 LPW
Efficiency:	N/A		

Technical Specifications

Listings

UL Listing: Suitable for wet locations as a downlight.

DLC Listed: This product is on the Design Lights Consortium (DLC) Qualified Products List and is eligible for rebates from DLC Member Utilities. DLC Product Code: P0000170X

IESNA LM-79 & IESNA LM-80 Testing: RAB LED luminaires have been tested by an independent laboratory in accordance with IESNA LM-79 and 80, and have received the Department of Energy "Lighting Facts" label.

Dark Sky Approved: The International Dark Sky Association has approved this product as a full cutoff, fully shielded luminaire.

LED Characteristics

Lifespan: 100,000-hour LED lifespan based on IES LM-80 results and TM-21 calculations.

LEDs: Six (6) multi-chip, 13W, high-output, long-life LEDs.

Color Consistency: 3-step MacAdam Ellipse binning to achieve consistent fixture-to-fixture color.

Color Stability: LED color temperature is warrantied to shift no more than 200K in CCT over a 5 year period.

Color Uniformity: RAB's range of CCT (Correlated Color Temperature) follows the guidelines of the American National Standard for Specifications for the Chromaticity of Solid State Lighting (SSL) Products, ANSI C78.377-2017.

Construction

IES Classification: The Type IV distribution (also known as a Forward Throw) is especially suited for mounting on the sides of buildings and walls, and for illuminating the perimeter of parking areas. It produces a semiCircular distribution with essentially the same candlepower at lateral angles from 90° to 270°.

Effective Projected Area: EPA = 0.75

Ambient Temperature: SuitableFor use in 40°C (104°F) ambient temperatures.

Cold Weather Starting: Minimum starting temperature is -40°C (-40°F)

Thermal Management: Superior heat sinking with external Air-Flow fins.

Housing: Die cast aluminum housing, lens frame and mounting arm.

IP Rating: Ingress Protection rating of IP66 for dust and water

Mounting: Universal mounting arm compatible for hole spacing patterns from 1" to 5 1/2" center to center. Round Pole Adaptor plate included as a standard. Easy slide and lock to mount fixture with ease.

Reflector: Specular vacuum-metallized polycarbonate

Gaskets: High temperature silicone gaskets.

Finish: Formulated for high-durability and long lasting color.

Green Technology: Mercury and UV free. RoHS compliant components. Polyester powder coat finish formulated without the use of VOC or toxic heavy metals.

For use on LEED Buildings: IDA Dark Sky Approval means that this fixture can be used to achieve LEED Credits for Light Pollution Reduction.

Electrical

Driver: Constant Current, Class 2, 2000mA, 100-277V, 50-60Hz, 1.1A, Power Factor 99%

THD: 5.1% at 120V, 13.2% at 277V

Surge Protection: 4kV

Surge Protector: ALED78 is available with a 6kV surge protector (SP6). SP6 available.

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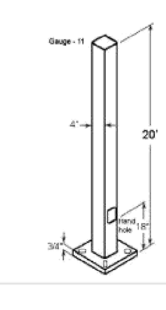
PS4-11-20D2

RAB LIGHTING

Dimensions



Features

- Designed for ground mounting
- Heavy duty TGIC polyester coating
- Reinforced hand holes with grounding lug and removable cover for easy wiring access
- Anchor Bolt Kit includes pole cap and base cover (sold separately)
- Custom manufactured for each application

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ALED4T78

RAB LIGHTING

Technical Specifications (continued)

Other

California Title 24: See ALED4T78/D10, ALED4T78/BL, ALED4T78/PCS, ALED4T78/PCS2, or ALED4T78/PCT for a 2013 California Title 24 compliant product. Any additional component requirements will be listed in the Title 24 section under technical specifications on the product page.

Compatibility: Compatible with Round Poles with a diameter of 2.5" to 6"

Warranty: RAB warrants that our LED products will be free from defects in materials and workmanship for a period of five (5) years from the date of delivery to the end user, including coverage of light output, color stability, driver performance and fixture finish.

Patents: The ALED design is protected by patents in the U.S. Pat. 668,370, Canada Pat. 144956, China ZL201230100154.X, and Mexico Pat. 38423. Pending patents in Taiwan.

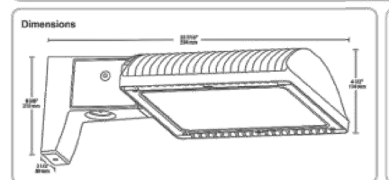
Replacement: Replaces 250W Metal Halide.

Buy American Act Compliance: RAB values USA manufacturing! Upon request, RAB may be able to manufacture this product to be compliant with the Buy American Act (BAA). Please contact customer service to request a quote for the product to be made BAA compliant.

Optical

BUG Rating: B1 U0 G2

Dimensions



Features

- 66% energy cost savings vs. HID
- 100,000-hour LED lifespan
- Type IV distribution
- 5-year warranty

Ordering Matrix

Family	Optics	Wattage	Mounting	Color Temp	Finish	Driver Options	Photocell Options
ALED	4T	78					
	2T = Type II 3T = Type III 4T = Type IV	50 = 50W 78 = 78W 105 = 105W 125 = 125W 150 = 150W	Blank = Pole mount SF = Slipfitter	Blank = 5000K (Cool) N = 4000K (Neutral) Y = 3000K (Warm)	Blank = Bronze RG = Roadway Gray W = White	Blank = 120-277V /480 = 480V (not available for 150W) /BL = Bi-Level /D10 = 0-10V Dimming	Blank = No Option /PC = 120V Button Photocell (Pole mount models only) /PC2 = 277V Button Photocell (Pole mount models only) /PCT = 120-277V Twistlock Photocell (Pole mount models only) /PCT4 = 480V Twistlock Photocell (Pole mount models only) /PCS = 120V Swivel Photocell /PCS2 = 277V Swivel Photocell /PCS4 = 480V Swivel Photocell /WS2 = Multi-Level Motion Sensor 20 ft. (Only available 0-10V dimming models) /WS4 = Multi-Level Motion Sensor 40 ft. (Only available 0-10V dimming models)

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FIELD MODIFY TO 19' HEIGHT

PS4-11-20D2

RAB LIGHTING

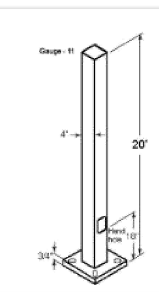
(Repeated PS4-11-20D2 page 1 of 2 cutsheet.)

Square steel poles drilled for 2 Area Lights at 180°. Designed for ground mounting. Poles are stocked nationwide for quick shipment. Protective packaging ensures poles arrive at the job site good as new.

PS4-11-20D2

RAB LIGHTING

Dimensions



Features

- Designed for ground mounting
- Heavy duty TGIC polyester coating
- Reinforced hand holes with grounding lug and removable cover for easy wiring access
- Anchor Bolt Kit includes pole cap and base cover (sold separately)
- Custom manufactured for each application

Type FF

LED LEXINGTON DECORATIVE AREA LIGHTS (XLXM3)

US patent 782456, 7952293, & 8432108 and US & Int'l. patents pending

SMARTTEC™ - LSI drivers feature integral sensor which reduces drive current, when ambient temperatures exceed rated temperature.

ENERGY SAVING CONTROL OPTIONS - DIM - 0-10 volt dimming enabled with controls by others. BLS - Bi-level switching responds to external line voltage signal from separate 120-277V controller or sensor (by others), with low light level decreased to 30% maximum drive current.

LEDS - Select high-brightness LEDs in Cool White (5000K) or Neutral White (4000K) color temperature, 70CRI.

DISTRIBUTION/PERFORMANCE - Types 3, FT, and 5. Exceptional uniformity creates bright environment at lower light levels. Improved backlight cutoff minimizes light trespass.

HOUSING - One piece housing/support frame is die-cast aluminum. Post top access cover and support arms are die-cast aluminum. Housing is sealed with an extruded silicone gasket.

HOUSING TOP CAP - Removable spun aluminum cap/driver enclosure is retained by captive stainless steel fasteners and safety cables. Housing and top cap interface is sealed with a one-piece extruded silicone gasket. Tool-less entry option is available.

SEALED OPTICAL UNIT - Lens is clear, flat tempered glass, sealed to aluminum optics housing. Pressure stabilizing breather allows super-tight protection while preventing temperature cycling from building up internal pressures and vacuums that can stress optical unit seals and components.

FASTENERS - All exposed fasteners are black oxide coated stainless steel. Internal fasteners are stainless steel or zinc electroplated steel.

ELECTRICAL - Terminal block for attachment of incoming primary wiring is supplied. Two-stage surge protection (including separate surge protection built into electronic driver) meets IEEE C62.41.2-2002, Location Category C. Available with universal voltage power supply 120-277VAC (50/60Hz input), 347VAC and 480VAC. Optional button-type photocells (PCI) are available in 120, 208, 240, 277 or 347 volt (supply voltage must be specified).

DRIVER - Available in Super Saver (SS) and High Output (HO) drive currents (Drive currents are factory programmed). State-of-the-art driver technology designed specifically for LSI LED light sources provides unsurpassed system efficiency. Components are fully encased in potting material for moisture resistance. Driver complies with IEC and FCC standards.

OPERATING TEMPERATURE - -40°C to +50°C (-40°F to +122°F).

MOUNTING - Post Top and Wall mounting available. Pole selection information shown under fixture drawings.

FINISH - Fixtures are finished with LSI's DuraGrip® polyester powder coat finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling.

WARRANTY - LSI LED fixtures carry a limited 5-year warranty.

PHOTOMETRICS - Please visit our web site at www.lsi-industries.com for detailed photometric data.

LISTING - Listed to U.S. and Canadian safety standards. Suitable for wet locations.

LIGHT OUTPUT - XLXM3						
POST TOP MOUNT		# of LEDS	Lumens (Nominal) Type 3	Type FT	Type 5	Watts (Nominal)
Cool White	SS	64	6180	5570	5240	70
	HO	64	8670	8270	7510	108
Neutral White	SS	64	5930	5350	5150	70
	HO	64	8250	7560	6890	108

LED Chips are frequently updated therefore values may increase.

Also available in traditional light sources

This product, or selected versions of this product, meet the standards listed below. Please consult factory for your specific requirements.

RoHS COMPLIANT — cUL US LISTED wet location — ARRA Funding Compliant

Fixtures comply with ANSI C136.31-2010 American National Standard for Roadway Lighting Equipment - Luminaire Vibration 1.5G requirements.

Project Name ____ Fixture Type ____ Catalog # ____

LED LEXINGTON DECORATIVE AREA LIGHTS (XLXM3)

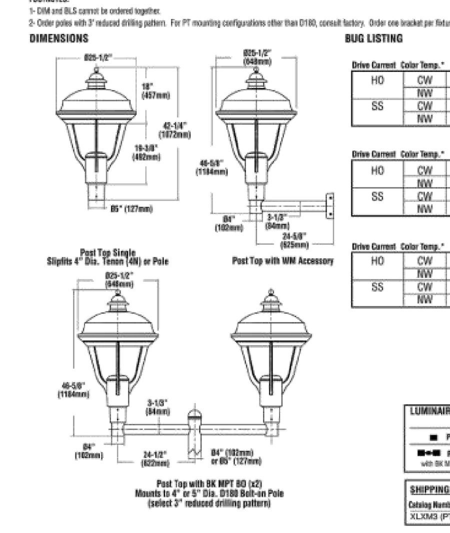
LUMINAIRE ORDERING INFORMATION

TYPICAL ORDER EXAMPLE: XLXM3 PT 5 LED HO CW UE MSV PCI120

Prefix	Mounting Style	Distribution	Light Source	Drive Current	Color Temperature	Input Voltage	Finish	Options
XLXM3	PT - Post Top	3 - Type III FT - Forward Throw 5 - Type V	LED	SS - Super Saver HO - High Output	CW - Cool White (5000K) NW - Neutral White (4000K)	UE - Universal Electronic (120-277V 50/60Hz) 347-480	BRZ - Bronze BLK - Black PLP - Platinum Plus WHT - White SVG - Satin Verde Green GPT - Graphite MSV - Metallic Silver	Button Type Photocells: PCI 120 - 120v; PCHV208-277 - 208-277v; PCI 347 - 347v; TE - Tool-less Entry; DIM - 0-10V Dimming (from external signal)[1]; BLS - Bi-level Switching (from external 120-277V signal)[1] Accessories: WM - Wall Mount; BK MPT BO4 - Medium Bolt on Bracket (for PT 180) For 4" Dia. Round Poles[2]; BK MPT BO5 - Medium Bolt on Bracket (for PT 180) For 5" Dia. Round Poles[2]

FOOTNOTES:
1- DIM and BLS cannot be ordered together.
2- Order poles with 3" reduced drilling pattern. For PT mounting configurations other than D180, consult factory. Order one bracket per fixture.

DIMENSIONS



BUG LISTING

XLXM3 PT - TYPE 3

Drive Current	Color Temp.*	Lumens	Watts	LER	BUG Rating
HO	CW	8669	108	80	B1-U2-G2
	NW	8251	108	76	B1-U2-G1
SS	CW	6184	70	88	B1-U1-G1
	NW	5930	70	85	B1-U1-G1

XLXM3 PT - TYPE 5

Drive Current	Color Temp.*	Lumens	Watts	LER	BUG Rating
HO	CW	7510	108	70	B3-U1-G1
	NW	6894	108	64	B3-U1-G1
SS	CW	5243	70	75	B2-U1-G1
	NW	5146	70	74	B2-U1-G1

XLXM3 PT - TYPE FT

Drive Current	Color Temp.*	Lumens	Watts	LER	BUG Rating
HO	CW	8271	107	77	B1-U2-G2
	NW	7560	108	70	B1-U2-G2
SS	CW	5572	70	80	B1-U2-G2
	NW	5354	70	76	B1-U2-G2

* Color Temperature: NW-4000K, CW-5000K

LUMINAIRE EPA CHART - Lexington	MOUNTING STYLE	
PT Single	PT	1.4
PT D180° with BK MPT BO (2)	PT	2.7

SHIPPING WEIGHTS - Lexington	
Catalog Number	Est. Weight (kg/lbs.)
XLXM3 (PT)	29/64

Project Name ____ Fixture Type ____ Catalog # ____

DRAWN BY:	DJK
CHECKED BY:	TJA
DATE:	11/30/17
DWG FILE:	
REF FILE:	
JOB NUMBER:	

REVISION DESCRIPTION:	NAME:	DATE:

BERD ELECTRIC LLC
3308 Southway Drive • St. Cloud, MN 56301
Phone: 320-656-0847
FAX: 320-656-0312

A·C/a Auth Consulting/associates
CORPORATE OFFICE
406 Technology Drive E.
Suite A
Menomonie, WI 54751
Tel 715-232-8490
Fax 715-232-8492
BRANCH OFFICE
2920 Enloe Street
Suite 101
Hudson, WI 54016
Tel 715-381-5277

PROJECT:
PROPOSED PROJECT FOR:
AFFINITY
RAMSEY, MN

LIGHTING CUTSHEETS

REVISION SUMMARY

DATE	DESCRIPTION
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.	.
.	.

LIGHTING PLAN
PAGE 2

LT1.1

STREET LIGHTING FIXTURES

TYPE GG #EANB0F3740
TYPE HH #EANB0A2740

Ordering Number Logic

Evolve™ LED Area Light N Series (EANB)

E A N B _ __ 7 __ _ _ ____ ___

- E = Evolve; A = Area Light; N = Housing Series
- B = Photometric Series "B"
- 0 = 120-277*; 1 = 120; 2 = 208; 3 = 240; 4 = 277; 5 = 480; D = 347; H = 347-480V*
  - *Not available with Fusing. Must choose a discreet voltage with F Option.
- 7 = 70 (min)
- 30 = 3000K*; 40 = 4000K; 50 = 5000K
  - ∞Select 3000K CCT for IDA Approved units
- 1 = None; A = ANSI C136.41 7-pin PE Receptacle #; D = ANSI C136.41 7-pin PE Receptacle with Shorting Cap #
  - # Order Dimming/Control PE as a separate item. See accessories section of this datasheet for ordering information.
- A = 10" Arm for Square Pole, supplied with leads; B = 10" Arm for Round Pole, supplied with leads; C = EXT Slipfitter 2" Pipe (2.378 in. OD) supplied with leads; D = 10" Arm for Round or Square poles, supplied with leads and additional hardware
- BLCK = Black; DKBZ = Dark Bronze; GRAY = Gray; WHTE = White
  - Contact manufacturer for other colors.
- D = External Dimming Leads Provided (0-10Volt Input); F = Fusing; L = Tool less entry; R = 10kV Enhanced Surge Protection; H = Motion Sensor *#; U = DALI Dimming+^; XXX = Special Options
  - *May only be selected in conjunction with A, B or D Mounting Arm.
  - # R & H options cannot be purchased together.
  - + Compatible with LightGrid 2.0 nodes.
  - ^ Not compatible at 347-480V, with A-level optical code, or with motion sensor control.

TYPE IV	A4	Asymmetric Forward	4,000	4,300	44	B1-U0-G1	B1-U0-G1	EANB_A4730__IES	EANB_A4740__IES	EANB_A4750__IES
	B4	Asymmetric Forward	5,800	6,200	58	B1-U0-G2	B1-U0-G2	EANB_B4730__IES	EANB_B4740__IES	EANB_B4750__IES
	C4	Asymmetric Forward	7,500	8,000	70	B1-U0-G2	B1-U0-G2	EANB_C4730__IES	EANB_C4740__IES	EANB_C4750__IES
	D4	Asymmetric Forward	9,200	9,800	89	B1-U0-G2	B2-U0-G2	EANB_D4730__IES	EANB_D4740__IES	EANB_D4750__IES
	E4	Asymmetric Forward	10,800	11,500	98	B2-U0-G2	B2-U0-G2	EANB_E4730__IES	EANB_E4740__IES	EANB_E4750__IES
	F4	Asymmetric Forward	12,900	13,700	125	B2-U0-G3	B2-U0-G3	EANB_F4730__IES	EANB_F4740__IES	EANB_F4750__IES
TYPE III	A3	Asymmetric Wide	4,300	4,600	44	B1-U0-G1	B1-U0-G1	EANB_A3730__IES	EANB_A3740__IES	EANB_A3750__IES
	B3	Asymmetric Wide	6,200	6,600	58	B1-U0-G1	B1-U0-G1	EANB_B3730__IES	EANB_B3740__IES	EANB_B3750__IES
	C3	Asymmetric Wide	8,100	8,600	70	B1-U0-G2	B1-U0-G2	EANB_C3730__IES	EANB_C3740__IES	EANB_C3750__IES
	D3	Asymmetric Wide	9,900	10,500	89	B2-U0-G2	B2-U0-G2	EANB_D3730__IES	EANB_D3740__IES	EANB_D3750__IES
	E3	Asymmetric Wide	11,600	12,400	98	B2-U0-G2	B2-U0-G2	EANB_E3730__IES	EANB_E3740__IES	EANB_E3750__IES
	F3	Asymmetric Wide	13,900	14,700	125	B2-U0-G2	B2-U0-G2	EANB_F3730__IES	EANB_F3740__IES	EANB_F3750__IES
TYPE II	A2	Asymmetric Narrow	4,200	4,500	44	B1-U0-G1	B1-U0-G1	EANB_A2730__IES	EANB_A2740__IES	EANB_A2750__IES
	B2	Asymmetric Narrow	6,100	6,500	58	B1-U0-G1	B1-U0-G1	EANB_B2730__IES	EANB_B2740__IES	EANB_B2750__IES
	C2	Asymmetric Narrow	7,900	8,400	70	B2-U0-G2	B2-U0-G2	EANB_C2730__IES	EANB_C2740__IES	EANB_C2750__IES
	D2	Asymmetric Narrow	9,700	10,300	89	B2-U0-G2	B2-U0-G2	EANB_D2730__IES	EANB_D2740__IES	EANB_D2750__IES
	E2	Asymmetric Narrow	11,400	12,100	98	B2-U0-G2	B2-U0-G2	EANB_E2730__IES	EANB_E2740__IES	EANB_E2750__IES
	F2	Asymmetric Narrow	13,600	14,400	125	B2-U0-G2	B2-U0-G2	EANB_F2730__IES	EANB_F2740__IES	EANB_F2750__IES

PE Accessories (to be ordered separately)

93029237	PED-MV-LED-7	ANSI C136.41 Dimming PE, 120-277V
93029238	PED-347-LED-7	ANSI C136.41 Dimming PE, 347V
93029239	PED-480-LED-7	ANSI C136.41 Dimming PE, 480V

28299	PECOTL	STANDARD 120-277V
28294	PECSTL	STANDARD 480V
80436	PECOTL	STANDARD 347V
73251	SCCL-PECTL	Shorting cap

HBLED18A

RAB

Bullet shape die cast aluminum flood with 18 Watt LED Light Engine. Comes with flood reflector installed.

Color: Bronze   Weight: 4.8 lbs

Project:	Type: JJ #HBLED18N
Prepared By:	Date:

Driver Info

Type:	Constant Current
120V:	0.17A
208V:	0.11A
240V:	0.10A
277V:	0.09A
Input Watts:	19W
Efficiency:	93%

LED Info

Watts:	18W
Color Temp:	5000K
Color Accuracy:	68 CRI
L70 Lifespan:	100000
Lumens:	2107
Efficacy:	109 LPW

Technical Specifications

Listings

UL Listing:
Suitable for wet locations. Suitable for ground mounting.

IESNA LM-79 & LM-80 Testing:
RAB LED luminaires have been tested by an independent laboratory in accordance with IESNA LM-79 and LM-80, and have received the Department of Energy "Lighting Facts" label.

Electrical

Driver:
Constant Current, 500mA, Class 2 120-277V with 4kV surge protection, 120V: 0.17A, 208V: 0.11A, 240V: 0.10A, 277V: 0.09A, 50/60Hz THD < 20%, Power Factor: 99.4%

THD:
10.3% at 120V

Optical

NEMA Type:
NEMA Beam Spread of 5H x 5V

LED Characteristics

LEDs:
Multi-chip, high-output, long-life LEDs

Color Stability:
RAB LEDs exceed industry standards for chromatic stability.

Color Uniformity:
RAB's range of CCT (Correlated Color Temperature) follows the guidelines of the American National Standard for Specifications for the Chromaticity of Solid State Lighting (SSL) Products, ANSI C78.377-2017.

Construction

Cold Weather Starting:
Minimum starting temperature is -40°C (-40°F)

Thermal Management:
Superior heat sinking with external Air-Flow fins

Housing:
Precision die-cast aluminum housing, lens frame and mounting arm

Reflector:
Semi-specular, vacuum-metalized polycarbonate

Mounting:
Heavy-duty mounting arm with "O" ring seal & stainless steel screws.

Gaskets:
High-temperature silicone gaskets

Finish:
Our environmentally friendly polyester powder coatings are formulated for high-durability and long-lasting color.

Green Technology:
Mercury and UV free. RoHS compliant components. Polyester powder coat finish formulated without the use of VOC or toxic heavy metals.

Other

Buy American Act Compliance:
RAB values USA manufacturing! Upon request, RAB may be able to manufacture this product to be compliant with the Buy American Act (BAA). Please contact customer service to request a quote for the product to be made BAA compliant.

Need help? Tech help line: (888) RAB-1000 Email: sales@rabweb.com Website: www.rabweb.com
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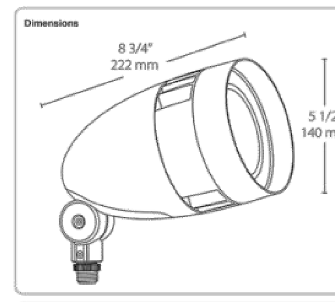
HBLED18A

RAB

Dimensions



Features

- 80% energy savings vs. PAR floods
- Mount on junction box or on RAB Mighty Post
- Patent-pending Air-Flow technology
- 5-year warranty

Ordering Matrix

Family	Wattage	Color Temp	Finish	Driver Options
HBLED	18		A	
	26 = 26W 18 = 18W	Blank = 5000K (Cool) N = 4000K (Neutral) Y = 3000K (Warm)	A = Bronze W = White B = Black VG = Verde Green	Blank = No Option /D10 = 0-10V Dimming /480 = 480V (Only available for 26W)

Need help? Tech help line: (888) RAB-1000 Email: sales@rabweb.com Website: www.rabweb.com
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REVISION DESCRIPTION:	NAME:	DATE:

DRAWN BY: DJK
CHECKED BY: TJA
DATE: 11/30/17
DWG FILE:
REF FILE:
JOB NUMBER:

BERD ELECTRIC LLC
3308 Southway Drive • St. Cloud, MN 56301
Phone: 320-656-0847
FAX: 320-656-0312

A·C/a
CORPORATE OFFICE
406 Technology Drive E.
Suite A
Menomonie, WI 54751
Tel 715-232-8490
Fax 715-232-8492

BRANCH OFFICE
2920 Enloe Street
Suite 101
Hudson, WI 54016
Tel 715-381-5277

Auth Consulting/associates

PROJECT:
PROPOSED PROJECT FOR:
AFFINITY
RAMSEY, MN

LIGHTING CUTSHEETS

REVISION SUMMARY

DATE	DESCRIPTION
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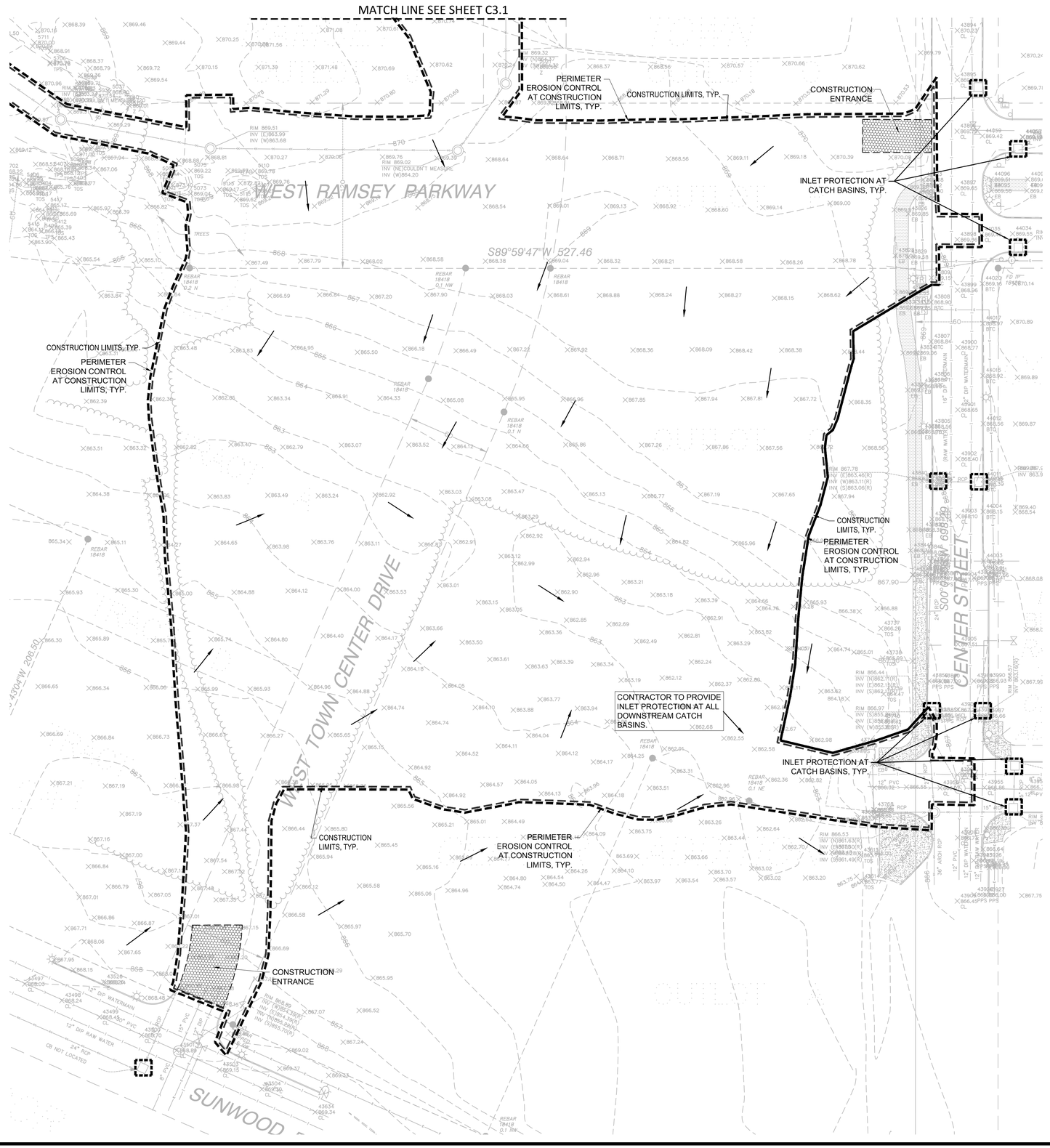
LIGHTING PLAN
PAGE 3

LT1.2



SWPPP NOTES:

1. THIS PROJECT IS GREATER THAN ONE ACRE AND WILL REQUIRE AN MPCA NPDES PERMIT. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY EROSION CONTROL PERMITS REQUIRED BY THE CITY.

2. SEE SHEETS SW1.0 - SW1.5 FOR ALL EROSION CONTROL NOTES, DESCRIPTIONS, AND PRACTICES.

3. SEE GRADING PLAN FOR ADDITIONAL GRADING AND EROSION CONTROL NOTES.

4. CONTRACTOR IS RESPONSIBLE FOR SWPPP IMPLEMENTATION, INSPECTIONS, AND COMPLIANCE WITH NPDES PERMIT.

CITY OF RAMSEY EROSION CONTROL NOTES:

1. RESERVED FOR CITY SPECIFIC EROSION CONTROL NOTES.

ALL SPECIFIED EROSION AND SEDIMENT CONTROL PRACTICES, AND MEASURES CONTAINED IN THIS SWPPP ARE THE MINIMUM REQUIREMENTS. ADDITIONAL PRACTICES MAY BE REQUIRED DURING THE COURSE OF CONSTRUCTION.

LEGEND:

- EX. 1' CONTOUR ELEVATION INTERVAL (1125)
- 1.0' CONTOUR ELEVATION INTERVAL (1137)
- DRAINAGE ARROW
- SILT FENCE / BIOROLL - GRADING LIMIT
- INLET PROTECTION
- STABILIZED CONSTRUCTION ENTRANCE
- EROSION CONTROL BLANKET

GOPHER STATE ONE CALL
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(800) 252-1166 TOLL FREE
(651) 454-0002 LOCAL

1" = 40'-0"
20'-0" 0 40'-0"

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4931 W. 35th Street, Suite 200
St. Louis Park, MN 55416
civilsitegroup.com 612-615-0060

kaas wilson architects

Inland Group

PROJECT
AFFINITY AT RAMSEY
RAMSEY, MN 55303

INLAND GROUP
120 W. CATALDO AVE. SUITE 100, SPOKANE, WA 99201

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. Pavek
DATE 05/02/18 LICENSE NO. 44263

ISSUE/SUBMITTAL SUMMARY

DATE	DESCRIPTION
12/06/17	SITE PLAN SUBMITTAL
03/16/18	WATERSHED SUBMITTAL
03/30/18	CITY SUBMITTAL
05/02/18	CITY RESUBMITTAL

REVISION SUMMARY

DATE	DESCRIPTION
1/15/18	SITE PLAN SUBMITTAL R1

PROJECT NO.: 17226

SWPPP - EXISTING CONDITIONS

SW1.0

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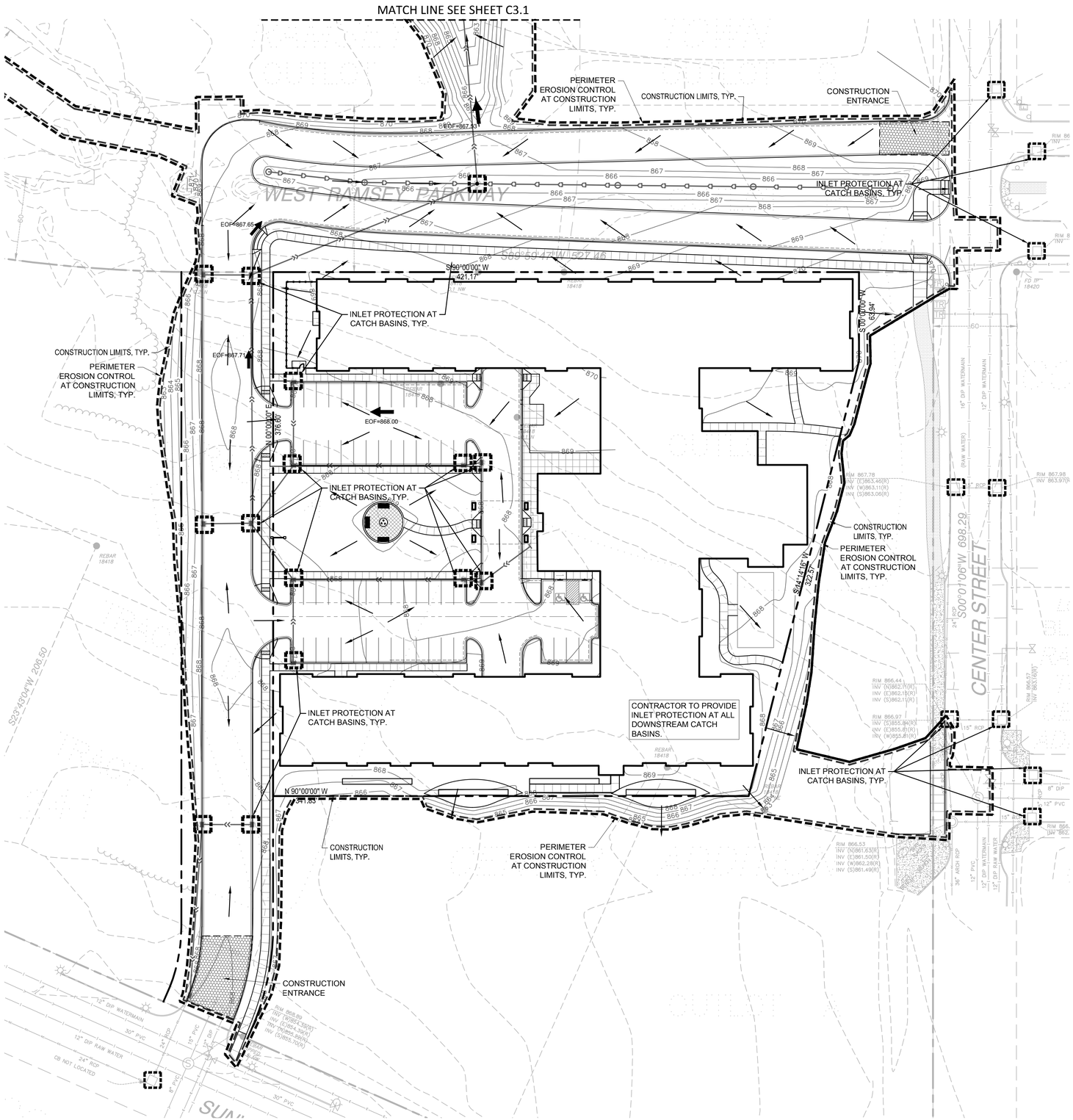

SWPPP NOTES:

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2. SEE SHEETS SW1.0 - SW1.5 FOR ALL EROSION CONTROL NOTES, DESCRIPTIONS, AND PRACTICES.

3. SEE GRADING PLAN FOR ADDITIONAL GRADING AND EROSION CONTROL NOTES.

4. CONTRACTOR IS RESPONSIBLE FOR SWPPP IMPLEMENTATION, INSPECTIONS, AND COMPLIANCE WITH NPDES PERMIT.

CITY OF RAMSEY EROSION CONTROL NOTES:

1. SEDIMENT BIO ROLLS MUST BE INSTALLED AS NOTED ON THE DETAIL. THE CITY WILL ORDER REPLACEMENT WITH SILT FENCE IF THE INSTALLATION IS NOT PER THE DETAIL, I.E., SUBGRADE NOT SCOOPED OUT, INADEQUATE STAKE SPACING OR MOVEMENT BY CONSTRUCTION EQUIPMENT.
2. A COPY OF THE INSPECTION REPORT TO BE EMAILED TO THE CITY AFTER EVERY WEEKLY INSPECTION OR POST RAINFALL INSPECTION
3. SUBMIT A FULL SET OF INSPECTION REPORTS PRIOR TO RECEIVING THE CERTIFICATE OF OCCUPANCY.
4. CONSTRACTOR SHALL HAVE A PICKUP TYPE SEWER ON SITE OR AVAILABLE WITHIN 3 HOURS AFTER NOTIFICATION FROM CITY THAT SWEEPING IS REQUIRED.
5. EXTERNAL WASHING OF TRUCKS AND CONSTRUCTION VEHICLES WILL NOT BE PERMITTED ON SITE. THE SITE IS IN THE DRINKING WATER PROTECTION AREA FOR THE MUNICIPAL WATER SUPPLY.
6. VEHICLE FUELING SHALL TKAE PLACE INSIDE AN IMPERMEABLE CONTAMINATION AREA.
7. THIS SITE IS IN THE DRINKING WATER SOURCE MANAGEMENT AREA AND INFILTRATION IS NOT PERMITTED. THE CITY IS DEVELOPING AN INFILTRATION MITIGATION AREA AND THE DEVELOPER WILL MAKE A FINANCIAL CONTRIBUTION TO THE INFILTRATION MITIGATION FUND.

ALL SPECIFIED EROSION AND SEDIMENT CONTROL PRACTICES, AND MEASURES CONTAINED IN THIS SWPPP ARE THE MINIMUM REQUIREMENTS. ADDITIONAL PRACTICES MAY BE REQUIRED DURING THE COURSE OF CONSTRUCTION.

LEGEND:

- EX. 1' CONTOUR ELEVATION INTERVAL (1125)
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kaas wilson architects

Inland Group

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AFFINITY AT RAMSEY
RAMSEY, MN 55303

INLAND GROUP
120 W. CATALDO AVE. SUITE 100, SPOKANE, WA 99201

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REVISION SUMMARY

DATE	DESCRIPTION
1/15/18	SITE PLAN SUBMITTAL R1

PROJECT NO.: 17226

SWPPP - PROPOSED CONDITIONS

SW1.1

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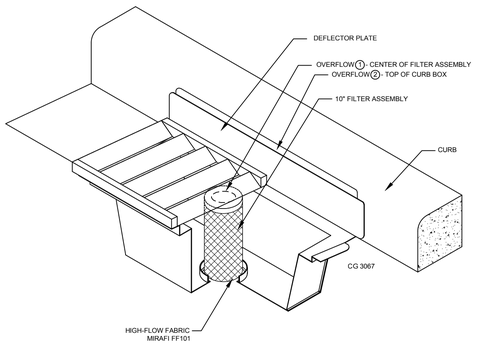
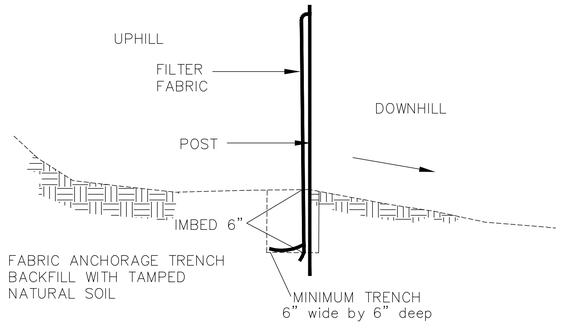


INLET PROTECTION – WIMCO OR EQUAL

N.T.S.

NOTE:
THIS INLET PROTECTION SHALL BE USED IMMEDIATELY FOLLOWING CURB & GUTTER CONSTRUCTION. INLET PROTECTION SHALL REMAIN INSTALLED AND MAINTAINTED UNTIL ALL HOME CONSTRUCTION IS COMPLETE.

1 CURB INLET PROTECTION
NTS

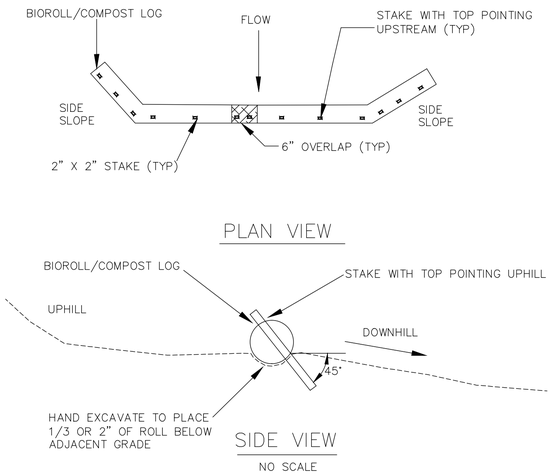


INSTALL AS PER FILTER FABRIC MANUFACTURER'S RECOMMENDATIONS

SILT FENCE DETAIL

NO SCALE

2 SILT FENCE
NTS



NO SCALE

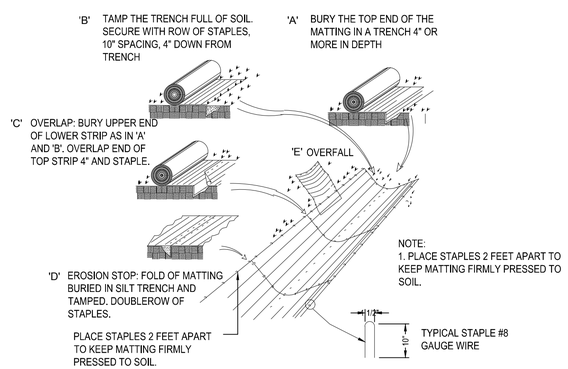
NOTE:
STAKE INTO GROUND WITH WOOD STAKES DRIVING STAKE 6" INTO GROUND AND PROTRUDING 2" ABOVE LOG
WOOD STAKES ARE A MINIMUM 0.5" X 2" X 16" AND PLACED EVERY 1' UNLESS PRECLUDED BY A ROCK
WHEN MORE THAN 1 BIOROLL/COMPOST LOG IS NEEDED, OVERLAP ENDS A MINIMUM OF 6" AND STAKE
WOOD STAKES ARE DRIVEN THROUGH BACK HALF OF BIOROLL OR COMPOST LOG AT 45° ANGLE WITH TOP OF STAKE POINTING UPHILL

3 SEDIMENT BIO-ROLL / COMPOST FILTER LOG
NTS

NOTE:
1. MINIMUM CONSTRUCTION ENTRANCE WIDTH EQUAL TO PROPOSED ROADWAY WIDTH.
2. WIDTH OF RADIUS AS REQUIRED TO ENSURE VEHICLES DO NOT TRACK ONTO PUBLIC ROAD.
3. MAINTAINENCE AS REQUIRED TO PREVENT TRACKING ONTO PUBLIC ROADS. THIS MAY REQUIRE TOP DRESSING WITH ADDITIONAL ROCK OR REMOVAL AND REINSTALLATION OF THE ENTRANCE AS NEEDED.

NOT TO SCALE

4 STABILIZED CONSTRUCTION ACCESS
NTS



5 EROSION BLANKET
NTS

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civilsitegroup.com 612-615-0060

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REVISION SUMMARY

DATE	DESCRIPTION

PROJECT NO.: 17226

SWPPP - DETAILS

SW1.2

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GENERAL SWPPP REQUIREMENTS AND NOTES:

THE CONTRACTOR AND ALL SUBCONTRACTORS INVOLVED WITH A CONSTRUCTION ACTIVITY THAT DISTURBS SITE SOIL OR WHO IMPLEMENT A POLLUTANT CONTROL MEASURE IDENTIFIED IN THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) MUST COMPLY WITH THE REQUIREMENTS OF THE NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT (DATED AUGUST 1, 2013 # MNR100001 PAGES 1-35) AND ANY LOCAL GOVERNING AGENCY HAVING JURISDICTION CONCERNING EROSION AND SEDIMENTATION CONTROL.

PART III STORMWATER DISCHARGE DESIGN REQUIREMENTS

SWPPP (PART III.A)

THE NATURE OF THIS PROJECT WILL BE CONSISTENT WITH WHAT IS REPRESENTED IN THIS SET OF CONSTRUCTION PLANS AND SPECIFICATIONS. SEE THE SWPPP PLAN SHEETS AND SWPPP NARRATIVE (ATTACHMENT A: CONSTRUCTION SWPPP TEMPLATE) FOR ADDITIONAL SITE SPECIFIC SWPPP INFORMATION. THE PLANS SHOW LOCATIONS AND TYPES OF ALL TEMPORARY AND PERMANENT EROSION PREVENTION AND SEDIMENT CONTROL BMP'S. STANDARD DETAILS ARE ATTACHED TO THIS SWPPP DOCUMENT.

THE INTENDED SEQUENCING OF MAJOR CONSTRUCTION ACTIVITIES IS AS FOLLOWS:
1. INSTALL STABILIZED ROCK CONSTRUCTION ENTRANCE
2. INSTALLATION OF SILT FENCE AROUND SITE
3. INSTALL ORANGE CONSTRUCTION FENCING AROUND INFILTRATION AREAS.
4. CLEAR AND GRUB FOR TEMPORARY SEDIMENT BASIN / POND INSTALL
5. CONSTRUCT TEMPORARY SEDIMENT BASIN / POND (PART III.B)
6. CLEAR AND GRUB REMAINDER OF SITE
7. STRIP AND STOCKPILE TOPSOIL
8. ROUGH GRADING OF SITE
9. STABILIZE DENUDED AREAS AND STOCKPILES
10. INSTALL SANITARY SEWER, WATER MAIN STORM SEWER AND SERVICES
11. INSTALL SILT FENCE / INLET PROTECTION AROUND CB'S
12. INSTALL STREET SECTION
13. INSTALL CURB AND GUTTER
14. BITUMINOUS ON STREETS
15. FINAL GRADE BOULEVARD, INSTALL SEED AND MULCH
16. REMOVE ACCUMULATED SEDIMENT FROM BASIN / POND
17. FINAL GRADE POND / INFILTRATION BASINS (DO NOT COMPACT SOILS IN INFILTRATION AREAS.) (PART III.C)
18. WHEN ALL CONSTRUCTION ACTIVITY IS COMPLETE AND THE SITE IS STABILIZED BY EITHER SEED OR SOD/LANDSCAPING, REMOVE SILT FENCE AND RESEED ANY AREAS DISTURBED BY THE REMOVAL.

RECORDS RETENTION (PART III.E):

THE SWPPP (ORIGINAL OR COPIES) INCLUDING, ALL CHANGES TO IT, AND INSPECTIONS AND MAINTENANCE RECORDS MUST BE KEPT AT THE SITE DURING CONSTRUCTION BY THE PERMITTEE WHO HAS OPERATIONAL CONTROL OF THAT PORTION OF THE SITE. THE SWPPP CAN BE KEPT IN EITHER THE FIELD OFFICE OR IN AN ON SITE VEHICLE DURING NORMAL WORKING HOURS.

ALL OWNER(S) MUST KEEP THE SWPPP, ALONG WITH THE FOLLOWING ADDITIONAL RECORDS, ON FILE FOR THREE (3) YEARS AFTER SUBMITTAL OF THE NOT AS OUTLINED IN PART II.C. THIS DOES NOT INCLUDE ANY RECORDS AFTER SUBMITTAL OF THE NOT.

1. THE FINAL SWPPP;
2. ANY OTHER STORMWATER RELATED PERMITS REQUIRED FOR THE PROJECT;
3. RECORDS OF ALL INSPECTION AND MAINTENANCE CONDUCTED DURING CONSTRUCTION (SEE PART IV.E. INSPECTIONS AND MAINTENANCE);
4. ALL PERMANENT OPERATION AND MAINTENANCE AGREEMENTS THAT HAVE BEEN IMPLEMENTED, INCLUDING ALL RIGHT OF WAY, CONTRACTS, COVENANTS AND OTHER BINDING REQUIREMENTS REGARDING PERPETUAL MAINTENANCE; AND
5. ALL REQUIRED CALCULATIONS FOR DESIGN OF THE TEMPORARY AND PERMANENT STORMWATER MANAGEMENT SYSTEMS.

SWPPP IMPLEMENTATION RESPONSIBILITIES:

1. THE OWNER AND CONTRACTOR ARE PERMITTEE(S) AS IDENTIFIED BY THE NPDES PERMIT.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ON-SITE IMPLEMENTATION OF THE SWPPP, INCLUDING THE ACTIVITIES OF ALL OF THE CONTRACTOR'S SUBCONTRACTORS.
3. CONTRACTOR SHALL PROVIDE A PERSON(S) KNOWLEDGEABLE AND EXPERIENCED IN THE APPLICATION OF EROSION PREVENTION AND SEDIMENT CONTROL BMPS TO OVERSEE ALL INSTALLATION AND MAINTENANCE OF BMPS AND IMPLEMENTATION OF THE SWPPP.
4. CONTRACTOR SHALL PROVIDE PERSON(S) MEETING THE TRAINING REQUIREMENTS OF THE NPDES PERMIT TO CONDUCT INSPECTION AND MAINTENANCE OF ALL EROSION PREVENTION AND SEDIMENT CONTROL BMPS IN ACCORDANCE WITH THE REQUIREMENTS OF THE PERMIT. ONE OF THESE INDIVIDUAL(S) MUST BE AVAILABLE FOR AN ONSITE INSPECTION WITHIN 72 HOURS UPON REQUEST BY MPCA. CONTRACTOR SHALL PROVIDE TRAINING DOCUMENTATION FOR THESE INDIVIDUAL(S) AS REQUIRED BY THE NPDES PERMIT. THIS TRAINING DOCUMENTATION SHALL BE RECORDED IN OR WITH THE SWPPP BEFORE THE START OF CONSTRUCTION OR AS SOON AS THE PERSONNEL FOR THE PROJECT HAVE BEEN DETERMINED. DOCUMENTATION SHALL INCLUDE:
   - 4.1. NAMES OF THE PERSONNEL ASSOCIATED WITH THE PROJECT THAT ARE REQUIRED TO BE TRAINED PER PART III.F.1 OF THE PERMIT.
   - 4.2. DATES OF TRAINING AND NAME OF INSTRUCTOR AND ENTITY PROVIDING TRAINING.
   - 4.3. CONTENT OF TRAINING COURSE OR WORKSHOP INCLUDING THE NUMBER OF HOURS OF TRAINING.
5. FOLLOWING FINAL STABILIZATION AND THE TERMINATION OF COVERAGE FOR THE NPDES PERMIT, THE OWNER IS EXPECTED TO FURNISH LONG TERM OPERATION AND MAINTENANCE (O & M) OF THE PERMANENT STORM WATER MANAGEMENT SYSTEM.

PART IV. CONSTRUCTION ACTIVITY REQUIREMENTS

CONSTRUCTION ACTIVITY FIELD REQUIREMENTS:

1. ALL FIELD REQUIREMENTS SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NPDES PERMIT AND STORMWATER POLLUTION PREVENTION PLAN (SWPPP).
2. THE CONTRACTOR MUST IMPLEMENT THE SWPPP AND PROVIDE BMPS IDENTIFIED IN THE SWPPP IN AN APPROPRIATE AND FUNCTION MANNER.
3. THE CONTRACTOR SHALL RESPOND TO CHANGING SITE CONDITIONS AND IMPLEMENT/SUPPLEMENT EROSION PREVENTION AND SEDIMENT CONTROL MEASURES UTILIZED TO PROVIDE ADEQUATE PROTECTION OF DISTURBED SOILS AND ADEQUATE PREVENTION OF SEDIMENT TRANSPORT OFF-SITE. AT A MINIMUM, THE FOLLOWING STORMWATER POLLUTION PREVENTION CONSTRUCTION ACTIVITY FIELD REQUIREMENTS SHALL BE FURNISHED BY THE CONTRACTOR.

EROSION PREVENTION (PART IV.B):

THE CONTRACTOR IS RESPONSIBLE FOR PLANING FOR AND IMPLEMENTING APPROPRIATE CONSTRUCTION PHASING, VEGETATIVE BUFFER STRIPS, HORIZONTAL SLOPE GRADING, AND OTHER CONSTRUCTION PRACTICES THAT MINIMIZE EROSION, SO THAT THE INSPECTION AND MAINTENANCE REQUIREMENTS OF PART IV.E. ARE COMPLIED WITH. THE LOCATION OF AREAS NOT TO BE DISTURBED MUST BE DELINEATED (E.G. WITH FLAGS, STAKES, SIGNS, SILT FENCE ETC.) ON THE DEVELOPMENT SITE BEFORE WORK BEGINS.

ALL EXPOSED SOIL AREAS MUST BE STABILIZED AS SOON AS POSSIBLE TO LIMIT SOIL EROSION BUT NO LATER THAN THE END OF THE NEXT WORK DAY WHEN EARTH-DISTURBING ACTIVITIES WILL CEASE FOR AT LEAST 14 DAYS. TEMPORARY STOCKPILES WITHOUT SIGNIFICANT SILT, CLAY OR ORGANIC COMPONENTS (E.G., CLEAN AGGREGATE STOCKPILES, DEMOLITION CONCRETE STOCKPILES, SAND STOCKPILES) AND THE CONSTRUCTED BASE COMPONENTS OF ROADS, PARKING LOTS AND SIMILAR SURFACES ARE EXEMPT FROM THIS REQUIREMENT BUT MUST COMPLY WITH PART IV.C.5.

SOILS WITHIN 200 FEET OF A PUBLIC WATER (AS DESIGNATED BY THE MINNESOTA DNR) MUST BE STABILIZED WITHIN 24 HOURS DURING FISH SPAWNING TIMES.

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

STABILIZATION OF THE REMAINING PORTIONS OF ANY TEMPORARY OR PERMANENT DITCHES OR SWALES MUST BE COMPLETE WITHIN 14 DAYS AFTER CONNECTING TO A SURFACE WATER AND CONSTRUCTION IN THAT PORTION OF THE DITCH HAS TEMPORARILY OR PERMANENTLY CEASED.

TEMPORARY OR PERMANENT DITCHES OR SWALES THAT ARE BEING USED AS A SEDIMENT CONTAINMENT SYSTEM (WITH PROPERLY DESIGNED ROCK DITCH CHECKS, BIO ROLLS, SILT DIKES ETC.) DO NOT NEED TO BE STABILIZED. THESE AREAS MUST BE STABILIZED WITHIN 24 HOURS AFTER NO LONGER BEING USED AS A SEDIMENT CONTAINMENT SYSTEM.

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

SEED NOTES (PART III.A.4.A):

ALL SEED MIXES AND APPLICATION SHALL BE IN ACCORDANCE WITH THE MNDOT SEEDING MANUAL.

GENERAL RECOMMENDATIONS:
IMMEDIATELY BEFORE SEEDING THE SOIL SHALL BE TILLED TO A MINIMUM DEPTH OF 3 INCHES.

TEMPORARY EROSION CONTROL SEEDING, MULCHING & BLANKET.

SEED
- TEMPORARY SEED SHALL BE MNDOT SEED MIX 21-112 (WINTER WHEAT COVER CROP) FOR WINTER AND 21-111 (OATS COVER CROP) FOR SPRING/SUMMER APPLICATIONS. BOTH SEED MIXES SHALL BE APPLIED AT A SEEDING RATE OF 100 LBS/ACRE.

MULCH
- IMMEDIATELY AFTER SEEDING, WITHIN 24 HOURS, MNDOT TYPE 1 MULCH SHOULD BE APPLIED TO PROTECT AND ENHANCE SEED GERMINATION. MULCH SHALL BE APPLIED AT 90% COVERAGE (2 TONS PER ACRE OF STRAW MULCH)

SLOPES
- 3:1 (HORIZ/VERT.) OR FLATTER MUCH SHALL BE COVERED WITH MULCH
- SLOPES STEEPER THAN 3:1 OR DITCH BOTTOMS SHALL BE COVERED WITH EROSION CONTROL BLANKET.
- SEE PLAN FOR MORE DETAILED DITCH AND STEEP SLOPE EROSION CONTROL TREATMENTS.

SEDIMENT CONTROL (PART IV.C):

SEDIMENT CONTROL PRACTICES MUST MINIMIZE SEDIMENT FROM ENTERING SURFACE WATERS, INCLUDING CURB AND GUTTER SYSTEMS AND STORM SEWER INLETS.
- a. TEMPORARY OR PERMANENT DRAINAGE DITCHES AND SEDIMENT BASINS THAT ARE DESIGNED AS PART OF A SEDIMENT CONTAINMENT SYSTEM (E.G., DITCHES WITH ROCK CHECK DAMS) REQUIRE SEDIMENT CONTROL PRACTICES ONLY AS APPROPRIATE FOR SITE CONDITIONS.
- b. IF THE DOWN GRADIENT TREATMENT SYSTEM IS OVERLOADED, ADDITIONAL UPGRADIENT SEDIMENT CONTROL PRACTICES OR REDUNDANT BMPS MUST BE INSTALLED TO ELIMINATE THE OVERLOADING, AND THE SWPPP MUST BE AMENDED TO IDENTIFY THESE ADDITIONAL PRACTICES AS REQUIRED IN PART III.A.4, A. THROUGH C.
- c. 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.

SEDIMENT CONTROL PRACTICES MUST BE ESTABLISHED ON ALL DOWN GRADIENT PERIMETERS BEFORE ANY UPGRADIENT LAND DISTURBING ACTIVITIES BEGIN. THESE PRACTICES SHALL REMAIN IN PLACE UNTIL FINAL STABILIZATION HAS BEEN ESTABLISHED IN ACCORDANCE WITH PART IV.G.

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

ALL STORM DRAIN INLETS MUST BE PROTECTED BY APPROPRIATE BMPS DURING CONSTRUCTION UNTIL ALL SOURCES WITH POTENTIAL FOR DISCHARGING TO THE INLET HAVE BEEN STABILIZED. INLET PROTECTION MAY BE REMOVED FOR A PARTICULAR INLET IF A SPECIFIC SAFETY CONCERN (STREET FLOODING/FREEZING) HAS BEEN IDENTIFIED AND THE PERMITTEE(S) HAVE RECEIVED WRITTEN CORRESPONDENCE FROM THE JURISDICTIONAL AUTHORITY (E.G. CITY/COUNTY/TOWNSHIP/MNDOT ENGINEER) VERIFYING THE NEED FOR REMOVAL. THE WRITTEN CORRESPONDENCE MUST BE DOCUMENTED IN THE SWPPP OR AVAILABLE WITHIN 72 HOURS UPON REQUEST. WHEN WRITTEN CORRESPONDENCE CAN NOT BE OBTAINED IN A TIMELY MANNER, THE SPECIFIC INLET PROTECTION CAN BE REMOVED TO ALLEVIATE THE IMMEDIATE SAFETY CONCERN. HOWEVER, EFFORTS TO OBTAIN WRITTEN CORRESPONDENCE MUST BE DOCUMENTED IN THE SWPPP AND AVAILABLE WITHIN 72 HOURS UPON REQUEST. PERMISSION TO REMOVE INLET PROTECTION BASED ON A SPECIFIC SAFETY CONCERN MUST STILL BE OBTAINED FROM THE JURISDICTIONAL AUTHORITY WITHIN 30 DAYS OF REMOVAL.

TEMPORARY SOIL 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, OR CONDUITS AND DITCHES UNLESS THERE IS A BYPASS IN PLACE FOR THE STORMWATER.

VEHICLE TRACKING OF SEDIMENT FROM THE CONSTRUCTION SITE (OR ONTO STREETS WITHIN THE SITE) MUST BE MINIMIZED BY BMPS SUCH AS STONE PADS, CONCRETE OR STEEL WASH RACKS, OR EQUIVALENT SYSTEMS. STREET SWEEPING MUST BE USED IF SUCH BMPS ARE NOT ADEQUATE TO PREVENT SEDIMENT FROM BEING TRACKED ONTO THE STREET (SEE PART IV.E.4.D.).

THE PERMITEE MUST MINIMIZE SOIL COMPACTION AND, UNLESS INFEASIBLE, PRESERVE TOPSOIL. MINIMIZING SOIL COMPACTION IS NOT REQUIRED WHERE THE FUNCTION OF THE SPECIFIC AREA OF THE SITE DICTATES THAT IT BE COMPACTED. METHODS FOR MINIMIZING COMPACTION INCLUDE THE USE OF TRACKED EQUIPMENT, AND STAYING OFF OF AREAS TO BE LEFT UN-COMPACTED. METHODS TO PRESERVE TOPSOIL INCLUDE STRIPPING AND STOCKPILING TOPSOIL PRIOR TO GRADING OR EXCAVATION OPERATIONS.

THE PERMITTEE MUST INSTALL TEMPORARY SEDIMENTATION BASINS AS REQUIRED IN PART III.B. OF THIS PERMIT.

DEWATERING AND BASIN DRAINING (PART IV.D):

DEWATERING OR BASIN DRAINING (E.G., PUMPED DISCHARGES, TRENCH/DITCH CUTS FOR DRAINAGE) RELATED TO THE CONSTRUCTION ACTIVITY THAT MAY HAVE TURBID OR SEDIMENT LADEN DISCHARGE WATER MUST BE DISCHARGED TO A TEMPORARY OR PERMANENT SEDIMENTATION BASIN ON THE PROJECT SITE WHENEVER POSSIBLE. IF THE WATER CANNOT BE DISCHARGED TO A SEDIMENTATION BASIN PRIOR TO ENTERING THE SURFACE WATER, IT MUST BE TREATED WITH THE APPROPRIATE BMP'S SUCH THAT THE DISCHARGE DOES NOT ADVERSELY AFFECT THE RECEIVING WATER, DOWNSTREAM LANDOWNERS OR WETLANDS. THE CONTRACTOR MUST ENSURE THAT DISCHARGE POINTS ARE ADEQUATELY PROTECTED FROM EROSION AND SCOUR. THE DISCHARGE MUST BE DISPERSED OVER NATURAL ROCK RIPRAP, SAND BAGS, PLASTIC SHEATHING OR OTHER ACCEPTED ENERGY DISSIPATION MEASURES. ADEQUATE SEDIMENTATION CONTROL MEASURES ARE REQUIRED FOR DISCHARGE WATER THAT CONTAINS SUSPENDED SOLIDS.

FILTER BACKWASH WATERS MUST BE HAULED AWAY FOR DISPOSAL, RETURNED TO THE BEGINNING OF THE TREATMENT PROCESS, OR INCORPORATE INTO THE SITE IN A MANNER THAT DOES NOT CAUSE EROSION. DISCHARGE OF THE BACKWASH WATER TO SANITARY SEWER IS ALLOWED WITH PERMISSION OF THE SANITARY SEWER AUTHORITY.

INSPECTIONS AND MAINTENANCE (PART IV.E):

THE CONTRACTOR IS RESPONSIBLE AT ALL TIMES FOR THE MAINTENANCE AND PROPER OPERATION OF EROSION AND SEDIMENT CONTROL FACILITIES. THE CONTRACTOR SHALL AT A MINIMUM, INSPECT, MAINTAIN AND REPAIR ALL DISTURBED SURFACES AND ALL EROSION AND SEDIMENT CONTROL FACILITIES AND SOIL STABILIZATION MEASURES ONCE EVERY SEVEN (7) DAYS DURING ACTIVE CONSTRUCTION AND WITHIN 24 HOURS FOLLOWING A RAINFALL OF 0.5 INCHES OR GREATER AND WITHIN 7 DAYS AFTER THAT. CONTRACT SHALL SUBMIT WEEKLY INSPECTION LOGS AFTER EVERY 0.5" RAINFALL EVENT TO THE CITY INSPECTOR. THE ENTIRE HISTORY MUST BE SUBMITTED TO CITY PRIOR TO FINAL ACCEPTANCE. CONTINUE INSPECTION ACTIVITIES UNTIL LAND-DISTURBING ACTIVITY HAS CEASED. THEREAFTER THE CONTRACTOR SHALL PERFORM THESE RESPONSIBILITIES AT LEAST WEEKLY UNTIL VEGETATIVE COVER IS ESTABLISHED. INSPECTIONS MUST INCLUDE STABILIZED AREAS, EROSION PREVENTION AND SEDIMENT CONTROL BMP'S AND INFILTRATION AREAS.

BASED ON INSPECTION RESULTS THE CONTRACTOR MAY MODIFY THE SWPPP IN ORDER TO PREVENT POLLUTANTS FROM LEAVING THE SITE VIA STORM WATER RUNOFF. THIS MODIFICATION MUST BE MADE WITHIN 7 CALENDAR DAYS OF THE INSPECTION UNLESS OTHERWISE REQUIRED BY THE TERMS OF THE PERMIT, LEGAL, REGULATORY, OR PHYSICAL ACCESS CONSTRAINTS.

INSPECTION REPORTS MUST BE RECORDED WITHIN 24 HOURS IN WRITING AND KEPT ON FILE BY THE CONTRACTOR AS AN INTEGRAL PART OF THE SWPPP ON SITE AND THEN FOR AT LEAST 3 YEARS FROM THE DATE OF COMPLETION OF THIS PROJECT.

ALL PERIMETER CONTROL DEVICES MUST BE REPAIRED, REPLACED OR SUPPLEMENTED WHEN THEY BECOME NONFUNCTIONAL OR THE SEDIMENT REACHES 1/2 OF THE HEIGHT OF THE DEVICE. THESE REPAIRS MUST BE MADE BY THE END OF THE NEXT BUSINESS DAY AFTER DISCOVERY, OR THEREAFTER AS SOON AS FIELD CONDITIONS ALLOW ACCESS.

REMOVE ALL DELTAS AND SEDIMENT DEPOSITED IN SURFACE WATERS, INCLUDING DRAINAGE WAYS, CATCH BASINS, AND OTHER DRAINAGE SYSTEMS, AND RESTABILIZE THE AREAS WHERE SEDIMENT REMOVAL RESULTS IN EXPOSED TOPSOIL. THIS REMOVAL AND STABILIZATION MUST TAKE PLACE WITHIN 7 DAYS OF DISCOVERY UNLESS PRECLUDED BY LEGAL, REGULATORY, OR PHYSICAL ACCESS CONSTRAINTS.

SEE (ATTACHMENT A: CONSTRUCTION SWPPP TEMPLATE) FOR SITE SPECIFIC INSPECTIONS AND MAINTENANCE REQUIREMENTS.

POLLUTION PREVENTION MANAGEMENT (PART IV.F):

THE CONTRACTOR SHALL IMPLEMENT THE FOLLOWING POLLUTION PREVENTION MANAGEMENT MEASURES ON THE SITE;

SOLID WASTE: COLLECTED SEDIMENT, ASPHALT AND CONCRETE MILLINGS, FLOATING DEBRIS, PAPER, PLASTIC, FABRIC, CONSTRUCTION AND DEMOLITION DEBRIS AND OTHER WASTES MUST BE DISPOSED OF PROPERLY AND MUST COMPLY WITH MINNESOTA POLLUTION CONTROL AGENCY (MPCA) DISPOSAL REQUIREMENTS.

HAZARDOUS MATERIALS: OIL, GASOLINE, PAINT AND ANY HAZARDOUS SUBSTANCES MUST BE PROPERLY STORED, INCLUDING SECONDARY CONTAINMENT, TO PREVENT SPILLS, LEAKS OR OTHER DISCHARGE. RESTRICTED ACCESS TO STORAGE AREAS MUST BE PROVIDED TO PREVENT VANDALISM. STORAGE AND DISPOSAL OF HAZARDOUS WASTE MUST BE IN COMPLIANCE WITH MPCA REGULATIONS.

EXTERNAL WASHING OF TRUCKS AND OTHER CONSTRUCTION VEHICLES MUST BE LIMITED TO A DEFINED AREA OF THE SITE. RUNOFF MUST BE CONTAINED AND WASTEWATER PROPERLY DISPOSED OF. NO ENGINE DEGREASING IS ALLOWED ON SITE.

CONCRETE WASHOUT: ALL LIQUID AND SOLID WASTES GENERATED BY CONCRETE WASHOUT OPERATIONS MUST BE CONTAINED IN A LEAK PROOF CONTAINMENT FACILITY OR IMPERMEABLE LINER. A COMPACTED CLAY LINER THAT DOES NOT ALLOW WASHOUT LIQUIDS TO ENTER THE GROUND IS CONSIDERED AN IMPERMEABLE LINER. THE LIQUID AND SOLID WASTES MUST NOT CONTACT THE GROUND, AND THERE MUST NOT BE RUNOFF FROM THE CONCRETE WASHOUT OPERATIONS OR AREAS. LIQUID AND SOLID WASTES MUST BE DISPOSED OF PROPERLY AND IN COMPLIANCE WITH MPCA REGULATIONS. A SIGN MUST BE INSTALLED ADJACENT TO EACH WASHOUT FACILITY TO INFORM CONCRETE EQUIPMENT OPERATORS TO UTILIZE THE PROPER FACILITIES. CONCRETE WASHOUT MAY ALSO OCCUR OFF SITE ACCORDING TO THE APPROPRIATE REGULATIONS.

FUELING OPERATION PLAN: ALL FUELING SHALL TAKE PLACE AT THE DESIGNATED FUELING LOCATION AND ACCORDING TO BEST PRACTICES FOR SITE FUELING OPERATIONS AS TO MINIMIZE THE POTENTIAL FOR SPILLS.

SPILL PREVENTION PLAN: ALL SPILLS SHALL BE IMMEDIATELY CLEANED UP AFTER DISCOVERY. THE SITE SUPERINTENDENT, WHO IS RESPONSIBLE FOR DAY-TO-DAY ONSITE CONSTRUCTION OPERATIONS WILL BE THE SPILL PREVENTION COORDINATOR AND WILL BE RESPONSIBLE FOR IMPLEMENTING CLEAN UP PROCEDURES, POSTING CLEAN UP RECOMMENDATIONS, AND ENSURING PROPER CLEAN UP TRAINING OF APPROPRIATE PERSONNEL.

SANITARY AND SEPTIC WASTE: SANITARY/SEPTIC FACILITIES SHALL BE PROVIDED AND MAINTAINED IN A NEAT AND SANITARY CONDITION, FOR THE USE OF THE CONTRACTOR'S EMPLOYEES. A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR AS REQUIRED BY STATE REGULATIONS WILL COLLECT SANITARY WASTE FROM PORTABLE UNITS.

FINAL STABILIZATION (PART IV.G):

THE CONTRACTOR MUST ENSURE FINAL STABILIZATION OF THE SITE ACCORDING THE DEFINITIONS IN THE NPDES GENERAL PERMIT PART IV SECTION G. THE CONTRACTOR MUST SUBMIT A NOTICE OF TERMINATION (N.O.T.) WITHIN 30 DAYS AFTER FINAL STABILIZATION IS COMPLETE OR WITHIN 7 DAYS AFTER SELLING THE SITE OR PORTION OF THE SITE (THAT HAS NOT UNDERGONE FINAL STABILIZATION) TO ANOTHER PARTY. THE N.O.T. MUST BE PROVIDED TO THE CITY FOR REVIEW PRIOR TO SUBMITTAL. A COPY OF THIS NOTICE OF TERMINATION / PERMIT MODIFICATION FORM MUST GO TO THE NEW OWNER. THE ORIGINAL CURRENT OWNER MUST PROVIDE A SWPPP TO THE NEW OWNER THAT SPECIFICALLY ADDRESSES THE REMAINING CONSTRUCTION ACTIVITY. SEE THE SWPPP PLAN SHEETS AND SWPPP NARRATIVE (ATTACHMENT A: CONSTRUCTION SWPPP TEMPLATE) AND SWPPP PLAN SHEETS FOR FINAL STABILIZATION MEASURES

TRAINING (PART III.A.2)

DESIGN ENGINEER: MATTHEW R. PAVEK P.E.
TRAINING COURSE: DESIGN OF SWPPP
TRAINING ENTITY: UNIVERSITY OF MINNESOTA
INSTRUCTOR: JOHN CHAPMAN
DATES OF TRAINING COURSE: 5/15/2011 - 5/16/2011
TOTAL TRAINING HOURS: 12
RE-CERTIFICATION: 3/16/2017 (8 HOURS), EXP. 5/31/2020

OWNER INFORMATION

OWNER:

INLAND GROUP
120 W CATALDO AVE, SUITE 100
SPOKANE, WA 99201
(509)-891-5162

CONTACT: ROBERT KETNER
509-321-3204
ROBERTK@INLANDCONSTRUCTION.COM

AREAS AND QUANTITIES (PART III.A.4.B&C):

	EXISTING		PROPOSED LOT	
BUILDING COVERAGE	0 SF	0.0%	71,135 SF	48.7%
ALL PAVEMENTS	0 SF	0.0%	38,404 SF	26.3%
ALL NON-PAVEMENTS	146,210 SF	100.0%	36,671 SF	25.1%
TOTAL SITE AREA	146,210 SF	100.0%	146,210 SF	100.0%
	3.36 AC		3.36 AC	
IMPERVIOUS SURFACE				
EXISTING CONDITION	0 SF	0.0%		
PROPOSED CONDITION LOT	109,539 SF	74.9%	109,539 SF	74.9%
DIFFERENCE (EX. VS PROP.)	109,539 SF	74.9%		
IMPERVIOUS TOTAL	109,539 SF	74.9%		
EROSION CONTROL QUANTITIES				
DISTURBED AREA	329,048 SF			
SILT FENCE/BIO-ROLL	±6200 LF			
EROSION CONTROL BLANKET	±72000 SF			
INLET PROTECTION DEVICES	±28 EA			

NOTE: QUANTITIES ARE FOR INFORMATIONAL PURPOSES ONLY. CONTRACTOR SHALL DETERMINE FOR THEMSELVES THE EXACT QUANTITIES FOR BIDDING AND CONSTRUCTION.

SWPPP CONTACT PERSON

CONTRACTOR:

TBD

SWPPP INSPECTOR TRAINING:
ALL SWPPP INSPECTIONS MUST BE PERFORMED BY A PERSON THAT MEETS THE TRAINING REQUIREMENTS OF THE NPDES CONSTRUCTION SITE PERMIT.
TRAINING CREDENTIALS SHALL BE PROVIDED BY THE CONTRACTOR AND KEPT ON SITE WITH THE SWPPP

PARTY RESPONSIBLE FOR LONG TERM OPERATION AND MAINTENANCE OF PERMANENT STORM WATER MANAGEMENT SYSTEM

PERMANENT STORMWATER MANAGEMENT IS NOT REQUIRED AS PART OF THIS PROJECT TO MEET NPDES PERMIT REQUIREMENTS. THE CITY OF RAMSEY IS RESPONSIBLE FOR CONSTRUCTION AND MAINTENANCE OF THE REGIONAL STORMWATER FEATURES SERVING THE SITE.

SWPPP ATTACHMENTS (ONLY APPLICABLE IF SITE IS 1 ACRE OR GREATER):

CONTRACTOR SHALL OBTAIN A COPY OF THE FOLLOWING SWPPP ATTACHMENTS WHICH ARE A PART OF THE OVERALL SWPPP PACKAGE:
ATTACHMENT A. CONSTRUCTION SWPPP TEMPLATE - SITE SPECIFIC SWPPP DOCUMENT
ATTACHMENT B. CONSTRUCTION STORMWATER INSPECTION CHECKLIST
ATTACHMENT C. MAINTENANCE PLAN FOR PERMANENT STORM WATER TREATMENT SYSTEMS
ATTACHMENT D: STORMWATER MANAGEMENT REPORT - ON FILE AT THE OFFICE OF PROJECT ENGINEER. AVAILABLE UPON REQUEST.
ATTACHMENT E: GEOTECHNICAL EVALUATION REPORT - ON FILE AT THE OFFICE OF PROJECT ENGINEER. AVAILABLE UPON REQUEST.

SUPPLEMENTARY SITE SPECIFIC EROSION CONTROL NOTES:

THESE NOTES SUPERCEDE ANY GENERAL SWPPP NOTES.

THIS PROJECT IS GREATER THAN 1.0 ACRES SO AN NPDES PERMIT IS REQUIRED AND NEEDS TO BE SUBMITTED TO THE MPCA. THE CONTRACTOR IS REQUIRED TO FOLLOW THE GUIDELINES IN THE NPDES PERMIT THROUGHOUT CONSTRUCTION.

PROJECT NARRATIVE:

PROJECT IS THE DEVELOPMENT OF A VACANT PARCEL TO A MULTIFAMILY RESIDENTIAL DEVELOPMENT WITH ASSOCIATED DRIVES AND PARKING AREAS. SITE, GRADING, UTILITY, AND LANDSCAPE IMPROVEMENTS WILL OCCUR.

SPECIAL TMDL BMP REQUIREMENTS SITE SPECIFIC (IF REQUIRED):

N/A

1. DURING CONSTRUCTION:
   A. STABILIZATION OF ALL EXPOSED SOIL AREAS MUST BE INITIATED IMMEDIATELY TO LIMIT SOIL EROSION BUT IN NO CASE COMPLETED LATER THAN SEVEN (7) DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED.
   B. TEMPORARY SEDIMENT BASIN REQUIREMENTS DESCRIBED IN PART III.C. MUST BE USED FOR COMMON DRAINAGE LOCATIONS THAT SERVE AN AREA WITH FIVE (5) OR MORE ACRES DISTURBED AT ONE TIME.

2. POST CONSTRUCTION:THE WATER QUALITY VOLUME THAT MUST BE RETAINED ON SITE BY THE PROJECT'S PERMANENT STORMWATER MANAGEMENT SYSTEM DESCRIBED IN PART III.D. SHALL BE ONE (1) INCH OF RUNOFF FROM THE NEW IMPERVIOUS SURFACES CREATED BY THE PROJECT. SEE PART III.D.1. FOR MORE INFORMATION ON INFILTRATION DESIGN, PROHIBITIONS AND APPROPRIATE SITE CONDITIONS.

PERMANENT STABILIZATION NOTES SITE SPECIFIC:

PERMANENT SEED MIX
- FOR THIS PROJECT ALL AREAS THAT ARE NOT TO BE SODDED OR LANDSCAPED SHALL RECEIVE A NATIVE PERMANENT SEED MIX.
  - AREAS IN BUFFERS AND ADJACENT TO OR IN WET AREAS MNDOT SEED MIX 33-261 (STORMWATER SOUTH AND WEST) AT 35 LBS PER ACRE.
  - DRY AREAS MNDOT SEED MIX 35-221 (DRY PRAIRIE GENERAL) AT 40 LBS PER ACRE.
- MAINTENANCE SHALL BE IN ACCORDANCE TO THE MNDOT SEEDING MANUAL.

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kaas wilson architects

Inland Group

PROJECT

AFFINITY AT RAMSEY

RAMSEY, MN 55303

INLAND GROUP

120 W. CATALDO AVE. SUITE 100, SPOKANE, WA 99201

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. Pavek

DATE 05/02/18 LICENSE NO. 44263

ISSUE/SUBMITTAL SUMMARY

DATE	DESCRIPTION
12/06/17	SITE PLAN SUBMITTAL
03/16/18	WATERSHED SUBMITTAL
03/30/18	CITY SUBMITTAL
05/02/18	CITY RESUBMITTAL

REVISION SUMMARY

DATE	DESCRIPTION
1/15/18	SITE PLAN SUBMITTAL R1

PROJECT NO.: 17226

SWPPP - NARRATIVE

SW1.3

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ATTACHMENT A: SITE SPECIFIC SWPPP DOCUMENT

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Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, MN 55155-4194

Attachment A:
SWPPP Site Specific Document

Stormwater Pollution Prevention Plan (SWPPP)
To comply with the General Stormwater Permit for Construction Activity
Doc Type: Stormwater Pollution Prevention Plan

Construction Activity Information

Project name: Affinity Ramsey

Project location (Briefly describe where construction activity occurs. Include address if available.)
Address or describe area: N.W. Corner of Center Street NW and Sunwood Drive NW
City or Township: Ramsey State: MN Zip code: 55303
Latitude/longitude of approximate centroid of project: 45.234512 ; -93.461098
Method of collection of latitude/longitude:
☐ GPS ☒ Online tool ☐ USGS Topographic map
All cities where construction will occur: Ramsey
All counties where construction will occur: Anoka
All townships where construction will occur: --

Project size (number of acres to be disturbed): 7.6

Project type:
☒ Residential ☐ Commercial/Industrial ☐ Road construction
☐ Residential and road construction ☐ Other (describe):

Cumulative impervious surface:
Existing area of impervious surface: 0.0 (to the nearest tenth acre)
Post construction area of impervious surface: 2.5 (to the nearest tenth acre)
Total new area of impervious surface: 2.5 (to the nearest tenth acre)

Receiving waters

Water body ID*	Name of water body	Type (ditch, pond, wetland, lake, stream, river)	Special water? (See Stormwater Permit Appendix A)	Impaired Water?** (See Stormwater Permit Appendix A)
07010206-805	MISSISSIPPI RIVER	RIVER	☒ Yes ☐ No	☒ Yes ☐ No
			☐ Yes ☐ No	☐ Yes ☐ No
			☐ Yes ☐ No	☐ Yes ☐ No
			☐ Yes ☐ No	☐ Yes ☐ No

* *Water Body Identification (ID) might not be available for all water bodies. Use the Special and Impaired Waters Search Tool at: www.pca.state.mn.us/water/stormwater/stormwater-c.html.*
** *Impaired water for the following pollutant(s) or stressor(s): phosphorus, turbidity, dissolved oxygen, or biotic impairment.*

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Dates of construction (Briefly describe where construction activity occurs. Include address if available.)
Construction start date: 03/2018 Estimated completion date: 03/2019

General Construction Project Information

Describe the construction activity (what will be built, general timeline, etc): THE PROJECT WILL BE THE RENOVATION OF A VACANT PARCEL TO A MULTIFAMILY APARTMENT BUILDING.

Describe soil types found at the project: THE EXISTING SOILS AT THE SITE ARE PRIMARILY SANDS

Site Location map - Attach maps (U.S. Geologic Survey 7.5 minute quadrangle, National Wetland Inventory maps or equivalent) showing the location and type of all receiving waters, including wetlands, drainage ditches, stormwater ponds or basins, etc. that will receive runoff from the project. Use arrows showing the direction of flow and distance to the water body

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General Site Information (III.A)

1. Describe the location and type of all temporary and permanent erosion prevention and sediment control Best Management Practices (BMPs). Include the timing for installation and procedures used to establish additional temporary BMPs as necessary. (III.A.4.a)
THE PROJECT WILL BE PROTECTED BY TWO (2) MAIN BMP'S, SILT FENCE AND INLET PROTECTION DEVICES. THE SILT FENCE WILL BE INSTALLED AT THE DOWNHILL LOCATIONS OF THE SITE AND MONITORED AS NECESSARY. INLET PROTECTION DEVICES WILL BE INSTALLED IN ALL CATCH BASINS ON THE SITE AND ANY OFF SITE THAT WILL RECEIVE STORMWATER RUNOFF FROM THIS SITE, AS THE PROJECT PROGRESSES. ADDITIONAL BMP'S SUCH AS EROSION CONTROL BLANKET MAY BE UTILIZED.
2. Attach to this SWPPP a table with the anticipated quantities for the life of the project for all erosion prevention and sediment control BMPs (III. A. 4.b)
SEE PAGE SW1.3
3. Attach to this SWPPP a site map that includes the following features (III.A.3.b – f):
   - Existing and final grades, including dividing lines and direction of flow for all pre and post-construction stormwater runoff drainage areas located within the project limits.
   - Locations of impervious surfaces and soil types.
   - Locations of areas not to be disturbed.
   - Location of areas of phased construction
   - All surface waters and existing wetlands within one mile from the project boundaries that will receive stormwater runoff from the site (identifiable on maps such as USGS 7.5 minute quadrangle maps or equivalent). Where surface waters receiving runoff associated with construction activity will not fit on the plan sheet, they must be identified with an arrow, indicating both direction and distance to the surface water.

   Methods to be used for final stabilization of all exposed soil areas.
4. Were stormwater mitigation measures required as the result of an environmental, archaeological, or other required local, state, or federal review of the project? ☐ Yes ☒ No
   If yes, describe how these measures were addressed in the SWPPP. (III.A.6.)
   N/A
5. Is the project located in a karst area such that additional measures would be necessary to protect drinking water supply management areas as described in Minn. R. chapters 7050 and 7060? ☐ Yes ☒ No
   If yes, describe the additional measures to be used. (III.A.7.)
   N/A
6. Does the site discharge to a calcareous fen listed in Minn. R. 7050.0180, subp. 6.b.? ☐ Yes ☒ No
   If yes, a letter of approval from the Minnesota Department of Natural Resources must be obtained prior to application for this permit. (Part I B.6 and Part III.A.8)
7. Does the site discharge to a water that is listed as impaired for the following pollutant(s) or stressor(s): phosphorus, turbidity, dissolved oxygen or biotic impairment? Use the Special and Impaired Waters Search Tool at: www.pca.state.mn.us/water/stormwater/stormwater-c.html. ☒ Yes ☐ No
   If no, skip to Training.
   Does the impaired water have an approved Total Maximum Daily Loads (TMDL) with an Approved Waste Load Allocation for construction activity? ☐ Yes ☒ No
   If yes:
   a. List the receiving water, the areas of the site discharging to it, and the pollutant(s) identified in the TMDL.
   b. List the BMPs and any other specific construction stormwater related implementation activities identified in the TMDL.

   If the site has a discharge point within one mile of the impaired water and the water flows to the impaired water but no specific BMPs for construction are identified in the TMDL, the additional BMPs in Appendix A (C.1, C.2, C.3 & (C.4-trout stream)) must be added to the SWPPP and implemented. (III.A.7). The additional BMPs only apply to those portions of the project that drain to one of the identified discharge points.

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N/A

9. Identify adjacent public waters where the Minnesota Department of Natural Resources (DNR) has declared "work in water restrictions" during fish spawning timeframes
   N/A

Selection of a Permanent Stormwater Management System (III.D.)

1. Will the project create a new cumulative impervious surface greater than or equal to one acre? ☒ Yes ☐ No
   If yes, a water quality volume of one inch of runoff from the cumulative new impervious surfaces must be retained on site (see Part III.D of the permit) through infiltration unless prohibited due to one of the reasons in Part III.D.1.j. If infiltration is prohibited identify other method of other volume reduction (e.g., filtration system, wet sedimentation basin, regional ponding or equivalent method
2. Describe which method will be used to treat runoff from the new impervious surfaces created by the project (III.D):
   - Wet sedimentation basin
   - Infiltration/Filtration
   - Regional ponds
   - Combination of practices

   Include all calculations and design information for the method selected. See Part III.D of the permit for specific requirements associated with each method.
   REGIONAL PONDS, THESE WILL BE CONSTRUCTED BYTHE CITY PRIOR TO THE TIME OF CONSTRUCTION.
   Calculations are within the Site Storm Water management Report and part of this SWPPP as Attachment D.
3. If it is not feasible to meet the treatment requirement for the water quality volume, describe why. This can include proximity to bedrock or road projects where the lack of right of way precludes the installation of any permanent stormwater management practices. Describe what other treatment, such as grasses swales, smaller ponds, or grit chambers, will be implemented to treat runoff prior to discharge to surface waters. (III.C)
   IT IS FEASIBLE TO MEET REQUIREMENT FOR WATER QUALITY VOLUME.
4. For projects that discharge to trout streams, including tributaries to trout streams, identify method of incorporating temperature controls into the permanent stormwater management system.
   N/A

Erosion Prevention Practices (IV.B)

Describe the types of temporary erosion prevention BMPs expected to be implemented on this site during construction:

1. Describe construction phasing, vegetative buffer strips, horizontal slope grading, and other construction practices to minimize erosion. Delineate areas not to be disturbed (e.g., with flags, stakes, signs, silt fence, etc.) before work begins.
   SILT FENCE WILL BE INSTALLED AT THE DOWNHILL LOCATIONS OF THE SITE.
2. Describe Methods of temporarily stabilizing soils and soil stockpiles (e.g., mulches, hydraulic tackifiers, erosion blankets, etc.):
   TEMPORARY EROSION PROTECTION WILL BE SEED AND MULCH AND EROSION BLANKETS WHERE REQUIRED, WITH PERMANENT COVER BEING EITHER SOD OR LANDSCAPE FEATURES.
3. Describe Methods of dissipating velocity along stormwater conveyance channels and at channel outlets (e.g., check dams, sediment traps, rip rap, etc.):
   SOD WILL BE UTILIZED ALONG CHANNELS AND RIP RAP AT CHANNEL OUTLETS.
4. Describe Methods to be used for stabilization of ditch and swale wetted perimeters (Note that mulch, hydraulic soil tackifiers, hydromulches, etc. are not acceptable soil stabilization methods for any part of a drainage ditch or swale)
   FINAL STABILIZATION OF SWALES WILL BE SOD.
5. Describe Methods to be used for energy dissipation at pipe outlets (e.g., rip rap, splash pads, gabions, etc.

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RIP RAP WILL BE UTILIZED AT PIPE OUTLETS.

6. Describe Methods to be used to promote infiltration and sediment removal on the site prior to offsite discharge, unless infeasible (e.g., direct stormwater flow to vegetated areas):
   DISCONNECTED IMPERVIOUS AREA AND INFILTRATION AREAS WILL BE UTILIZED.
7. For drainage or diversion ditches, describe practices to stabilize the normal wetted perimeter within 200 lineal feet of the property edge or point of discharge to surface water. The last 200 linear feet must be stabilized within **24 hours** after connecting to surface waters and construction in that portion of the ditch has temporarily or permanently ceased for all discharges to Special, Impaired or "work in water restrictions". All other remaining portions of the temporary or permanent ditches or swales within 14 calendar days after connecting to a surface water, property edge and construction in that area has temporarily or permanently ceased.
   N/A – NO DITCHES ON SITE
8. Describe additional erosion prevention measures that will be implemented at the site during construction (e.g., construction phasing, minimizing soil disturbance, vegetative buffers, horizontal slope grading, slope draining/terracing, etc.):
   OTHER EROSION CONTROL PRACTICES INCLUDE BUT NOT LIMITED TO; MINIMIZE SITE EXPOSURE WHEN POSSIBLE.
9. If applicable, include additional requirements in Appendix A Part C.3 regarding maintaining a 100-foot buffer zone or installing redundant BMPs for portions of the site that drain to special waters).
   N/A
10. If applicable, describe additional erosion prevention BMPs to be implemented at the site to protect planned infiltration areas
    MINIMIZE SITE EXPOSURE IN AREAS ADJACENT TO INFILTRATION AREA.

Sediment Control Practices (IV.C)

Describe the methods of sediment control BMPs to be implemented at this site during construction to minimize sediment impacts to surface waters, including curb and gutter systems

1. Describe Methods to be used for down gradient perimeter control:
   SILT FENCE WILL BE INSTALLED AROUND THE ENTIRE PERIMETER OF THE SITE.
2. Describe Methods to be used to contain soil stockpiles:
   SEED AND MULCH AS WELL AS EROSION CONTROL BLANKETS WILL BE UTILIZED AS NECESSARY.
3. Describe Methods to be used for storm drain inlet protection:
   SEE INLET PROTECTION DETAILS.
4. Describe Methods to minimize vehicle tracking at construction exits and street sweeping activities:
   THE PROJECT WILL UTILIZE A ROCK CONSTRUCTION ENTRANCE.
5. Describe Methods, If applicable, additional sediment controls (e.g., diversion berms) to be installed to keep runoff away from planned infiltration areas when excavated prior to final stabilization of the contributing drainage area:
   SILT FENCE TO BE INSTALLED IMMEDIATELY AFTER GRADING TO PROTECT INFILTRATION AREAS.
6. Describe methods to be used to minimize soil compaction and preserve top soil (unless infeasible) at this site:
   LIGHT TRACKED EQUIPMENT WILL BE USED, TOPSOIL WILL BE STRIPPED AND STOCKPILED.
7. Describe plans to preserve a 50-foot natural buffer between the project's soil disturbance and a surface water or plans for redundant sediment controls if a buffer is infeasible:
   DOUBLE ROW OF SILT FENCE WILL BE INSTALLED ALONG WETLAND. PROJECT WILL NOT DISTURB WITHIN 200 FEET OF WETLAND.
8. Describe plans for use of sedimentation treatment chemicals (e.g., polymers, flocculants, etc.) see Part IV.C.10 of the permit:
   N/A

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9. Is the project required to install a temporary sediment basin due to 10 or more acres draining to a common location or 5 acres or more if the site is within 1 mile of a special or impaired water? ☐ Yes ☒ No
   If yes, describe (or attach plans) showing how the basin will be designed and constructed in accordance with Part III.C of the permit.
   N/A

Dewatering and Basin Draining (IV.D)

1. Will the project include dewatering or basin draining? ☒ Yes ☐ No
   If yes, describe measures to be used to treat/dispose of turbid or sediment-laden water and method to prevent erosion or scour of discharge points (see Part IV. D of the permit):
2. Will the project include use of filters for backwash water? ☐ Yes ☒ No
   If yes, describe how filter backwash water will be managed on the site or properly disposed (see Part III.D.3. of the permit):

Additional BMPs for Special Waters and Discharges to Wetlands (Appendix A, Parts C and D)

1. **Special Waters.** Does your project discharge to special waters? ☐ Yes ☒ No
2. If proximity to bedrock or road projects where the lack of right of way precludes the installation of any of the permanent stormwater management practices, then other treatment such as grassed swales, smaller ponds, or grit chambers is required prior to discharge to surface waters. Describe what other treatment will be provided.
   N/A
3. Describe erosion and sediment controls for exposed soil areas with a continuous positive slope to a special waters, and temporary sediment basins for areas that drain five or more acres disturbed at one time.
   N/A
4. Describe the undisturbed buffer zone to be used (not less than 100 linear feet from the special water).
   N/A
5. Describe how the permanent stormwater management system will ensure that the pre and post project runoff rate and volume from the 1, and 2-year 24-hour precipitation events remains the same.
   N/A
6. Describe how the permanent stormwater management system will minimize any increase in the temperature of trout stream receiving waters resulting in the 1, and 2-year 24-hour precipitation events.
   N/A
7. **Wetlands.** Does your project discharge stormwater with the potential for significant adverse impacts to a wetland (e.g., conversion of a natural wetland to a stormwater pond)? ☐ Yes ☒ No
   If Yes, describe the wetland mitigation sequence that will be followed in accordance with Part D of Appendix A.
   N/A

Inspections and Maintenance (IV.E)

Describe procedures to routinely inspect the construction site:

- Once every seven (7) days during active construction and,
- Within 24 hours after a rainfall event greater than 0.5 inches in 24 hours, and within seven (7) days after that.

Inspections must include stabilized areas, erosion prevention and sediment control BMPs, and infiltration areas.
INSPECTOR WILL FOLLOW REQUIREMENTS SPECIFIED ABOVE AND FILL OUT "ATTACHMENT B – CONSTRUCTION

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STORMWATER INSPECTION CHECKLIST."

Pollution Prevention Management Measures (IV.F)

1. Describe practices for storage of building products with a potential to leach pollutants to minimize exposure to stormwater:
   ALL BUILDING PRODUCTS WILL BE SEALED AND STORED IN A MANNER TO MINIMIZE EXPOSURE.
2. Describe practices for storage of pesticides, herbicides, insecticides, fertilizers, treatment chemical, and landscape materials:
   ALL LANDSCAPE TREATMENT CHEMICALS WILL BE SEALED AND STORED IN A MANNER TO MINIMIZE EXPOSURE.
3. Describe practices for storage and disposal of hazardous materials or toxic waste (e.g., oil, fuel, hydraulic fluids, paint solvents, petroleum-based products, wood preservative, additives, curing compounds, and acids) according to Minn. R. ch. 7045, including restricted access and secondary containment:
   ALL HAZARDOUS WASTE WILL BE APPROPRIATELY DISPOSED OF OFF SITE ACCORDING TO LOCAL AND STATE LAWS.
4. Describe collection, storage and disposal of solid waste in compliance with Minn. R. ch. 7035:
   ALL CONSTRUCTION DEBRIS AND SOLID WASTE WILL BE APPROPRIATELY DISPOSED OF OFF SITE ACCORDING TO LOCAL AND STATE LAWS.
5. Describe management of portable toilets to prevent tipping and disposal of sanitary wastes in accordance with Minn. R. ch. 7040:
   SANITARY AND SEPTIC SERVICES WILL BE PROVIDED TO WORKERS WITH PORTABLE FACILITIES MAINTAINED AS NEEDED BY THE PROVIDER.
6. Describe spill prevention and response for fueling and equipment or vehicle maintenance:
   EMPLOYEES WILL BE TRAINED IN TECHNIQUES DESIGNED TO MINIMIZE SPILLS. VEHICLES AND EQUIPMENT SHALL BE CHECKED FOR LEAKS.
7. Describe containment and disposal of vehicle and equipment wash water and prohibiting engine degreasing on the site:
   ALL CONSTRUCTION VEHICLES SHALL BE WASHED OFF SITE.
8. Describe storage and disposal of concrete and other washout wastes so that wastes do not contact the ground:
   ALL CONCRETE WASHOUT SHALL OCCUR OFF SITE.

Final Stabilization (IV.G)

1. **Describe method of final stabilization (permanent cover) of all disturbed areas:**
   FINAL STABILIZATION WILL BE ACOMPLISHED WITH PAVEMENT, SOD AND LANDSCAPE MATERIALS.
2. **Describe procedures for completing final stabilization and terminating permit coverage (see Part IV.G.1-5):**
   UPON FINAL STABILIZATION DESCRIBED ABOVE, THE CONTRACTOR AND OWNER SHALL MUTUALLY TRANSFER THE NPDES PERMIT TO THE NEXT OWNER WITH DOCUMENTS DESCRIBING THE NATURE OF TERMINATION PROCEDURE.

Documentation of infeasibility: (If Applicable)

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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.

Matthew R. Pavek
DATE 05/02/18 LICENSE NO. 44263

ISSUE/SUBMITTAL SUMMARY

DATE	DESCRIPTION
12/06/17	SITE PLAN SUBMITTAL
03/16/18	WATERSHED SUBMITTAL
03/30/18	CITY SUBMITTAL
05/02/18	CITY RESUBMITTAL

REVISION SUMMARY

DATE	DESCRIPTION
1/15/18	SITE PLAN SUBMITTAL R1

PROJECT NO.: 17226

SWPPP
- ATTACHMENTS

SW1.4

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ATTACHMENT B: SWPPP INSPECTION FORM

Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, MN 55155-4194

ATTACHMENT B: Construction Stormwater Inspection Checklist

Construction Stormwater Program

Doc Type: Permitting Checklist

Note: This inspection report does not address all aspects of the National Pollutant Discharge Elimination System/State Disposal System (NPDES/SDS) Construction Stormwater permit (Permit) issued on August 1, 2013. The completion of this checklist does not guarantee that all permit requirements are in compliance; it is the responsibility of the Permittee(s) to read and understand the permit requirements.

Facility Information

Site name: _____

Facility address: _____ Permit number: _____

City: _____ State: _____ Zip code: _____

Inspection Information

Inspector name: _____ Phone number: _____

Date (mm/dd/yyyy): _____ Time: _____ ☐ am ☐ pm

Is the inspector certified in sediment and erosion control and it is documented in the Stormwater Pollution Prevention Plan (SWPPP)? ☐ Yes ☐ No

Is this inspection routine or in response to a storm event: _____

Rainfall amount (if applicable): _____

Is site within one aerial mile of special or impaired water? ☐ Yes ☐ No

If yes, follow Appendix A and other applicable permit requirements.

Note: If NA is selected at any time, specify **why** in the comment area for that section.

Erosion Control Requirement (Part IV.B)

	Yes	No	NA
1. Soil stabilization where no construction activity for 14 days? (7 days were applicable)	☐	☐	☐
2. Has the need to disturb steep slopes been minimized?	☐	☐	☐
3. All ditches stabilized 200' back from point of discharge within 24 hours? (Not mulch)	☐	☐	☐
4. Are there erosion BMP's for onsite stockpiles?	☐	☐	☐
5. Are appropriate BMP's installed protecting inlets/outlets?	☐	☐	☐

6. Do pipe outlets have energy dissipation?	☐	☐	☐

Comments:

Sediment Control Requirement (Part IV.C.)

	Yes	No	NA
1. Perimeter control installed on all down gradient perimeters?	☐	☐	☐
2. Perimeter control trenched in where appropriate?	☐	☐	☐
3. 50 Foot-natural buffer maintained around all surface waters?	☐	☐	☐
If No, have redundant sediment controls been installed?	☐	☐	☐
4. Inlet protection on all catch basins and culvert inlets?	☐	☐	☐
5. Vehicle tracking Best Management Practices (BMPs) at all site exits?	☐	☐	☐
6. All tracked sediment removed within 24 hours?	☐	☐	☐
7. Are all infiltration systems staked and marked to avoid compaction?	☐	☐	☐
8. Are all infiltration areas protected with a pretreatment device?	☐	☐	☐
9. Do all stockpiles have perimeter control?	☐	☐	☐

Comments:

Maintenance-Erosion and Sediment Control BMPs (Part IV.E.)

	Yes	No	NA
1. Are all previously stabilized areas maintaining 80% ground cover?	☐	☐	☐
2. Any ditch erosion observed?	☐	☐	☐
3. Perimeter Control – Has sediment reached one half the height of the device?	☐	☐	☐
4. Are inlet protection devices maintained and functioning properly?	☐	☐	☐

Comments:

Other

	Yes	No	NA
1. Are all materials that can leach pollutants under cover?	☐	☐	☐

2. Has access been restricted to onsite hazardous materials?	☐	☐	☐
3. Does on-site fueling only occur in a contained area?	☐	☐	☐
4. Are all solid wastes being properly disposed of?	☐	☐	☐
5. Is the concrete washout area completely contained?	☐	☐	☐
6. Is the concrete washout area marked with a sign?	☐	☐	☐

Comments:

7. Were any discharges seen during this inspection, sediment, water, or otherwise? ☐ Yes ☐ No

   If yes, state the exact location of all points of discharge. Photograph the discharge and describe the discharge (color, odor, foam, oil sheen, etc). How will it be removed? How did the discharge happen? How much was discharged? How will it be stopped, and how long will it take to stop? Is the discharge going into an adjacent site? Was the discharge a sediment delta? If yes, will the delta be recovered within 7 days?

8. Will a permanent stormwater management system be utilized in this project as required and in accordance with Part III.D of the permit? Describe:

9. Is any dewatering occurring on site? ☐ Yes ☐ No

   If yes, where? What BMP is being used? How much water is being dewatered? Is the water clear? Where is the water being discharged to?

10. Is a copy of the SWPPP located on the construction site? ☐ Yes ☐ No
11. Has the SWPPP been followed and implemented on site? ☐ Yes ☐ No
12. Is a sedimentation basin required for this project as specified in the permit? ☐ Yes ☐ No

    If yes, are they maintained as specified in the permit? ☐ Yes ☐ No
13. Is the topsoil on this project being preserved? ☐ Yes ☐ No

    If yes, explain how the topsoil is being preserved. If not, explain why it was infeasible.

14. Are all infiltration systems marked to avoid compaction? ☐ Yes ☐ No

    Do all infiltration areas have pretreatment devices? ☐ Yes ☐ No

15. Description of areas of non-compliance noted during the inspection, required corrective actions, and recommended date of completion of corrective actions:

16. Proposed amendments to the SWPPP:

17. Potential areas of future concern:

18. Additional comments:

Disclosures:

- After discovery, the permit requires many of the deficiencies that may be found in this checklist be corrected within a specified period of time. See permit for more details.
- This inspection checklist is an option for small construction sites. Large construction sites and linear projects require more extensive/more location specific inspection requirements.
- The Permittee(s) is/are responsible for the inspection and maintenance of temporary and permanent water quality management BMPs as well as erosion prevention and sediment control BMPs until another Permittee has obtained coverage under this Permit according to Part II.B.5., or the project has undergone Final Stabilization and a Notice of Termination has been submitted to the MPCA.

ATTACHMENT C: MAINTENANCE PLAN FOR PERMANENT STORM WATER TREATMENT SYSTEM

ATTACHMENT C

STORMWATER MANAGEMENT FACILITY
MAINTENANCE SCHEDULE

1. All stormwater retention, detention and treatment basins must be inspected at least once a year to determine that basin retention and treatment characteristics are adequate. A storage treatment basin will be considered inadequate if sediment has decreased the wet storage volume by 50 percent or dry storage volume by 25 percent of its original design volume. Based on this inspection, if a stormwater basin requires sediment cleanout, the basin will be restored to its original design contours and vegetated state within one year of the inspection date.

2. All outlet structures, culverts, outfall structures and other stormwater facilities for which maintenance requirements are not otherwise specified herein must be inspected in the spring, summer and fall of each year. Within 30 days of the inspection date, all accumulated sediment and debris must be removed such that each stormwater facility operates as designed and permitted. Contributing drainage areas must be kept clear of litter and vegetative debris, inflow pipes and overflow spillways kept clear, inlet areas kept clean, and undesirable vegetation removed. Erosion impairing the function or integrity of the facilities, if any, will be corrected, and any structural damage impairing or threatening to impair the function of the facilities must be repaired.

3. Volume control facilities and contributing drainage areas must be inspected every three months during the operational period (between spring snowmelt and first substantial snowfall) and monitored after rainfall events of 1 inch or more to ensure that the contributing drainage area is clear of litter and debris, inflow pipes and overflow spillways are clear, inlet areas are clean, undesirable vegetation is removed and there is no erosion impairing or threatening to impair the function of a facility. If sediment has accumulated in a infiltration feature, within 30 days of inspection deposited sediments must be removed, the infiltration capacity of the underlying soils must be restored, and any surface disturbance must be stabilized. Inspection must ensure that sediment traps and forebays are trapping sediment and that more than 50 percent of the storage volume remains, the contributing drainage area is stable

(i.e., no erosion is observed), and inlets and outlet/overflow spillways are in good conditions with no erosion. Maintenance techniques used must protect the infiltration capacity of the practice by limiting soil compaction to the greatest extent possible (e.g., by using low-impact earth-moving equipment).

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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.

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SWPPP - ATTACHMENTS

SW1.5

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