Ramsey Fire Station #2

5650 ALPINE DRIVE NW
RAMSEY, MN 55303

Ramsey Fire Department

SITE PLAN REVIEW - 11/17/2014

LOCATION MAP

PROJECT TEAM

OWNER

RAMSEY FIRE DEPARTMENT
7550 SUNWOOD DRIVE NW
RAMSEY, MINNESOTA 55303

PH: 763.427.1410

ARCHITECTURE
INTERIOR DESIGN
LANDSCAPE ARCHITECTURE
STRUCTURAL ENGINEERING
MECHANICAL ENGINEERING
ELECTRICAL ENGINEERING

BKV GROUP, INC.
222 N. SECOND STREET
MINNEAPOLIS, MINNESOTA 55401

PH: 612.339.3752

CIVIL ENGINEERING

WENCK ASSOCIATES, INC.
1800 PIONEER CREEK CENTER
P.O. BOX 249
MAPLE PLAIN, MN 55359

PH: 763.479.4242

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SHEET NO.	SHEET NAME	11-17-2014 SITE PLAN REVIEW	11-19-2014 DESIGN DEVELOPMENT
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G121	CODE PLANS		
G130	SYMBOLS & ABBREVIATIONS		
G140	ACCESSIBILITY & MOUNTING HEIGHTS		
CIVIL			
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A552	WALL SECTIONS		
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A803	INTERIOR ELEVATIONS		
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S001	STRUCTURAL COVERSHEET		
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MECHIANICAL			
M000	MECHANICAL		
PLUMBING			
P000	PLUMBING		
FIRE PROTECTION			
FP000	FIRE PROTECTION		
ELECTRICAL			
E000	ELECTRICAL		
TECHNOLOGY			
T000	TECHNOLOGY		

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Kroos
Vogel
Group
Inc.

www.bkvgroup.com
EOE

CONSULTANTS

PROJECT TITLE
Ramsey Fire Station #2

KEY PLAN

ISSUE #	DATE	DESCRIPTION

NOT FOR CONSTRUCTION

CERTIFICATION

DATE	11/17/2014
DRAWN BY	MMR
CHECKED BY	CLC
COMMISSION NUMBER	1937.01

SHEET TITLE
COVER SHEET

SHEET NUMBER
G100

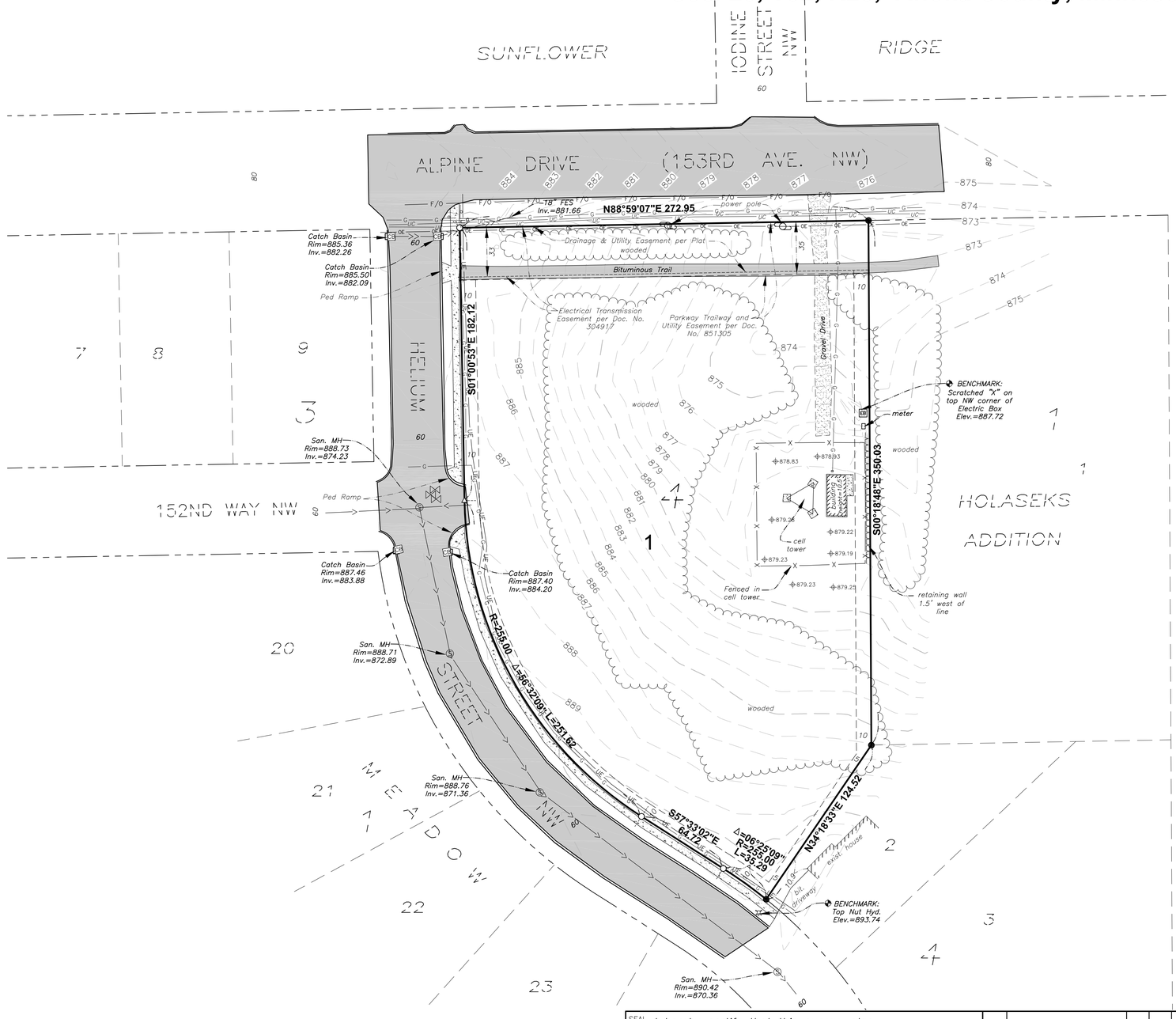
C:\Revit Local\1937-01_Ramsey2_ARCH_v2014_ccarter.rvt
11/17/2014 6:41:08 PM

Plot Date & Time: 18 September 2014@5:01 AM

CERTIFICATE OF SURVEY

Boundary and Topographic Survey

Sec. 23, T32, R25, Anoka County, Minnesota



LEGEND

- SET IRON MONUMENT
- FOUND IRON MONUMENT
- SET "PK" NAIL
- SANITARY SEWER MANHOLE
- STORM SEWER INLET
- HYDRANT
- WATER GATE VALVE
- ELECTRICAL PEDESTAL
- BENCHMARK
- 879.25 EXISTING SPOT ELEVATION
- FENCE LINE
- RETAINING WALL
- STORM SEWER
- SANITARY SEWER
- UNDERGROUND GAS
- UNDERGROUND CABLE
- OVERHEAD ELECTRIC
- UNDERGROUND ELECTRIC
- UNDERGROUND FIBER OPTIC
- RIGHT-OF-WAY LINE
- EXISTING EASEMENT LINE
- SURVEYED PROP. LINE/PLAT BOUNDARY
- CONCRETE SURFACE
- ASPHALT SURFACE
- GRAVEL SURFACE
- BUILDING

N

0 40 80 120

GRAPHIC SCALE IN FEET

TOTAL AREA = 2.35 ACRES

PROPERTY DESCRIPTION

Lot 1, Block 4, MEADOW, according to the record plat thereof.

SURVEYOR'S NOTES

1. Basis of bearing is Anoka County, MN Coordinate System.
2. Coordinates are Anoka County ground feet, based on Minnesota Coordinate System, NAD83, 1986 adjustment. Coordinate values dated 12/13/90.
3. Elevations depicted are based on NAVD 1988 Vertical Datum.
4. Source benchmark used: GSID Station #514 (MNDOT name: 0206 F AS MNDT) Elevation = 878.456
5. The boundary for this property is based on the applicable section 23 corner coordinates from Anoka County survey records and record plats and have been field verified.
6. Location of utilities existing on or serving the surveyed property have been determined by, observed evidence together with evidence from plans and markings obtained from utility companies. However, lacking excavation, the exact location of underground features cannot be accurately, completely and reliably depicted. Where additional or more detailed information is required, the client is advised that excavation may be necessary. This survey is not intended for construction purposes, prior to any digging or excavation call Gopher One Call. All utilities shown are per field shot from Ticket request No. 142473610.
7. This Survey has been preformed without the benefit of an update Title Commitment or Abstract.
8. No record information was provided or researched in regards to the existing cell tower site as shown.

SEAL

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.

David S. Landecker, MN Lic. No. 17008 — Date 9/18/14

REV	REVISION DESCRIPTION	DWN	APP	REV DATE
1	cell tower & building	MLH	DSL	9/18/14
#	DESCRIPTION	XXX	XXX	XX/XX/XX

PRIME CONSULTANT

Wenck

© Wenck Associates, Inc. Consulting Engineers

1800 Pioneer Creek Center, Maple Plain, MN 55359

Web Site: www.wenck.com

PH: 763-479-4200 FAX 763-479-4242

CLIENT NAME: CITY OF RAMSEY

PROJECT LOCATION: RAMSEY, MN

SHEET TITLE: CERTIFICATE OF SURVEY AND TOPOGRAPHIC SURVEY

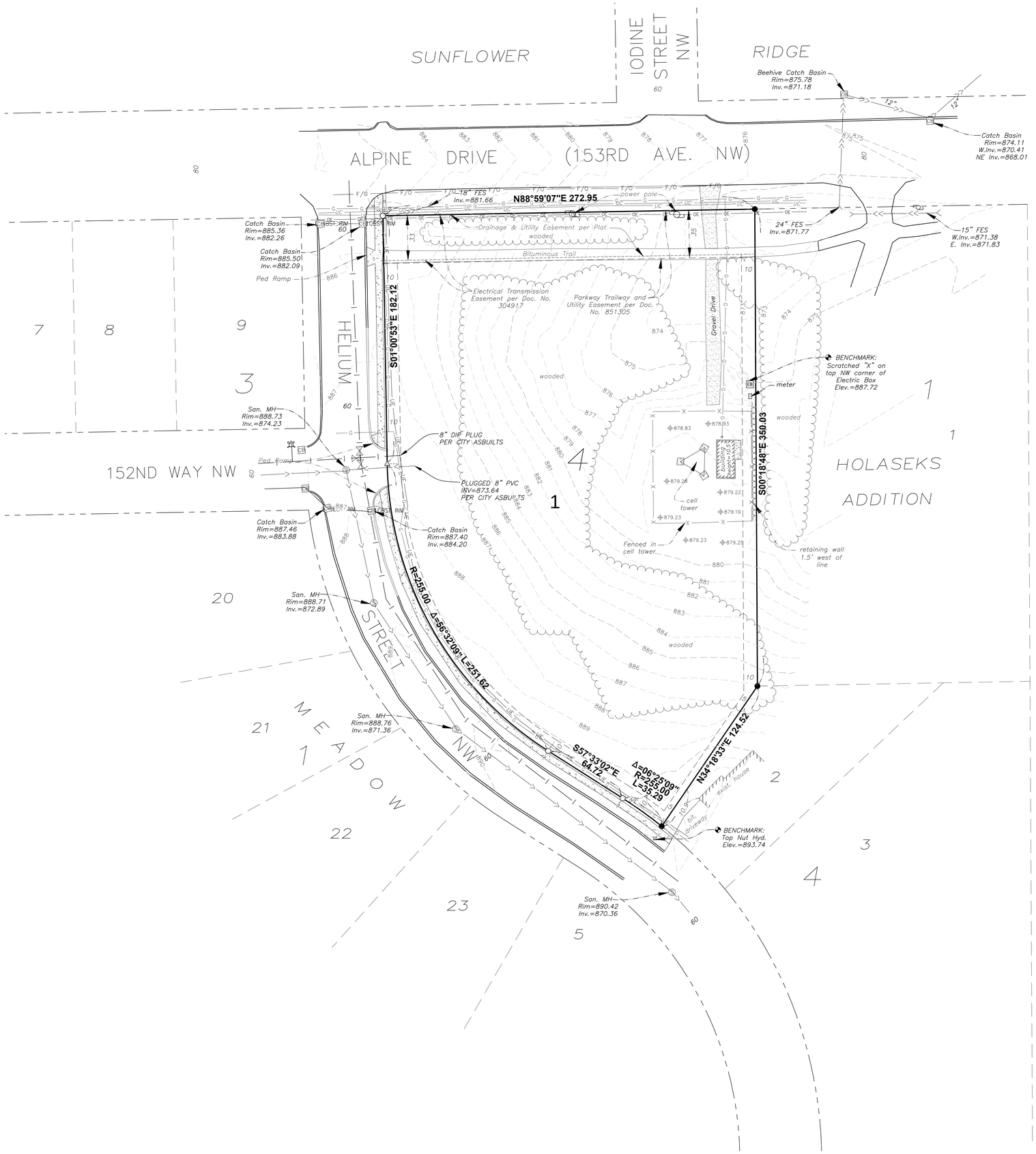
DWN BY	CHK'D	APP'D	DWG DATE
MLH	DSL	DSL	9/8/2014

SCALE 1" = 40'

PROJECT NO. B4988-0002

SHEET NO. 1 OF 1

M:\4988\0002\CAD\Civil\Certificate & topo.dwg



PROPERTY DESCRIPTION

Lot 1, Block 4, MEADOW, according to the record plat thereof.

TOTAL AREA = 2.35 ACRES

GENERAL NOTES

1. EXISTING CONDITIONS HAVE BEEN PROVIDED BY WENCK ASSOCIATES RECEIVED SEPTEMBER 8, 2014. ALL EXISTING FEATURES SHOWN SHALL BE FIELD VERIFIED BY CONTRACTOR.

WARNING:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR CALLING FOR LOCATIONS OF ALL EXISTING UTILITIES. THEY SHALL COOPERATE WITH ALL UTILITY COMPANIES IN MAINTAINING THEIR SERVICE AND/OR RELOCATION OF LINES.

THE CONTRACTOR SHALL CONTACT GOPHER STATE ONE CALL AT 651-454-0002 AT LEAST 48 HOURS IN ADVANCE FOR THE LOCATIONS OF ALL UNDERGROUND WIRES, CABLES, CONDUITS, PIPES, MANHOLES, VALVES OR OTHER BURIED STRUCTURES BEFORE DIGGING. THE CONTRACTOR SHALL REPAIR OR REPLACE THE ABOVE WHEN DAMAGED DURING CONSTRUCTION AT NO COST TO THE OWNER.

CALL BEFORE YOU DIG
GOPHER STATE ONE CALL
TWIN CITY AREA: 651-454-0002
TOLL FREE 1-800-252-1166

LEGEND

- SET IRON MONUMENT
- FOUND IRON MONUMENT
- SET "PK" NAIL
- SANITARY SEWER MANHOLE
- STORM SEWER INLET
- HYDRANT
- WATER GATE VALVE
- ELECTRICAL PEDESTAL
- BENCHMARK
- 879.25 EXISTING SPOT ELEVATION
- FENCE LINE
- RETAINING WALL
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- UNDERGROUND CABLE
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- CONCRETE SURFACE
- ASPHALT SURFACE
- GRAVEL SURFACE
- BUILDING

N

0 30 60
GRAPHIC SCALE IN FEET

BKV GROUP

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Engineering

Boarman Kroos Vogel Group Inc.

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Minneapolis MN 55401
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Facsimile: 612-339-6212
www.bkvgroup.com

Wenck
Engineers • Scientists
Business Professionals

ISSUANCE

PROJECT TITLE

RAMSEY
FIRE STATION

PRELIMINARY
NOT
FOR
CONSTRUCTION

CERTIFICATION

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.

11/17/2014
Jared T Ward — Date

48677
License Number

REVISION	DATE
DD SUBMITTAL	11/17/2014

WENCK JOB NO	1634-07
DATE	11-17-2014
DRAWN BY	KDK
CHECKED BY	JTW
COMMISSION NO.	1953.01

SHEET TITLE

EXISTING
CONDITIONS

SHEET NUMBER

C101

PLOTTED: 11/17/2014 10:35:32 AM

BKVTB-30x42

GENERAL NOTES

1. ALL EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO ANY REMOVAL WORK.
2. THE RELOCATION AND OR PROTECTION OF ALL EXISTING UTILITIES MUST BE COORDINATED BY THE CONTRACTOR AND ANY COSTS FOR SUCH WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR EXTRA TIME AND EFFORT OF PROVISIONS NECESSARY TO WORK AROUND OR UNDER ANY UTILITIES.
3. SAWCUT CONCRETE SIDEWALK AND CURB AND GUTTER AT NEAREST JOINT.
4. SAWCUT BITUMINOUS FULL DEPTH AT REMOVAL LIMITS. PROVIDE STABLE AND VERTICAL SURFACE FOR THE PROPOSED PAVEMENT INTERFACE.
5. CAREFULLY REMOVE AND STOCK PILE EXISTING AGGREGATE BASE MATERIAL, FOR RE-USE BY PAVING CONTRACTOR.
6. MAINTAIN ACCESS TO EXISTING BUILDING & PARKING LOT DURING CONSTRUCTION. PROVIDE TEMPORARY SIGNAGE AND BARRICADES AS NECESSARY

WARNING:

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LEGEND

- SET IRON MONUMENT
- FOUND IRON MONUMENT
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- STORM SEWER INLET
- HYDRANT
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- ELECTRICAL PEDESTAL
- BENCHMARK
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- X — X FENCE LINE
- RETAINING WALL
- STORM SEWER
- SANITARY SEWER
- G — G UNDERGROUND GAS
- UC — UC UNDERGROUND CABLE
- OE — OE OVERHEAD ELECTRIC
- UE — UE UNDERGROUND ELECTRIC
- F/O — F/O UNDERGROUND FIBER OPTIC
- RIGHT-OF-WAY LINE
- EXISTING EASEMENT LINE
- SURVEYED PROP. LINE/PLAT BOUNDARY
- CONCRETE SURFACE
- ASPHALT SURFACE
- GRAVEL SURFACE
- BUILDING

- SAW CUT LINE
- REMOVE CONCRETE CURB AND GUTTER
- REMOVE BITUMINOUS PAVEMENT
- REMOVE GRAVEL DRIVE
- CLEAR AND GRUB

N

0 30 60
GRAPHIC SCALE IN FEET

PLOTTED: 11/17/2014 10:35:42 AM

BKVTB-30x42

BKV GROUP

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Landscape Architecture
Engineering

Boarman Kroos Vogel Group Inc.

222 North Second Street
Minneapolis MN 55401
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DD SUBMITTAL	11/17/2014

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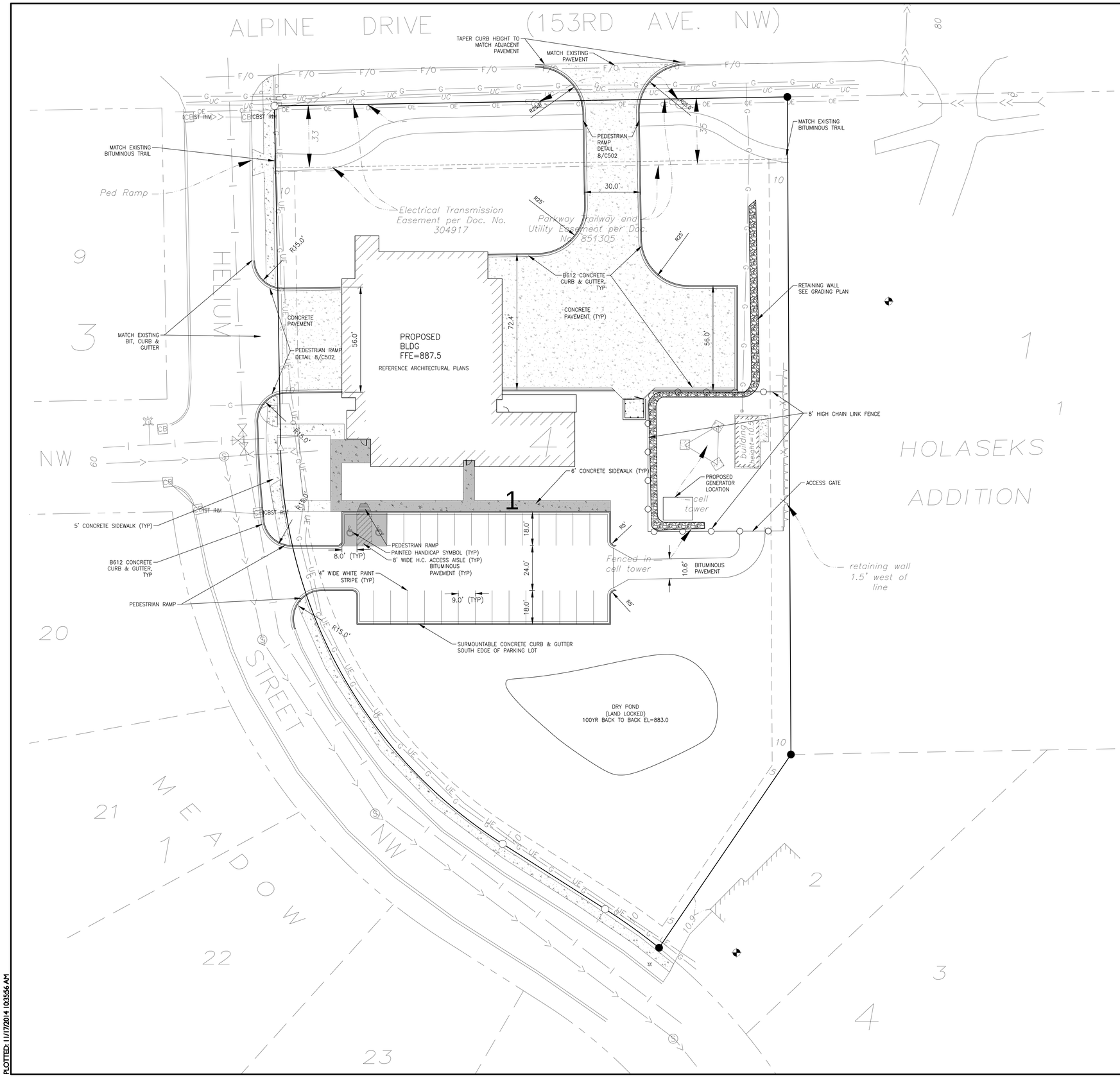
DATE	11-17-2014
DRAWN BY	KDK
CHECKED BY	JTW
COMMISSION NO.	1953.01

SHEET TITLE

REMOVAL
AND
DEMOLITION
PLAN

SHEET NUMBER

C102



PROPERTY DESCRIPTION

Lot 1, Block 4, MEADOW, according to the record plat thereof.

TOTAL AREA = 2.35 ACRES

GENERAL NOTES

1. EXISTING CONDITIONS HAVE BEEN PROVIDED BY WENCK ASSOCIATES RECEIVED SEPTEMBER 8, 2014. ALL EXISTING FEATURES SHOWN SHALL BE FIELD VERIFIED BY CONTRACTOR.
2. ALL DIMENSIONS ARE TO BACK OF CURB UNLESS OTHERWISE NOTED.
3. BUILDING DIMENSIONS ARE APPROXIMATE. REFER TO BUILDING & FLOOR PLANS FOR EXACT DIMENSIONS.
4. EXISTING SIDEWALK SECTIONS IS APPROXIMATELY 4" CONCRETE AND 4" AGGREGATE BASE CLASS 5.
5. ADA ACCESS: PARKING, ACCESS AISLES & STOOPS SHALL HAVE A 2% MAX SLOPE EACH WAY.
   ALL OTHER AREAS SHALL HAVE A MAXIMUM 5% RUNNING SLOPE AND MAX 2% CROSS SLOPE
   ADA ACCESS:
   PARKING, ACCESS AISLES, LANDINGS & STOOPS SHALL HAVE A 2% MAX SLOPE EACH WAY.
   ALL OTHER AREAS SHALL HAVE A MAXIMUM 5% RUNNING SLOPE AND MAX 2% CROSS SLOPE.
6. ALL SIGNS SHALL BE ALUMINUM. ALL STOP SIGNS SHALL BE 24" UNLESS NOTED OTHERWISE.

PROPOSED PARKING STALLS:
H.C.= 2
STANDARD = 28
TOTAL = 30

WARNING:

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LEGEND

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- ASPHALT SURFACE
- GRAVEL SURFACE
- BUILDING
- PROPERTY LINE
- EASEMENT LINE
- SETBACK LINE
- CONCRETE SIDEWALK
- CONCRETE CURB AND GUTTER
- BACK OF CURB
- STOP SIGN

N

0 20 40
GRAPHIC SCALE IN FEET

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ISSUANCE

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CERTIFICATION

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11/17/2014
Jared T Ward — Date

48677
License Number

REVISION	DATE
DD SUBMITTAL	11/17/2014

WENCK JOB NO	1634-07
DATE	11-17-2014
DRAWN BY	KDK
CHECKED BY	JTW
COMMISSION NO.	1953.01

SHEET TITLE

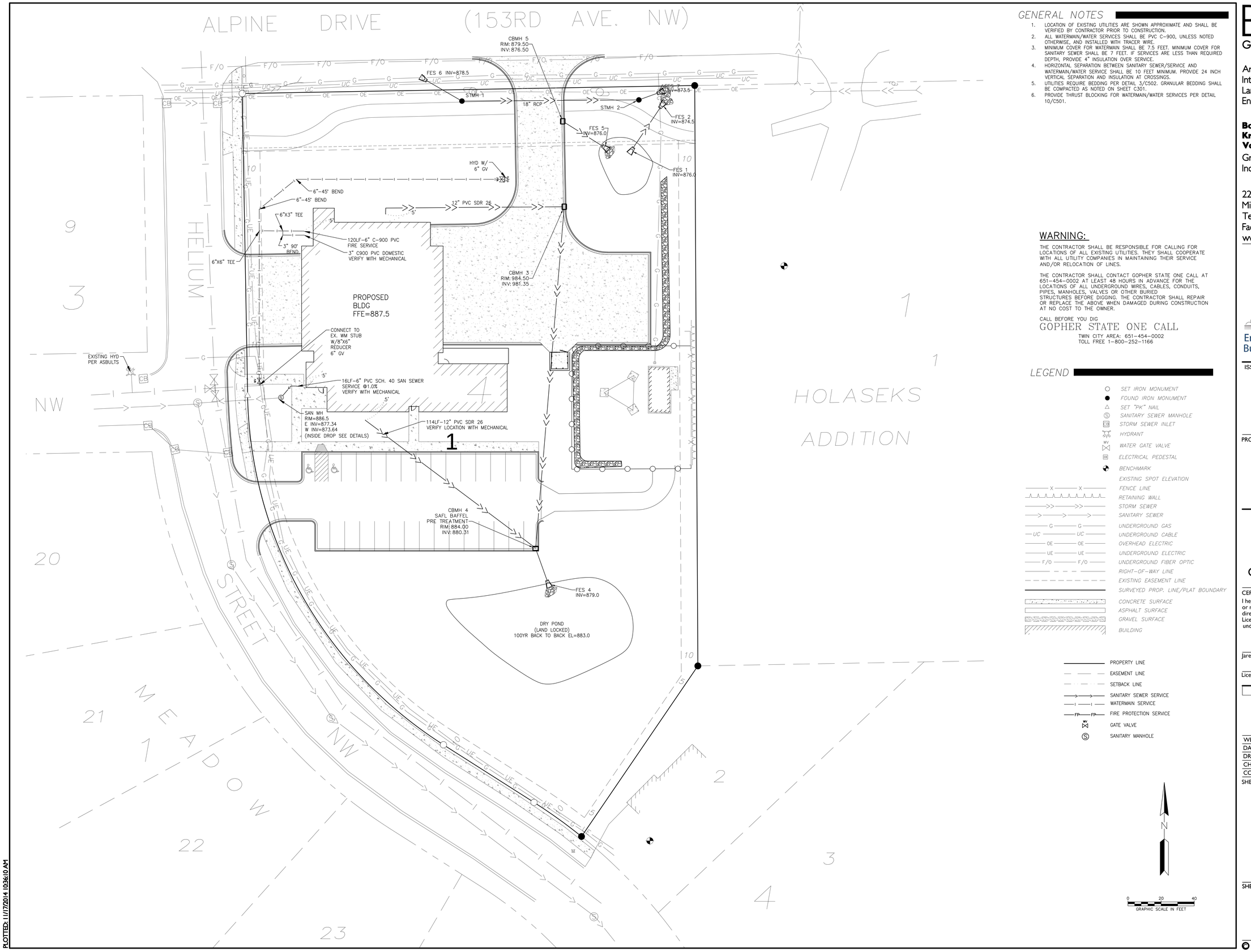
CIVIL
SITE
PLAN

SHEET NUMBER

C103

PLOTTED: 11/17/2014 10:35:56 AM

BKVTB-30x42



GENERAL NOTES

1. LOCATION OF EXISTING UTILITIES ARE SHOWN APPROXIMATE AND SHALL BE VERIFIED BY CONTRACTOR PRIOR TO CONSTRUCTION.
2. ALL WATERMAIN/WATER SERVICES SHALL BE PVC C-900, UNLESS NOTED OTHERWISE, AND INSTALLED WITH TRACER WIRE.
3. MINIMUM COVER FOR WATERMAIN SHALL BE 7.5 FEET. MINIMUM COVER FOR SANITARY SEWER SHALL BE 7 FEET. IF SERVICES ARE LESS THAN REQUIRED DEPTH, PROVIDE 4" INSULATION OVER SERVICE.
4. HORIZONTAL SEPARATION BETWEEN SANITARY SEWER/SERVICE AND WATERMAIN/WATER SERVICE SHALL BE 10 FEET MINIMUM. PROVIDE 24 INCH VERTICAL SEPARATION AND INSULATION AT CROSSINGS.
5. UTILITIES REQUIRE BEDDING PER DETAIL 3/C502. GRANULAR BEDDING SHALL BE COMPACTED AS NOTED ON SHEET C301.
6. PROVIDE THRUST BLOCKING FOR WATERMAIN/WATER SERVICES PER DETAIL 10/C501.

WARNING:

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- EASEMENT LINE
- SETBACK LINE
- SANITARY SEWER SERVICE
- WATERMAIN SERVICE
- FIRE PROTECTION SERVICE
- GATE VALVE
- SANITARY MANHOLE

N

0 20 40
GRAPHIC SCALE IN FEET

PLOTTED: 11/17/2014 10:36:10 AM

BKVTB-30x42

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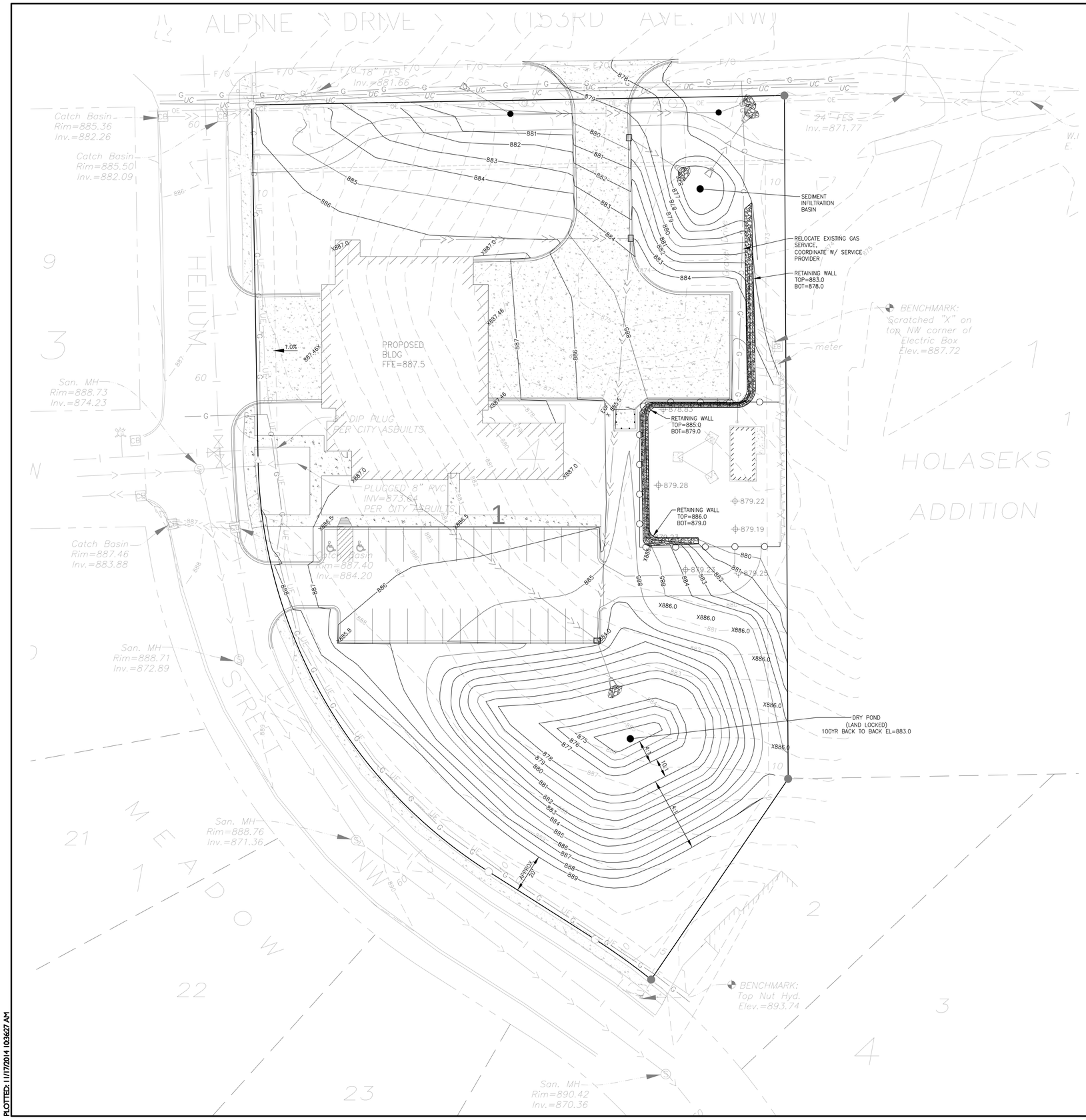
WENCK JOB NO	1634-07
DATE	11-17-2014
DRAWN BY	KDK
CHECKED BY	JTW
COMMISSION NO.	1953.01

SHEET TITLE

UTILITY PLAN

SHEET NUMBER

C201



GRADING NOTES

1. TOPSOIL SHALL BE PLACED TO A MINIMUM OF 4" DEPTH OVER ALL DISTURBED AREAS, SHOWN TO BE TURF OR LANDSCAPED.
2. THE SITE HAS NOT NECESSARILY BEEN DESIGNED TO BALANCE THE ON-SITE MATERIALS. CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMPORT/EXPORT OF SOIL AS NECESSARY TO ACHIEVE THE FINAL GRADE SHOWN ON THE DRAWINGS.
3. CONTRACTOR SHALL ASSURE POSITIVE DRAINAGE AWAY FROM BUILDING FOR ALL NATURAL AND PAVED AREAS.
4. THE EXISTING TOPSOIL ON SITE VARIES IN DEPTH. IT IS THE CONTRACTOR'S RESPONSIBILITY THAT ALL SURFACE VEGETATION AND ANY TOPSOIL OR OTHER LOOSE, SOFT OR OTHERWISE UNSUITABLE MATERIAL BE REMOVED FROM THE IMPERVIOUS AREAS PRIOR TO PLACEMENT OF ANY FILL.
5. ALL SOILS TESTING SHALL BE COMPLETED BY THE OWNER'S GEOTECHNICAL ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED SOIL TESTS AND INSPECTIONS WITH THE GEOTECHNICAL ENGINEER.
6. CONTRACTOR IS RESPONSIBLE FOR GRADING/COMPACTION RECOMMENDATIONS PER GEOTECHNICAL EVALUATION REPORT DATED SEPT 7, 2011 INCLUDING:
   A. COMPACT BACKFILL, FILL AND SUBGRADE TO RELATIVE COMPACTION (ASTM D 698) AS FOLLOWS:
      1) BELOW FOUNDATIONS – 98% STANDARD PROCTOR
      2) BELOW SLABS – 95% STANDARD PROCTOR
      3) BELOW PAVEMENTS, WITHIN 3 FEET OF SUBGRADE ELEVATIONS – 100% STANDARD PROCTOR
      4) BELOW PAVEMENTS, MORE THAN 3 FEET BELOW SUBGRADE ELEVATIONS – 95% STANDARD PROCTOR
      5) BELOW LANDSCAPE SURFACES – 90% STANDARD PROCTOR
   B. COMPACT BACKFILL, FILL AND SUBGRADE TO WITHIN ±3% OF OPTIMUM MOISTURE FOR SANDS AND WITHIN -1% TO +3% OF OPTIMUM MOISTURE FOR SILTY/CLAYEY SOILS.
   C. BACKFILL AND FILL SHALL BE SPREAD IN LOOSE LIFTS OF 8 INCHES. (MAX)
7. EXCAVATION FOR THE PURPOSE OF REMOVING UNSTABLE OR UNSUITABLE SHALL BE COMPLETED AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER. EMBANKMENT MATERIAL PLACED IN THE BUILDING PAD AREA AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER.
8. PROPOSED CONTOURS ARE TO FINISHED SURFACE GRADE.
9. CONTRACTOR SHALL ADJUST AND/OR CUT EXISTING PAVEMENT AS NECESSARY TO ASSURE A SMOOTH FIT AND CONTINUOUS GRADE ALONG MATCHING PAVEMENT AREA, OR OTHER SURFACES.
10. THE CONTRACTOR SHALL PROVIDE DE-WATERING MEASURES AS REQUIRED OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER.

WARNING:

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THE CONTRACTOR SHALL CONTACT GOPHER STATE ONE CALL AT 651-454-0002 AT LEAST 48 HOURS IN ADVANCE FOR THE LOCATIONS OF ALL UNDERGROUND WIRES, CABLES, CONDUITS, PIPES, MANHOLES, VALVES OR OTHER BURIED STRUCTURES BEFORE DIGGING. THE CONTRACTOR SHALL REPAIR OR REPLACE THE ABOVE WHEN DAMAGED DURING CONSTRUCTION AT NO COST TO THE OWNER.

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GOPHER STATE ONE CALL
TWIN CITY AREA: 651-454-0002
TOLL FREE 1-800-252-1166

LEGEND

- PROPERTY LINE
- EASEMENT LINE
- SETBACK LINE
- EXISTING MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- DELINEATED WETLAND BOUNDARY
- APPROXIMATE EDGE OF TREES
- EXISTING STORM SEWER
- UNDERGROUND GAS
- UNDERGROUND FIBER OPTIC
- UNDERGROUND TELEPHONE
- OVERHEAD ELECTRIC
- UNDERGROUND ELECTRIC
- EXISTING SANITARY SEWER
- EXISTING FORCEMAIN
- EXISTING WATERMAIN
- CATCH BASIN
- GATE VALVE
- HYDRANT
- MANHOLE
- EXISTING MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED MAJOR CONTOUR

GRADING SUMMARY

CUT = 3,554 CY
FILL = 9,462 CY
HOLD DOWN = 1,000 CY
NET FILL = 4,908 CY (BORROW)

N

0 20 40
GRAPHIC SCALE IN FEET

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ISSUANCE

PROJECT TITLE

RAMSEY
FIRE STATION

PRELIMINARY
NOT
FOR
CONSTRUCTION

CERTIFICATION

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.

11/17/2014
Jared T Ward Date

48677
License Number

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DD SUBMITTAL	11/17/2014

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CHECKED BY	JTW
COMMISSION NO.	1953.01

SHEET TITLE

PRELIMINARY
SITE GRADING
PLAN

SHEET NUMBER

C301

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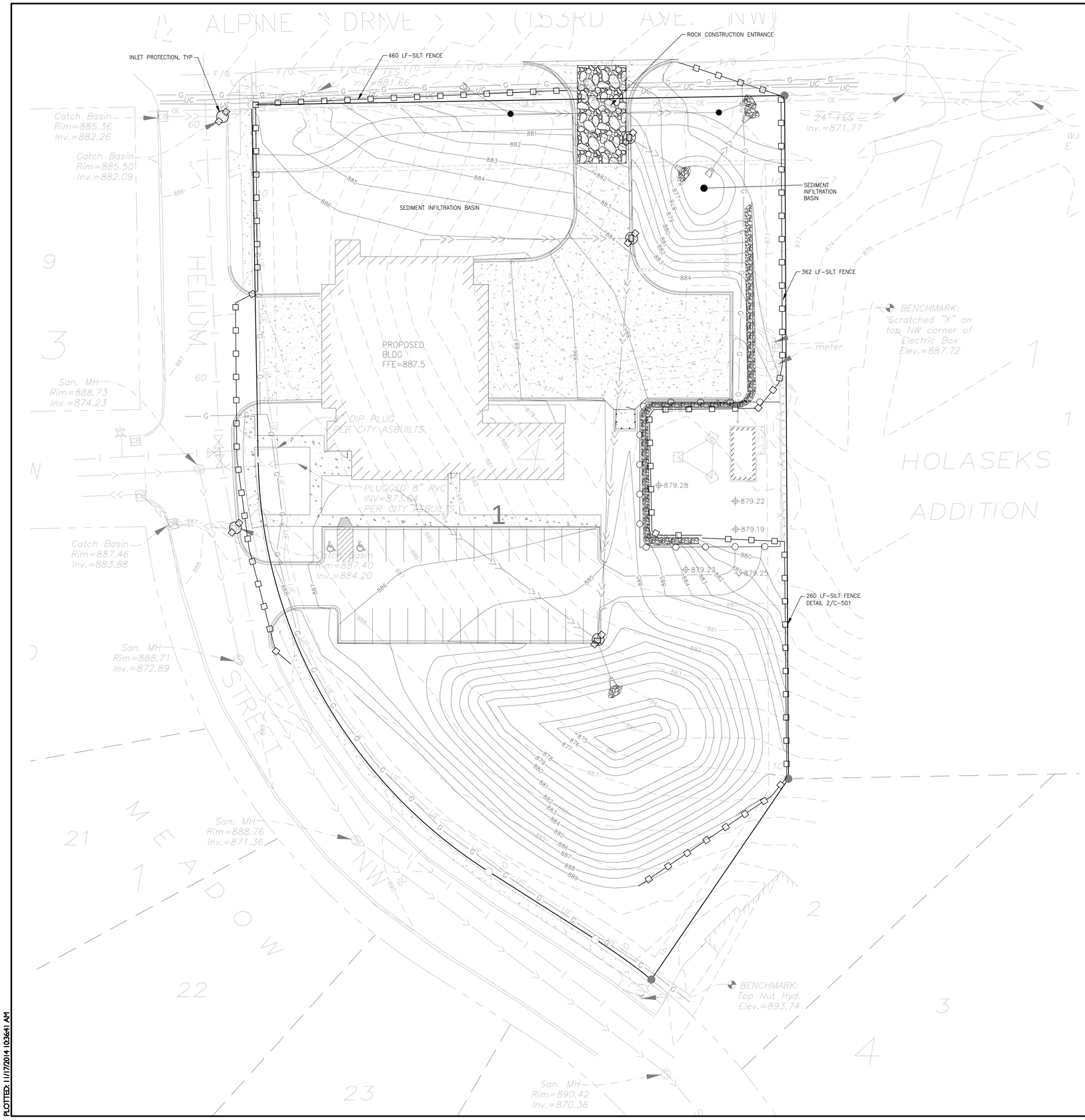

GRADING NOTES

1. TOPSOIL SHALL BE PLACED TO A MINIMUM OF 4" DEPTH OVER ALL DISTURBED AREAS, SHOWN TO BE TURF OR LANDSCAPED.
2. THE SITE HAS NOT NECESSARILY BEEN DESIGNED TO BALANCE THE ON-SITE MATERIALS. CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMPORT/EXPORT OF SOIL AS NECESSARY TO ACHIEVE THE FINAL GRADE SHOWN ON THE DRAWINGS.
3. CONTRACTOR SHALL ASSURE POSITIVE DRAINAGE AWAY FROM BUILDING FOR ALL NATURAL AND PAVED AREAS.
4. THE EXISTING TOPSOIL ON SITE VARIES IN DEPTH. IT IS THE CONTRACTOR'S RESPONSIBILITY THAT ALL SURFACE VEGETATION AND ANY TOPSOIL OR OTHER LOOSE, SOFT OR OTHERWISE UNSUITABLE MATERIAL BE REMOVED FROM THE IMPERVIOUS AREAS PRIOR TO PLACEMENT OF ANY FILL.
5. ALL SOILS TESTING SHALL BE COMPLETED BY THE OWNER'S GEOTECHNICAL ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED SOIL TESTS AND INSPECTIONS WITH THE GEOTECHNICAL ENGINEER.
6. CONTRACTOR IS RESPONSIBLE FOR GRADING/COMPACTION RECOMMENDATIONS PER GEOTECHNICAL EVALUATION REPORT DATED SEPT 7, 2011 INCLUDING:
   A. COMPACT BACKFILL, FILL AND SUBGRADE TO RELATIVE COMPACTION (ASTM D 698) AS FOLLOWS:
      1) BELOW FOUNDATIONS – 98% STANDARD PROCTOR
      2) BELOW SLABS – 95% STANDARD PROCTOR
      3) BELOW PAVEMENTS, WITHIN 3 FEET OF SUBGRADE ELEVATIONS – 100% STANDARD PROCTOR
      4) BELOW PAVEMENTS, MORE THAN 3 FEET BELOW SUBGRADE ELEVATIONS – 95% STANDARD PROCTOR
      5) BELOW LANDSCAPE SURFACES – 90% STANDARD PROCTOR
   B. COMPACT BACKFILL, FILL AND SUBGRADE TO WITHIN ±3% OF OPTIMUM MOISTURE FOR SANDS AND WITHIN −1% TO +3% OF OPTIMUM MOISTURE FOR SILTY/CLAYEY SOILS.
   C. BACKFILL AND FILL SHALL BE SPREAD IN LOOSE LIFTS OF 8 INCHES. (MAX)
7. EXCAVATION FOR THE PURPOSE OF REMOVING UNSTABLE OR UNSUITABLE SHALL BE COMPLETED AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER. EMBANKMENT MATERIAL PLACED IN THE BUILDING PAD AREA AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER.
8. PROPOSED CONTOURS ARE TO FINISHED SURFACE GRADE.
9. CONTRACTOR SHALL ADJUST AND/OR CUT EXISTING PAVEMENT AS NECESSARY TO ASSURE A SMOOTH FIT AND CONTINUOUS GRADE ALONG MATCHING PAVEMENT AREA, OR OTHER SURFACES.
10. THE CONTRACTOR SHALL PROVIDE DE-WATERING MEASURES AS REQUIRED OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER.

WARNING:

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- HYDRANT
- MANHOLE
- EXISTING MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- SILT FENCE
- ROCK CONSTRUCTION ENTRANCE
- INLET PROTECTION
- BIO LOG EROSION CONTROL
- EROSION CONTROL BLANKET
- RIPRAP

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SHEET TITLE

EROSION &
SEDIMENT
CONTROL PLAN

SHEET NUMBER

C401

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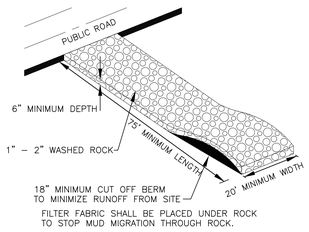
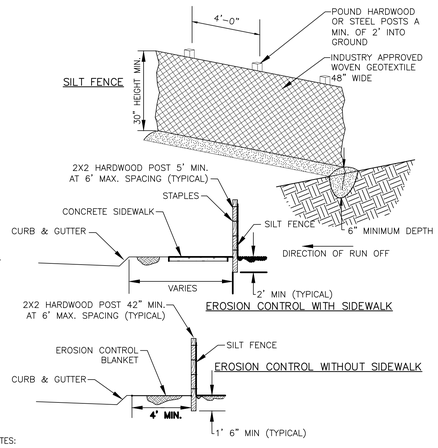


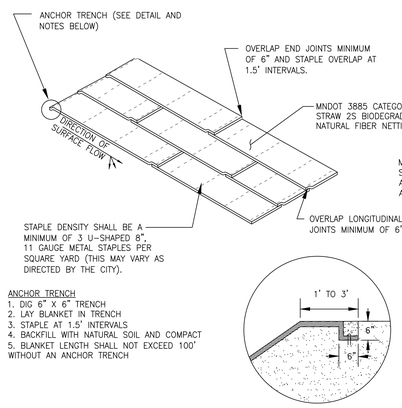
1 C501 ROCK CONSTRUCTION ENTRANCE
NOT TO SCALE



NOTES:

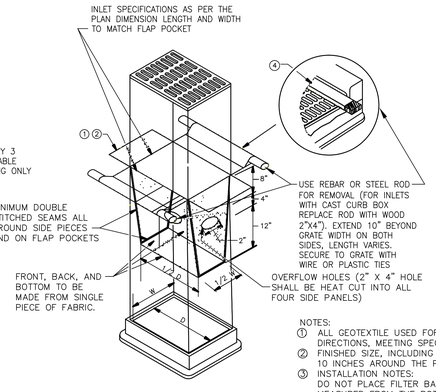
1. INSTALL SILT FENCE PER PLAN SET BEFORE BEGINNING CONSTRUCTION AND MAINTAIN PER SHEET C201.
2. REPLACE TORN, OVERBURDENED, OR DECOMPOSING SILT FENCE WITHIN 24 HOURS.
3. TO JOIN SECTIONS OF SILT FENCE, POSITION POSTS TO OVERLAP. FABRIC SHOULD FOLD AROUND EACH POST ONE FULL TURN.

2 C501 SILT FENCE DETAIL
NOT TO SCALE



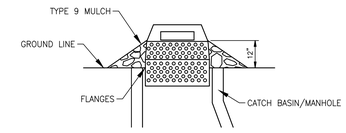
ANCHOR TRENCH
1. DIG 6" X 6" TRENCH
2. LAY BLANKET IN TRENCH
3. STAPLE AT 1.5' INTERVALS
4. BACKFILL WITH NATURAL SOIL AND COMPACT
5. BLANKET LENGTH SHALL NOT EXCEED 100' WITHOUT AN ANCHOR TRENCH

3 C501 EROSION CONTROL BLANKET DETAIL
NOT TO SCALE



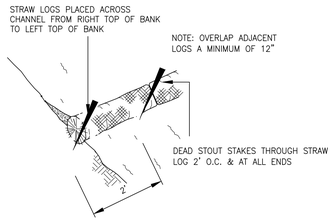
NOTES:
① ALL GEOTEXTILE USED FOR INLET PROTECTION SHALL BE MONOFILAMENT IN BOTH DIRECTIONS, MEETING SPEC. 3886.
② FINISHED SIZE, INCLUDING POCKETS WHERE REQUIRED SHALL EXTEND A MINIMUM OF 10 INCHES AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.
③ INSTALLATION NOTES:
DO NOT PLACE FILTER BAG INSERT IN INLETS SHALLOWER THAN 30 INCHES, MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE. THE PLACED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE OF 3 INCHES BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES. WHERE NECESSARY THE CONTRACTOR SHALL CLINCH THE BAG, USING PLASTIC ZIP TIES,TO ACHIEVE THE 3 INCH SIDE CLEARANCE.
④ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2"X4" OR USE A ROCK SOCK OR SAND BAGS IN PLACE OF THE FLAP POCKETS.

4 C501 INLET PROTECTION DETAIL
NOT TO SCALE

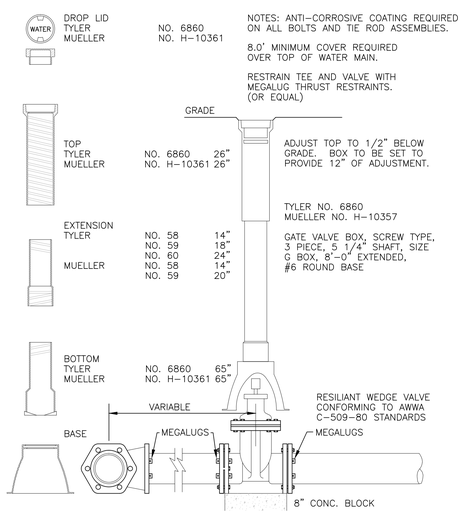


SEDIMENT CONTROL INLET HAT

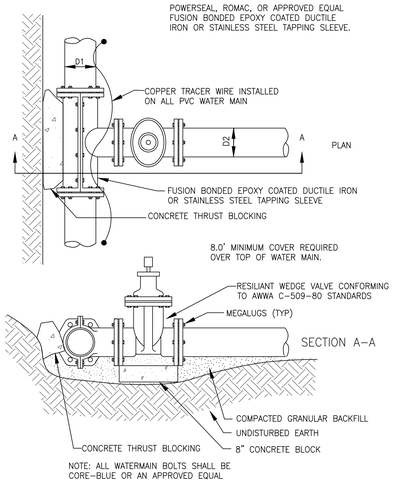
NOTE:
THE SEDIMENT CONTROL BARRIER SHALL BE A METAL OR PLASTIC/POLYETHYLENE RISER SIZED TO FIT INSIDE THE CATCH BASIN/MANHOLE; HAVE PERFORATIONS TO ALLOW FOR WATER INFILTRATION; HAVE AN OVERFLOW OPENING, FLANGES AND A LID/COVER.



5 C501 BIOLOG DETAIL
NOT TO SCALE

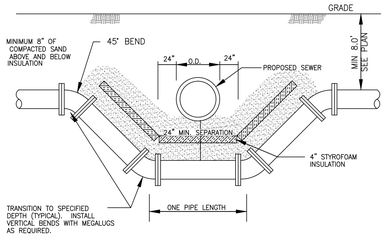


6 C501 GATE VALVE AND BOX DETAIL
NOT TO SCALE

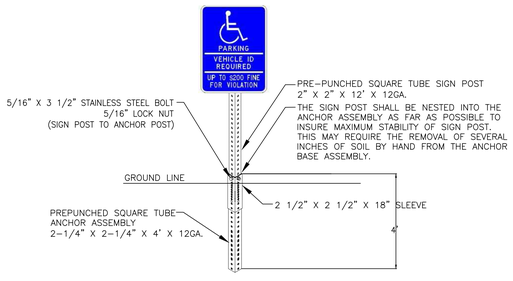


NOTE: ALL WATERMAIN BOLTS SHALL BE CORE-BLUE OR AN APPROVED EQUAL

7 C501 WET TAP DETAIL
NOT TO SCALE



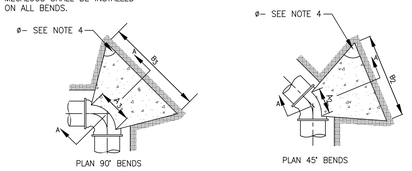
8 C501 WATERMAIN OFFSET DETAIL
NOT TO SCALE



9 C501 HANDICAP SIGN AND POST DETAIL
NOT TO SCALE

NOTES:
1. SHAPE OF BACK OF BUTTRESS MAY VERY AS LONG AS POURED AGAINST FIRM UNDISTURBED EARTH.
2. DIMENSION C1,C2,C3 SHOULD BE LARGE ENOUGH TO MAKE ANGLE ø EQUAL TO OR LARGER THAN 45°.
3. DIMENSION A1,A2,A3 SHOULD BE AS LARGE AS POSSIBLE WITHOUT INTERFERING WITH MJ BOLTS.
4. ø = 45° MINIMUM.
5. PLACE POLYETHYLENE BETWEEN CONCRETE & PIPE.
6. MEGALUGS SHALL BE INSTALLED ON ALL BENDS.

BUTTRESS DIMENSIONS						
PIPE SIZE	22 1/2° BEND		45° BEND		90° BEND	
	B_1	D_1	B_2	D_2	B_3	D_3
6"	1'-5"	1'-5"	1'-5"	1'-5"	2'-1"	1'-6"
8"	1'-5"	1'-5"	2'-1"	1'-6"	2'-8"	2'-0"
12"	1'-10"	1'-10"	3'-4"	2'-0"	4'-9"	2'-6"
16"	3'-0"	2'-0"	3'-10"	3'-0"	6'-2"	3'-6"
20"	3'-6"	2'-8"	5'-6"	3'-4"	8'-4"	4'-0"
24"	4'-4"	3'-0"	6'-10"	3'-10"	9'-8"	5'-0"
30"	–	–	9'-3"	6'-0"	17'-0"	6'-0"



NOTE: ALL WATERMAIN BOLTS SHALL BE CORE-BLUE OR APPROVED EQUAL

10 C501 CONCRETE THRUST BLOCKING DETAIL
NOT TO SCALE

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SHEET TITLE

DETAILS

SHEET NUMBER

C501

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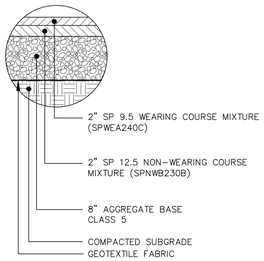
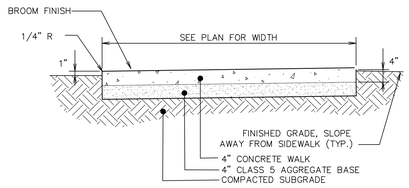
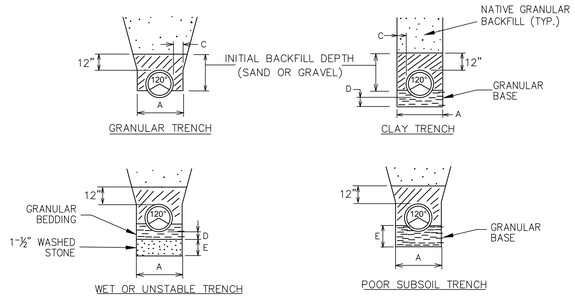


1 C502 PARKING LOT TYPICAL SECTION
NOT TO SCALE



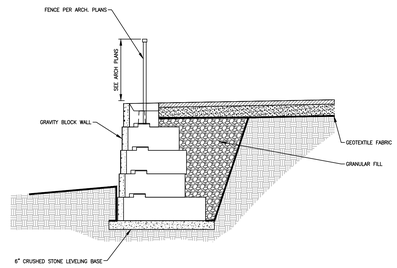
2 C502 CONCRETE SIDEWALK
NOT TO SCALE



A=O.D. PIPE + 16"(MIN) OR O.D. PIPEx1.25 + 12" (WHICHEVER IS GREATER)
C=6" MIN.
D=3" MIN.
E=6" MIN.

NOTES:
1. VERIFY TRENCH CONDITIONS IN FIELD
2. INSTALL PVC AND HDPE PIPE PER ASTM D2321

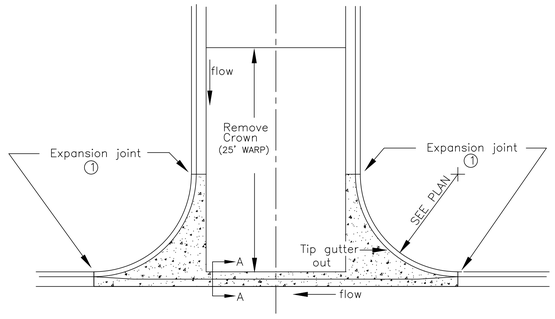
3 C502 TYPICAL TRENCH SECTIONS
NOT TO SCALE



8 C502 TYPICAL SECTION – BLOCK WALL
NOT TO SCALE

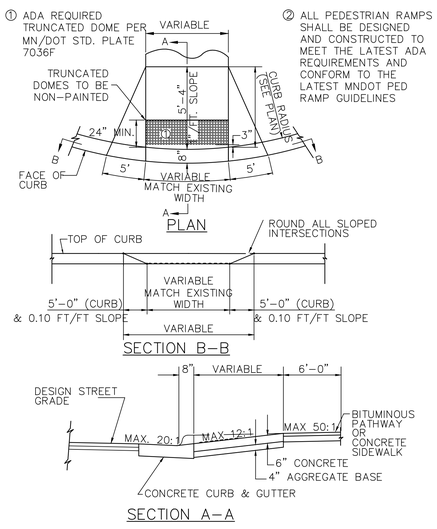
5 C502 CONCRETE CURB AND GUTTER
NOT TO SCALE

6 C502 CONCRETE JOINTS
NOT TO SCALE



NOTES:
1. 1/2" Preformed joint filler material – AASHTO M213.
2. No Contraction Joints in Cross Gutter.

7 C502 CONCRETE VALLEY GUTTER
NOT TO SCALE



8 C502 PEDESTRIAN RAMP
NOT TO SCALE

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SHEET TITLE

DETAILS

SHEET NUMBER

C502

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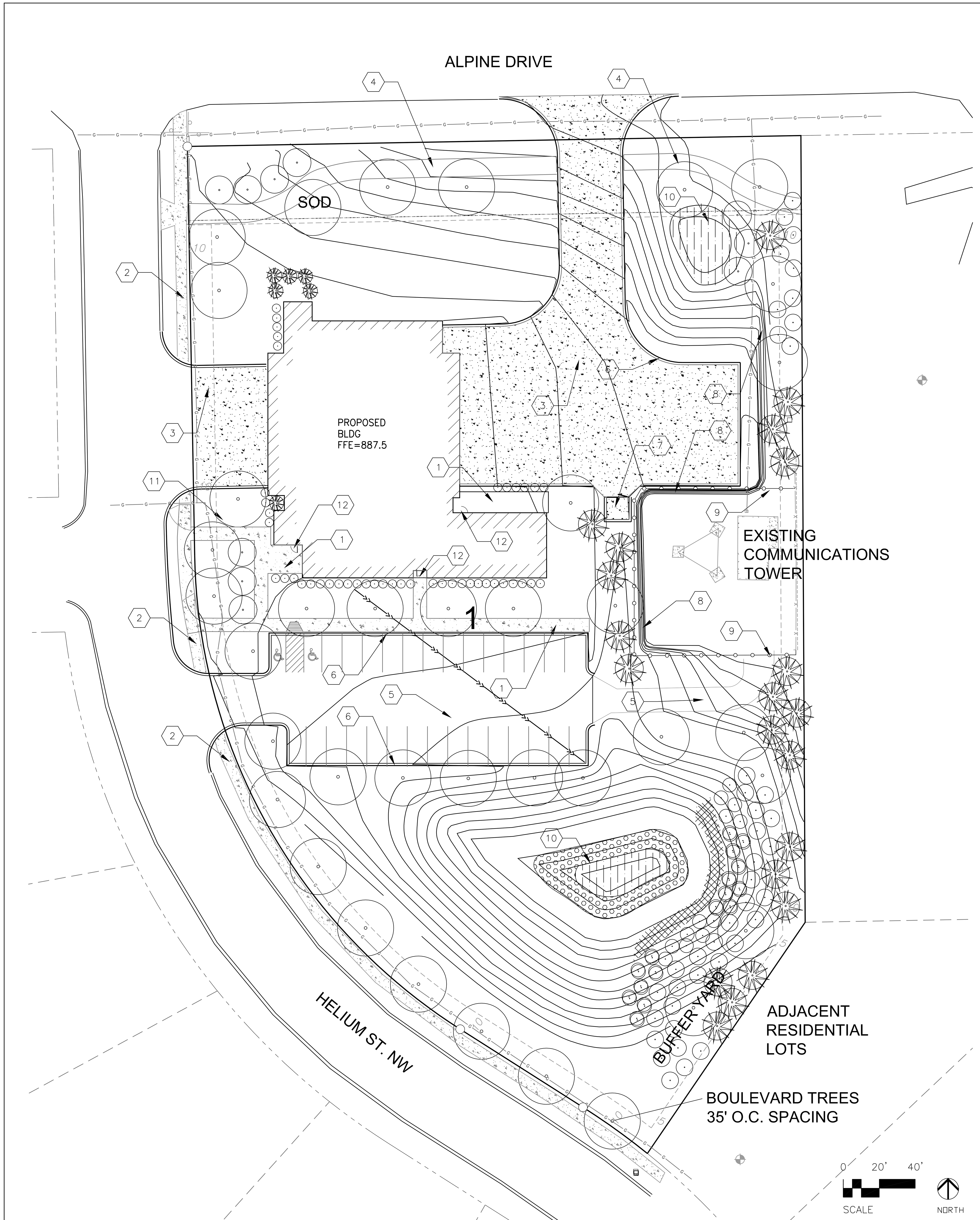

LANDSCAPE PLAN
1" = 20'-0"

KEY NOTES

1. PLAIN CONCRETE WALK, 5" THICKNESS; BROOM FINISH
2. EXISTING CONCRETE TO REMAIN
3. BITUMINOUS PAVING; SEE CIVIL
4. BITUMINOUS TRAIL, RELOCATED FROM EXISTING LOCATION; SEE CIVIL
5. REINFORCED CONCRETE DRIVE APRON, 8" THICKNESS
6. CONCRETE CURB AND GUTTER; SEE CIVIL
7. TRASH ENCLOSURE; SEE ARCHITECTURE
8. RETAINING WALL; SEE CIVIL
9. RELOCATED SECURITY FENCE; SEE SPEC.
10. RAIN GARDEN PLANTING BED, MIXED PERENNIALS; SEE L101
11. FLAG POLES (3); SEE SPEC.
12. BUILDING ENTRY

GENERAL NOTES

LANDSCAPE CONTRACTOR SHALL INSPECT THE SITE AND BECOME FAMILIAR WITH EXISTING CONDITIONS RELATING TO THE NATURE AND SCOPE OF WORK.

LANDSCAPE CONTRACTOR SHALL VERIFY PLAN LAYOUT AND DIMENSIONS SHOWN AND BRING TO THE ATTENTION OF THE LANDSCAPE ARCHITECT DISCREPANCIES WHICH MAY COMPROMISE THE DESIGN AND/OR INTENT OF THE PROJECT'S LAYOUT.

LANDSCAPE CONTRACTOR SHALL ASSURE COMPLIANCE WITH APPLICABLE CODES AND REGULATIONS GOVERNING THE WORK AND/OR MATERIALS SUPPLIED.

LANDSCAPE CONTRACTOR SHALL PROTECT EXISTING ROADS, CURBS/GUTTERS, TRAILS, TREES, LAWNS AND SITE ELEMENTS DURING CONSTRUCTION OPERATIONS. DAMAGE TO SAME SHALL BE REPAIRED AT NO ADDITIONAL COST TO THE OWNER.

LANDSCAPE CONTRACTOR SHALL VERIFY ALIGNMENT AND LOCATION OF UNDERGROUND AND ABOVE GRADE UTILITIES AND PROVIDE THE NECESSARY PROTECTION FOR SAME BEFORE CONSTRUCTION / MATERIAL INSTALLATION BEGINS (MINIMUM 10'-0" CLEARANCE).

UNDERGROUND UTILITIES SHALL BE INSTALLED SO THAT TRENCHES DO NOT CUT THROUGH ROOT SYSTEMS OF ANY EXISTING TREES TO REMAIN.

EXISTING CONTOURS, TRAILS, VEGETATION, CURB/GUTTER AND OTHER ELEMENTS ARE BASED UPON INFORMATION SUPPLIED TO THE LANDSCAPE ARCHITECT BY OTHERS. LANDSCAPE CONTRACTOR SHALL VERIFY DISCREPANCIES PRIOR TO CONSTRUCTION AND NOTIFY LANDSCAPE ARCHITECT OF SAME.

ALIGNMENT AND GRADES OF THE PROPOSED WALKS, TRAILS AND/OR ROADWAYS ARE SUBJECT TO FIELD ADJUSTMENT REQUIRED TO CONFORM TO LOCALIZED TOPOGRAPHIC CONDITIONS AND TO MINIMIZE TREE REMOVAL AND GRADING. CHANGES IN THE ALIGNMENT AND GRADES MUST BE APPROVED BY THE LANDSCAPE ARCHITECT.

LANDSCAPE CONTRACTOR SHALL REVIEW THE SITE FOR DEFICIENCIES IN THE PLANT MATERIAL SELECTIONS AND OTHER SITE CONDITIONS WHICH MIGHT NEGATIVELY AFFECT PLANT ESTABLISHMENT, SURVIVAL OR WARRANTY. UNDESIRABLE PLANT MATERIAL SELECTIONS OR SITE CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT PRIOR TO BEGINNING OF WORK.

LANDSCAPE CONTRACTOR SHALL PREPARE AND SUBMIT REPRODUCIBLE AS-BUILT DRAWING(S) OF LANDSCAPE INSTALLATION, IRRIGATION AND SITE IMPROVEMENTS UPON COMPLETION OF CONSTRUCTION INSTALLATION AND PRIOR TO PROJECT ACCEPTANCE.

NO PLANTS WILL BE INSTALLED UNTIL FINAL GRADING AND CONSTRUCTION HAS BEEN COMPLETED IN THE IMMEDIATE AREA.

WHERE SOD ABUTS PAVED SURFACES, FINISHED GRADE OF SOD/SEED SHALL BE HELD 1" BELOW SURFACE ELEVATION OF TRAIL, SLAB, CURB, ETC.

SOD SHALL BE LAID PARALLEL TO THE CONTOURS AND SHALL HAVE STAGGERED JOINTS. ON SLOPES STEEPER THAN 3:1 OR IN DRAINAGE SWALES, SOD SHALL BE STAKED SECURELY.

PROPOSED PLANT MATERIAL SHALL COMPLY WITH THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK, ANSI Z60.1. UNLESS NOTED OTHERWISE, DECIDUOUS SHRUBS SHALL HAVE AT LEAST 5 CANES AT THE SPECIFIED HEIGHT. ORNAMENTAL TREES SHALL HAVE NO 'V' CROTCHES AND SHALL BEGIN BRANCHING NO LOWER THAN 3' FEET ABOVE THE ROOT BALL. STREET AND BOULEVARD TREES SHALL BEGIN BRANCHING NO LOWER THAN 6' ABOVE FINISHED GRADE.

LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR ONGOING MAINTENANCE OF NEWLY INSTALLED MATERIALS UNTIL TIME OF OWNER ACCEPTANCE. ACTS OF VANDALISM OR DAMAGE WHICH MAY OCCUR PRIOR TO OWNER ACCEPTANCE SHALL BE THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR.

LANDSCAPE CONTRACTOR SHALL WARRANTY NEW PLANT MATERIAL THROUGH ONE CALENDAR YEAR FROM THE DATE OF THE OWNER ACCEPTANCE. NO PARTIAL ACCEPTANCE WILL BE CONSIDERED.

PLANTING AREAS (NOT OVER STRUCTURE) RECEIVING GROUND COVER, PERENNIALS, ANNUALS, AND/OR VINES SHALL RECEIVE A MINIMUM OF 12" DEPTH OF PLANTING SOIL CONSISTING OF AT LEAST 45 PARTS TOPSOIL, 45 PARTS SCREENED COMPOST OR MANURE AND 10 PARTS SAND.

ANNUAL AND PERENNIAL PLANTING BEDS TO RECEIVE 4" DEEP SHREDDED HARDWOOD MULCH WITH NO WEED BARRIER.

SHRUB BED MASSINGS TO RECEIVE 4" DEEP SHREDDED HARDWOOD MULCH WITH FIBER MAT WEED BARRIER.

STEEL EDGER TO BE USED TO CONTAIN SHRUBS, PERENNIALS AND ANNUALS WHERE PLANTING BED MEETS SOD UNLESS OTHERWISE NOTED.

REFER TO CIVIL FOR SITE DEMOLITION INFORMATION.

REFER TO CIVIL FOR ADDITIONAL SITE GRADING AND UTILITY INFORMATION.

IF A DISCREPANCY EXISTS BETWEEN THE NUMBER OF PLANTS SHOWN IN THE PLANT MATERIALS SCHEDULE AND THE PLANS, THE PLANS SHALL GOVERN.

CONTRACTOR SHALL STAKE OUT LOCATION OF ALL PROPOSED TREES FOR APPROVAL BY LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.

SURVEY NOTES

ALL EXISTING CONDITIONS SHOWN ON THIS DRAWING ARE BASED ON AN OWNER-FURNISHED SURVEY. BKV GROUP OFFERS NO GUARANTEE, EITHER EXPRESSED OR IMPLIED, FOR THE ACCURACY OR RELIABILITY OF THE INDICATED EXISTING CONDITIONS.

THE CONTRACTOR SHALL FIELD VERIFY ALL CRITICAL EXISTING CONDITIONS INCLUDING, BUT NOT LIMITED TO, EXISTING BUILDING LOCATIONS, UTILITY LOCATIONS AND INVERT ELEVATIONS, AND EXISTING SITE GRADES PRIOR TO THE START OF WORK.

ANY OBSERVED DEVIATIONS FROM CONDITIONS INDICATED ON THE DRAWINGS SHALL BE BROUGHT TO THE ARCHITECT OR LANDSCAPE ARCHITECT'S ATTENTION IMMEDIATELY UPON DISCOVERY. NO WORK SHALL PROCEED IN THE AREAS OF ANY DISCOVERED DEVIATIONS UNTIL THE DIFFERENCES ARE RESOLVED.

IRRIGATION NOTES

- LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A PERFORMANCE IRRIGATION PLAN AND SPECIFICATIONS AS PART OF THE SCOPE OF WORK WHEN BIDDING. THESE SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO ORDER AND/OR INSTALLATION. IT SHALL BE THE LANDSCAPE CONTRACTOR'S RESPONSIBILITY TO INSURE THAT SODDED/SEEDED AND PLANTED AREAS ARE IRRIGATED PROPERLY, INCLUDING THOSE AREAS DIRECTLY AROUND AND ABUTTING BUILDING FOUNDATION.
- SHRUB & PERENNIAL BEDS TO BE IRRIGATED WITH DRIP IRRIGATION. SOD TO BE IRRIGATED WITH SPRAY.
- LANDSCAPE CONTRACTOR SHALL PROVIDE THE OWNER WITH A WATERING/LAWN IRRIGATION SCHEDULE APPROPRIATE TO THE PROJECT SITE CONDITIONS AND TO PLANT MATERIALS GROWTH REQUIREMENTS.
- LANDSCAPE CONTRACTOR SHALL INSURE THAT SOIL CONDITIONS AND COMPACTION ARE ADEQUATE TO ALLOW FOR PROPER DRAINAGE AROUND THE CONSTRUCTION SITE. UNDESIRABLE CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT PRIOR TO BEGINNING OF WORK. IT SHALL BE THE LANDSCAPE CONTRACTOR'S RESPONSIBILITY TO INSURE PROPER SURFACE AND SUBSURFACE DRAINAGE IN ALL PLANTING AREAS.
- COORDINATE IRRIGATION SLEEVING LOCATIONS WITH GENERAL CONTRACTOR.
- RAIN SENSORS TO BE INCLUDED WITHIN THE IRRIGATION DESIGN.
- IRRIGATION LIMITS TO EXTEND TO STREET BACK OF CURB.

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GROUP

Architecture
Interior Design
Landscape Architecture
Engineering

Boarman
Kroos
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222 North Second Street
Minneapolis MN 55401
Telephone: 612-339-3752
Facsimile: 612-339-6212
www.bkvgroup.com

CONSULTANTS

ISSUANCE

Progress Set
11/18/2014

PROJECT TITLE

Ramsey Fire
Station #2

KEY PLAN | NORTH ARROW

CERTIFICATION

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 under the laws of the State of Minnesota.

License Number | Date

REVISION	DATE

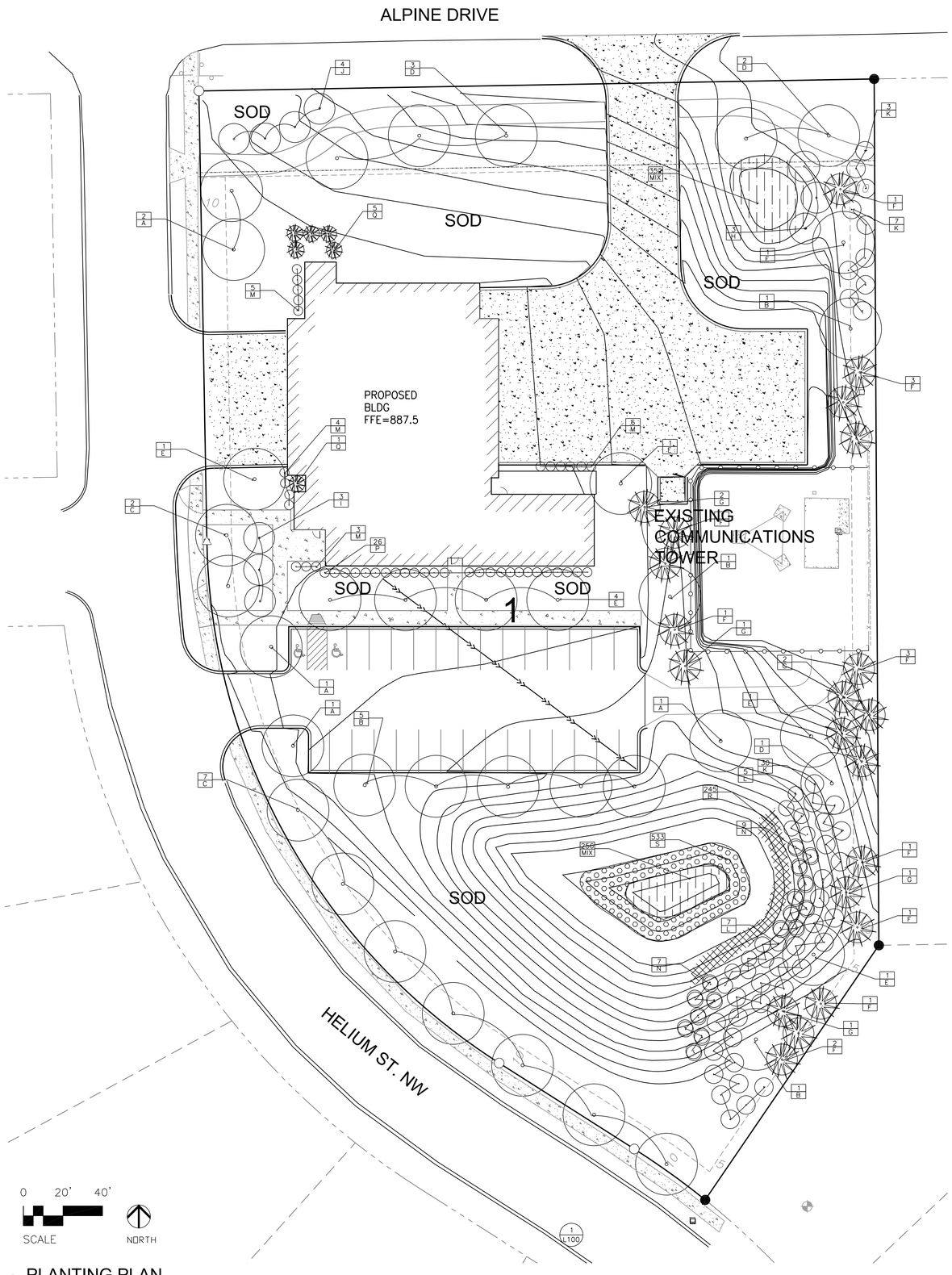
DATE	11/05/14
DRAWN BY	BH
CHECKED BY	BH
COMMISSION NO.	1937.01

SHEET TITLE

LANDSCAPE PLAN

SHEET NUMBER

L100



0 20' 40'

SCALE NORTH

1 L101 PLANTING PLAN

1" = 20'-0"

LANDSCAPE REQUIREMENTS

LOT SIZE AREA = 102,213 SF
LOT STREET FRONTAGE = 807 LF
BUFFER YARD LENGTH = 470 LF
TOTAL LOT PERIMETER LENGTH = 1,277 LF
BUILDING AREA = 10,230 SF

DECIDUOUS/CONIFEROUS TREES REQUIRED: (1 PER 50 LF OF PERIMETER)
DECIDUOUS/CONIFEROUS SHRUBS REQUIRED: (1 PER 30 LF OF PERIMETER)

BOULEVARD TREES SPACED AT 35' ON CENTER, OUT OF R.O.W.

PARKING LOT TREES REQUIRED: 1 PER 10 SPACES WITH 162 SF OF SOIL MIN. PER TREE.

ALL PLANTINGS WILL BE IRRIGATED WITH AN UNDERGROUND AUTOMATED IRRIGATION SYSTEM INSTALLED AS PART OF THIS SCOPE OF WORK.

PERIMETER TYPE	LENGTH	BASE REQ.	BUFFER YARD 25% INCREASE	TOTAL
STREET FRONTAGE	807 LF	17 TREES	NA	17 TREES
BUFFER YARD FRONTAGE	470 LF	10 TREES	3 TREES	13 TREES
STREET FRONTAGE	807 LF	27 SHRUBS	NA	27 SHRUBS
BUFFER YARD FRONTAGE	470 LF	16 SHRUBS	4 SHRUBS	20 SHRUBS

PROPOSED PLANT SCHEDULE - DD

QTY.	SYM	COMMON NAME	SCIENTIFIC NAME	SIZE	TYPE	SPACING
DECIDUOUS CANOPY TREES						
5	A	PRINCETON ELM	Ulmus americana 'Princeton'	2.5" CAL.	B&B	PLANT PER PLAN
8	B	SWAMP WHITE OAK	Quercus bicolor	2.5" CAL.	B&B	PLANT PER PLAN
9	C	BOULEVARD LINDEN	Tilia Americana "Boulevard'	2.5" CAL.	B&B	PLANT PER PLAN
6	D	IMPERIAL HONEYLOCUST	Gleditsia triacanthos var. inermis 'Impcole'	2.5" CAL.	B&B	PLANT PER PLAN
9	E	FALL FIESTA SUGAR MAPLE	Acer saccharum 'Bailsta'	2.5" CAL.	B&B	PLANT PER PLAN
CONIFEROUS TREES						
14	F	NORWAY SPRUCE	Picea abies	6' TALL	B&B	PLANT PER PLAN
7	G	WHITE PINE	Pinus strobus	6' TALL	B&B	PLANT PER PLAN
DECIDUOUS ORNAMENTAL TREES						
3	H	HARVEST GOLD CRAB	Malus 'Hargozam'	1.5" CAL.	B&B	PLANT PER PLAN
3	I	DAKOTA PINNACLE BIRCH	Betula platyphylla 'Fargo'	1.5" CAL.	B&B	PLANT PER PLAN
4	J	THORNLESS HAWTHORN	Crataegus crus-galli var. inermis	1.5" CAL.	B&B	PLANT PER PLAN
SHRUBS - DECIDUOUS						
40	K	SMOOTH SUMAC	Rhus glabra	#5	CONT.	PLANT PER PLAN
12	L	FRAGRANT SUMAC	Rhus aromatica	#5	CONT.	PLANT PER PLAN
7	M	BUTTERFLY BUSH HONEYSUCKLE	Diervilla sessifolia 'Butterfly'	#5	CONT.	PLANT PER PLAN
16	N	CARDINAL DOGWOOD	Cornus sericea 'Cardinal'	#5	CONT.	PLANT PER PLAN
11	O	SEM FALSESPIREA	Sorbaria sorbifolia 'Sem'	#5	CONT.	PLANT PER PLAN
SHRUBS - CONIFEROUS						
26	P	MANEY JUNIPER	Juniperus chinensis 'Maneyi'	#5	CONT.	PLANT PER PLAN
6	Q	KING'S GOLD CHAMEACYPARIS	Chamecyparis pisifera 'KING'S GOLD'	#5	CONT.	PLANT PER PLAN
PERENNIALS / GRASSES / GROUNDCOVERS						
533	R	PRAIRIE DROPSEED	Sporobolus heterolepis	#1	CONT.	18" O.C.
245	S	LITTLE BLUESTEM	Schichyrium scoparium	#1	CONT.	18" O.C.
152	MIX	LIATRIS	Liatris spicata	#1	CONT.	18" O.C.
152	MIX	PURPLE CONEFLOWER	Echinacea purpurea	#1	CONT.	18" O.C.
152	MIX	BLACKEYED SUSAN	Rudbeckia 'Goldsturm'	#1	CONT.	18" O.C.
152	MIX	FOX SEDGE	Carex vulpinoidea	#1	CONT.	18" O.C.

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CONSULTANTS

ISSUANCE

Progress Set
NOT FOR CONSTRUCTION
11/18/2014

PROJECT TITLE

Ramsey Fire Station #2

KEY PLAN NORTH ARROW

CERTIFICATION

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 under the laws of the State of Minnesota.

License Number Date

REVISION	DATE

DATE	11/05/14
DRAWN BY	BH
CHECKED BY	BH
COMMISSION NO.	1937.01

SHEET TITLE

PLANTING PLAN

SHEET NUMBER

L101

SITE PLAN NOTES:

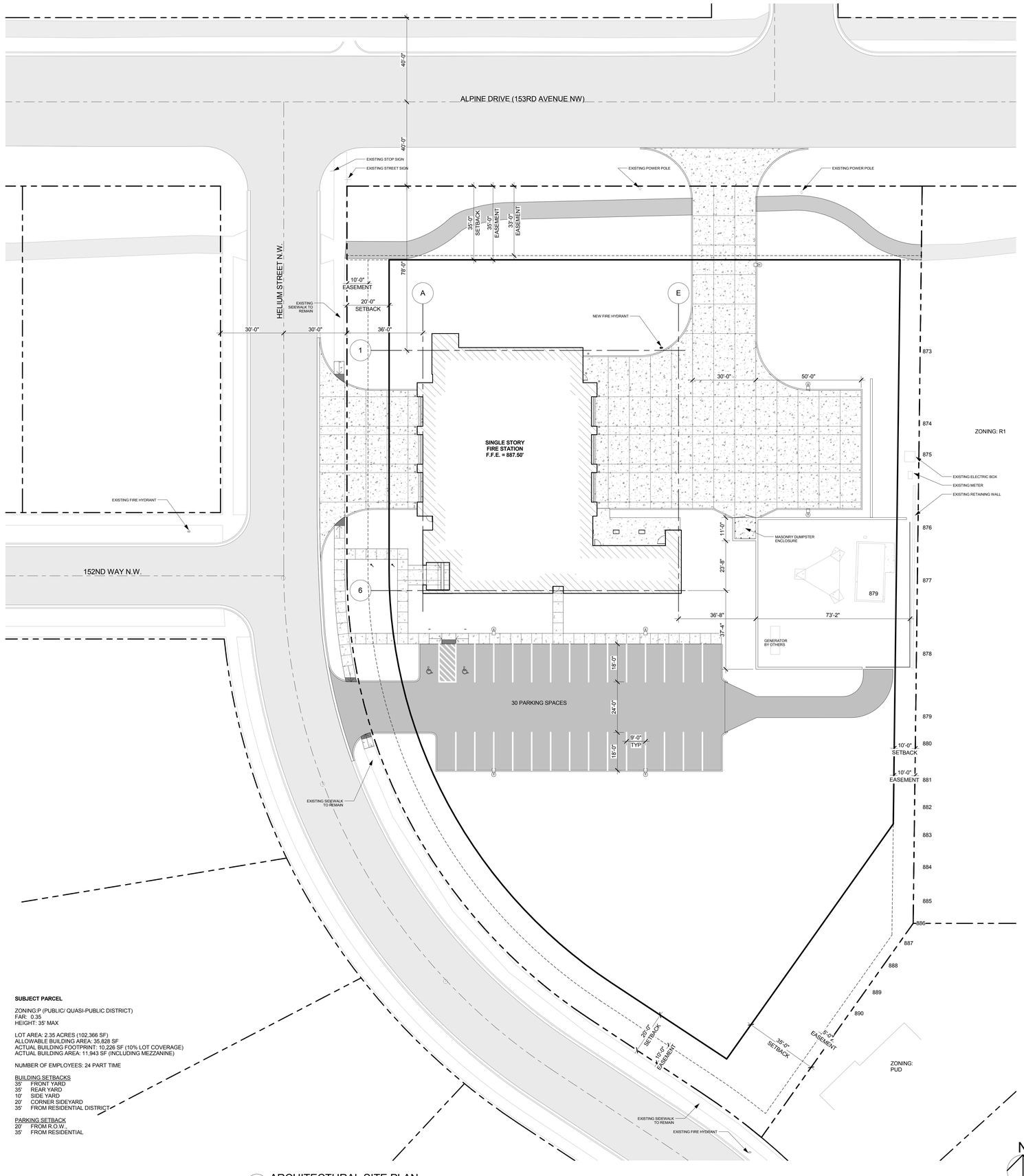
1. SEE CIVIL, LANDSCAPE, MECHANICAL, AND ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
2. PROVIDE PRECAST CONCRETE SPLASHBLOCKS AT ALL ON-GRADE DOWNSPOUTS LOCATIONS.
3. PAINT STRIPES SHALL BE 4" WIDE, COLOR WHITE.
4. TRUNCATED DOME COLOR SHALL BE SELECTED FROM MANUFACTURER'S STANDARD COLORS.
5. SIGNAGE SUBCONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING SIGNAGE PERMITS, VARIANCES, AND APPROVALS.
6. CONSTRUCT DRIVES, SIDEWALKS, CURB RAMPS, ETC. PER COUNTY'S AND CITY'S STANDARD DETAILS AND SPECIFICATIONS.
7. SURVEY INFORMATION ON THIS PLAN HAS BEEN TAKEN FROM A SURVEY PERFORMED BY OTHERS. VERIFY ALL INFORMATION.
8. ARCHITECT MAKES NO WARRANTY THAT THE UNDERGROUND UTILITIES ARE COMPLETE, CORRECT, OR COMPRISE SERVICE AVAILABLE OR ABANDONED. CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATIONS OF ALL UTILITIES ENCOUNTERED DURING CONSTRUCTION. RECORD LOCATION AND CHANGES TO UTILITIES IN SURVEY NOTES AND ON THE AS-BUILT DRAWINGS. CONTRACTOR SHALL NOTIFY THE ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES AFFECTING PROPOSED IMPROVEMENTS.
9. CONTRACTOR SHALL PROTECT ALL EXISTING ROADS, DRIVES, SIDEWALKS, CURBS & GUTTERS, AND UTILITIES DURING CONSTRUCTION. ANY DAMAGE TO SAME SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE.
10. EXISTING PLANT MATERIALS TO REMAIN ON SITE SHALL BE PROTECTED AND RETAINED.
11. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN AND COMPLY WITH ALL ENVIRONMENTAL QUALITY PERMITS AND REGULATIONS DURING CONSTRUCTION.
12. ALL ORGANIC MATERIAL SHALL BE REMOVED WITHIN THE CLEARING LIMITS FOR NECESSARY GRADING TO A DEPTH OF SIX INCHES AND HAULED FROM SITE PRIOR TO GRADING.
13. THE GEOTECHNICAL ENGINEER SHALL OBSERVE, INSPECT, AND TEST ALL EARTHWORK OPERATIONS, INCLUDING BUT NOT LIMITED TO: CLEARING AND GRUBBING, SUB GRADE PREPARATION, STRUCURAL, TRENCH EXCAVATION AND BACKFILL, AND PLACEMENT AND COMPACTION OF FILL.
14. COORDINATE WITH OWNER FOR MATERIAL STAGING, DUMPSTER LOCATIONS, AND CONSTRUCTION PERSONNEL PARKING.
15. ALL BURIED UTILITY LINES INSTALLED AS PART OF THIS PROJECT SHALL INCLUDE THE APPROPRIATE TRACER WIRE SECURELY ATTACHED AT 8'-0" O.C.

SITE PLAN LEGEND:

FIRE HYDRANT

SIGN

POLE LIGHT



SUBJECT PARCEL

ZONING:P (PUBLIC/ QUASI-PUBLIC DISTRICT)
FAR: 0.35
HEIGHT: 35' MAX

LOT AREA: 2.35 ACRES (102,366 SF)
ALLOWABLE BUILDING AREA: 35,828 SF
ACTUAL BUILDING FOOTPRINT: 10,226 SF (10% LOT COVERAGE)
ACTUAL BUILDING AREA: 11,943 SF (INCLUDING MEZZANINE)

NUMBER OF EMPLOYEES: 24 PART TIME

BUILDING SETBACKS
35' FRONT YARD
35' REAR YARD
10' SIDE YARD
20' CORNER SIDEYARD
35' FROM RESIDENTIAL DISTRICT

PARKING SETBACK
20' FROM R.O.W.
35' FROM RESIDENTIAL

1 A010 ARCHITECTURAL SITE PLAN
1" = 20'-0"

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PROJECT TITTLE

Ramsey Fire Station #2

KEY PLAN

ISSUE #	DATE	DESCRIPTION
	11/19/2014	Design Development

NOT FOR CONSTRUCTION

CERTIFICATION

DATE	11/17/2014
DRAWN BY	MMR
CHECKED BY	CLC
COMMISSION NUMBER	1937.01

SHEET TITLE

SITE PLAN

SHEET NUMBER

A010

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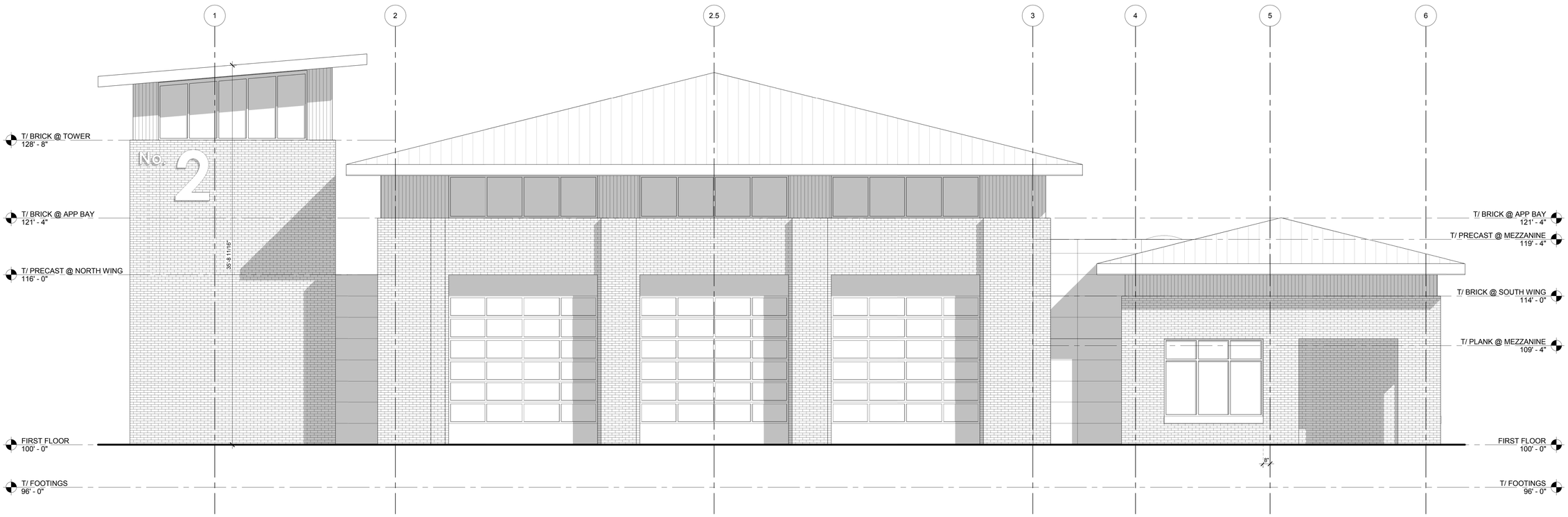
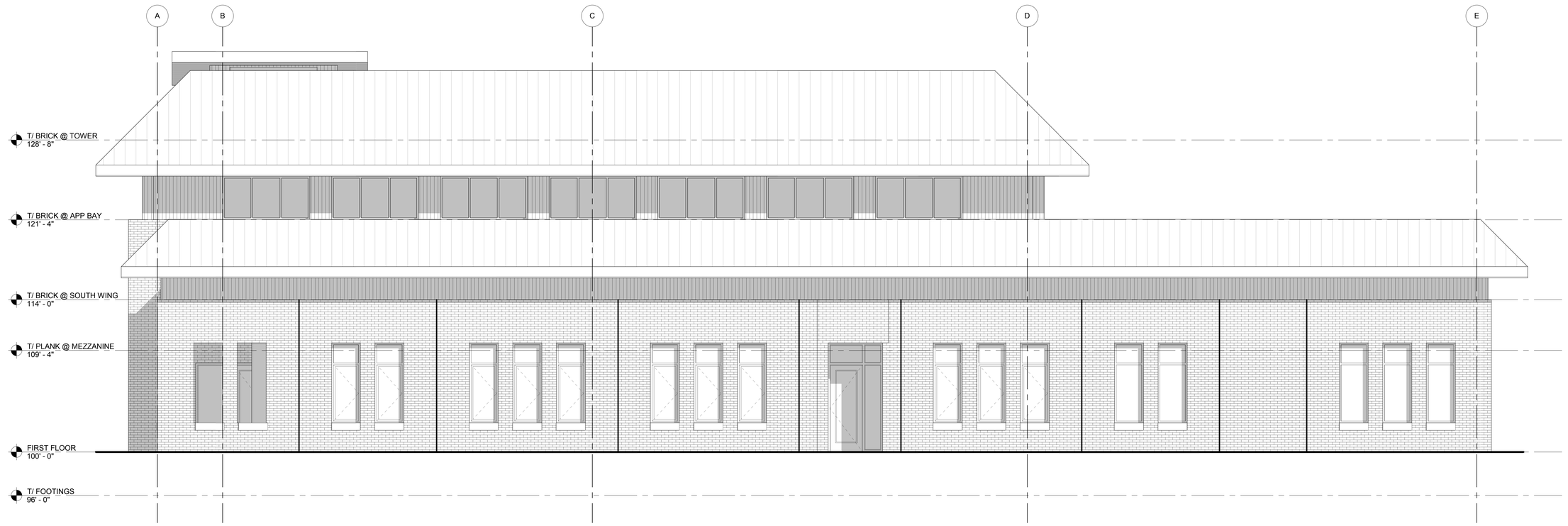


1 A401 WEST ELEVATION
1/4" = 1'-0"



2 A401 SOUTH ELEVATION
1/4" = 1'-0"

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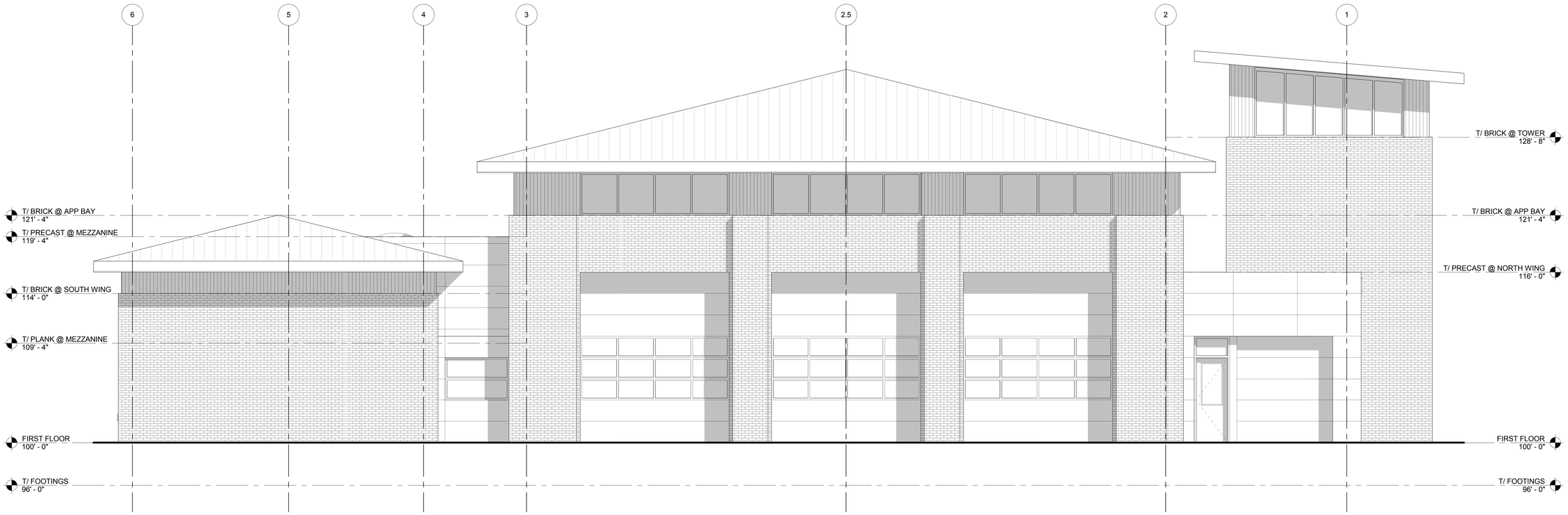
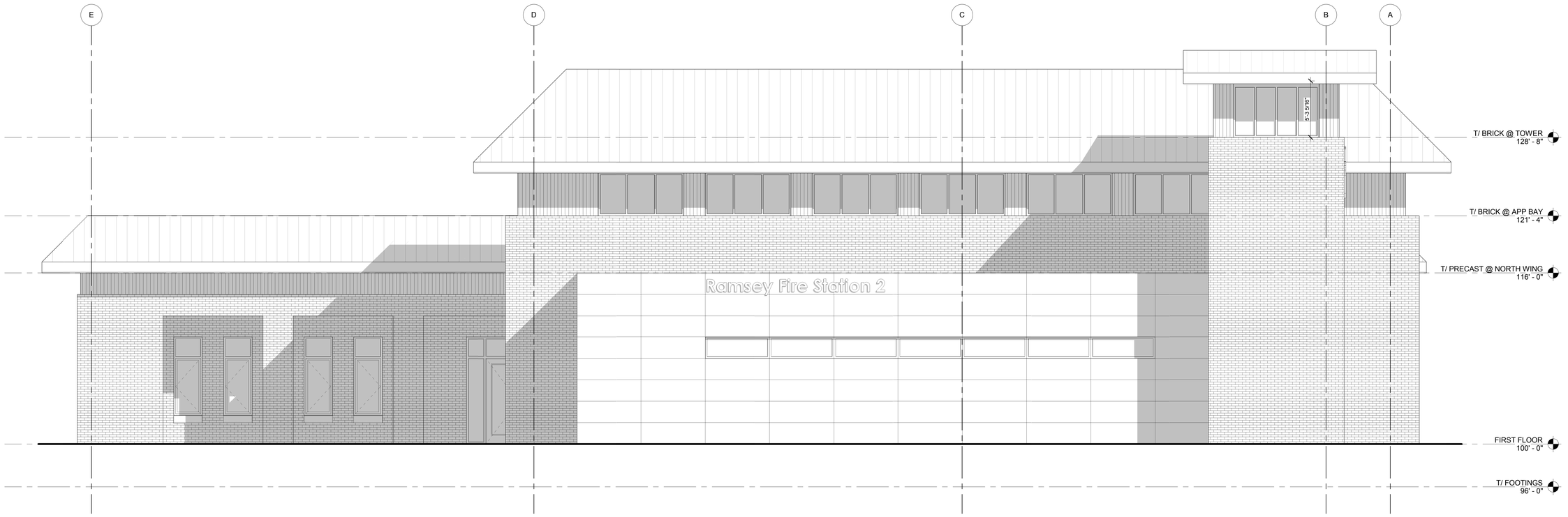
ELEVATIONS

SHEET NUMBER

A401



1 A402 EAST ELEVATION
1/4" = 1'-0"



2 A402 NORTH ELEVATION
1/4" = 1'-0"

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Ramsey Fire Station #2

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	11/19/2014	Design Development

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COMMISSION NUMBER	1937.01

SHEET TITLE

ELEVATIONS

SHEET NUMBER

A402

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D-Series Size 1
LED Area Luminaire

d-series

Catalog Number

Notes TYPE: XA (TYPE IV) AND XA1 (TYPE II) PARKING LOT & ROADWAY POLES

Type

Hit the Tab key or mouse over the page to see all interactive elements.

Specifications

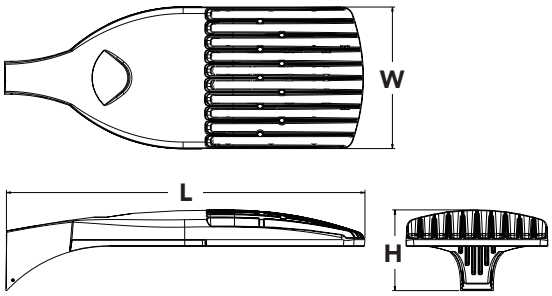
EPA: 1.2 ft² (0.11 m²)

Length: 33" (83.8 cm)

Width: 13" (33.0 cm)

Height: 7-1/2" (19.0 cm)

Weight (max): 27 lbs (12.2 kg)



Introduction

The modern styling of the D-Series is striking yet unobtrusive - making a bold, progressive statement even as it blends seamlessly with its environment.

The D-Series distills the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire. The outstanding photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. It is ideal for replacing 100 – 400W metal halide in pedestrian and area lighting applications with typical energy savings of 65% and expected service life of over 100,000 hours.

Ordering Information

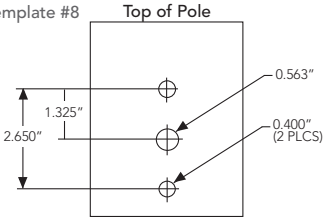
EXAMPLE: DSX1 LED 60C 1000 40K T3M MVOLT SPA DDBXD

DSX1 LED

Series	LEDs	Drive current	Color temperature	Distribution	Voltage	Mounting	Control options	Other options	Finish *(required)*
DSX1 LED	**Forward optics** 30C 30 LEDs (one engine) 40C 40 LEDs (two engines) 60C 60 LEDs (two engines) **Rotated optics** [1] 60C 60 LEDs (two engines)	530 530 mA 700 700 mA 1000 1000 mA (1 A)	30K 3000 K (80 CRI min.) 40K 4000 K (70 CRI min.) 50K 5000 K(70 CRI) AMBPC Amber phosphor converted [2]	T1S Type I short T2S Type II short T2M Type II medium T3S Type III short T3M Type III medium T4M Type IV medium TFTM Forward throw medium T5VS Type V very short T5S Type V short T5M Type V medium T5W Type V wide	MVOLT [3] 120 [3] 208 [3] 240 [3] 277 [3] 347 [4] 480 [4]	**Shipped included** SPA Square pole mounting RPA Round pole mounting WBA Wall bracket SPUMBA Square pole universal mounting adaptor [5] RPUMBA Round pole universal mounting adaptor [5] KMA8 DDBXD U Mast arm mounting bracket adaptor (specify finish) [6]	**Shipped installed** PER NEMA twist-lock receptacle only (no controls) [7] DMG 0-10V dimming driver (no controls) [8] DCR Dimmable and controllable via ROAM® (no controls) [9] DS Dual switching [10,11] PIR Motion sensor, 8-15' mounting height [12] PIRH Motion sensor, 15-30' mounting height [12] BL30 Bi-level switched dimming, 30% [11,13] BL50 Bi-level switched dimming, 50% [11,13]	**Shipped installed** HS House-side shield [14] WTB Utility terminal block [15] SF Single fuse (120, 277, 347V) [16] DF Double fuse (208, 240, 480V) [16] L90 Left rotated optics [17] R90 Right rotated optics [17]	DDBXD Dark bronze DBLXD Black DNAXD Natural aluminum DWHXD White DDBTXD Textured dark bronze DBLBXD Textured black DNATXD Textured natural aluminum DWHGXD Textured white

Drilling

Template #8 Top of Pole



DSX1 shares a unique drilling pattern with the AERIS™ family. Specify this drilling pattern when specifying poles, per the table below.

DM19AS	Single unit	**DM29AS**	2 at 90° *
DM28AS	2 at 180°	**DM39AS**	3 at 90° *
DM49AS	4 at 90° *	**DM32AS**	3 at 120° **

Example: SSA 20 4C **DM19AS** DDBXD

Visit Lithonia Lighting's POLES CENTRAL to see our wide selection of poles, accessories and educational tools.

**Round pole top must be 3.25" O.D. minimum.*
***For round pole mounting (RPA) only.*

Accessories

Ordered and shipped separately.

DLL127F 1.5 JU	Photocell - SSL twist-lock (120-277V) [18]
DLL347F 1.5 CUL JU	Photocell - SSL twist-lock (347V) [18]
DLL480F 1.5 CUL JU	Photocell - SSL twist-lock (480V) [18]
SC U	Shorting cap [18]
DSX1HS 30C U	House-side shield for 30 LED unit
DSX1HS 40C U	House-side shield for 40 LED unit
DSX1HS 60C U	House-side shield for 60 LED unit
PUMBA DDBXD U*	Square and round pole universal mounting bracket adaptor (specify finish)
KMA8 DDBXD U	Mast arm mounting bracket adaptor (specify finish) [6]

For more control options, visit DTL and ROAM online.

Tenon Mounting Slipfitter**

Tenon O.D.	Single Unit	2 at 180°	2 at 90°	3 at 120°	3 at 90°	4 at 90°
2-3/8"	AST20-190	AST20-280	N/A	N/A	N/A	N/A
2-7/8"	AST25-190	AST25-280	N/A	AST25-320	N/A	N/A
4"	AST35-190	AST35-280	AST35-290	AST35-320	AST35-390	AST35-490

NOTES

1. Rotated optics only available with 60C.
2. AMBPC only available with 530mA or 700mA.
3. MVOLT driver operates on any line voltage from 120-277V (50/60 Hz). Specify 120, 208, 240 or 277 options only when ordering with fusing (SF, DF options).
4. Not available with single board, 530mA product (30C 530, or 60C 530 DS). Not available with DCR, BL30 or BL50.
5. Available as a separate combination accessory: PUMBA (finish) U.
6. Requires "SPA" mounting option. Must be ordered as a separate accessory; see Accessories information. For use with 2-3/8" mast arm (not included).
7. Photocell ordered and shipped as a separate line item from Acuity Brands Controls. See accessories. Not available with DS option.
8. DMG option for 347v or 480v requires 1000mA
9. Specifies a ROAM® enabled luminaire with 0-10V dimming capability; PER option required. Not available with 347 or 480V. Additional hardware and services required for ROAM® deployment; must be purchased separately. Call 1-800-442-6745 or email: sales@roamservices.net. N/A with BL30, BL50, DS, PIR or PIRH.
10. Requires 40C or 60C. Provides 50/50 luminaire operation via two independent drivers on two separate circuits. N/A with PER, DCR, WTB, PIR, or PIRH.
11. Requires an additional switched circuit.
12. PIR specifies the SensorSwitch SBGR-10-ODP control; PIRH specifies the SensorSwitch SBGR-6-ODP control; see Motion Sensor Guide for details. Dimming driver standard. Not available with DS or DCR.
13. Dimming driver standard. MVOLT only. Not available with DCR.
14. Also available as a separate accessory; see Accessories information.
15. WTB not available with DS.
16. Single fuse (SF) requires 120, 277 or 347 voltage option. Double fuse (DF) requires 208, 240 or 480 voltage option.
17. Available with 60 LEDs (60C option) only.
18. Requires luminaire to be specified with PER option. Ordered and shipped as a separate line item from Acuity Brands Control.

LITHONIA LIGHTING

One Lithonia Way • Conyers, Georgia 30012 • Phone: 800.279.8041 • Fax: 770.918.1209 • www.lithonia.com

Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Actual performance may differ as a result of end-user environment and application. Actual wattage may differ by +/- 8% when operating between 120-480V +/-10%. Contact factory for performance data on any configurations not shown here.

LEDs	Drive Current (mA)	System Watts	Dist. Type	30K (3000 K, 80 minimum CRI)					40K (4000 K, 70 minimum CRI)					50K (5000 K, 70 CRI)				
				Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
30C (30 LEDs)	700 mA	68 W	T1S	5,290	1	0	1	78	6,524	2	0	2	96	7,053	2	0	2	104
			T2S	5,540	1	0	1	81	6,833	2	0	2	100	7,387	2	0	2	109
			T2M	5,360	1	0	2	79	6,611	2	0	2	97	7,147	2	0	2	105
			T3S	5,479	1	0	1	81	6,757	1	0	2	99	7,305	2	0	2	107
			T3M	5,452	1	0	2	80	6,724	2	0	2	99	7,269	2	0	2	107
			T4M	5,461	1	0	2	80	6,736	2	0	2	99	7,282	2	0	2	107
			TFTM	5,378	1	0	2	79	6,633	1	0	2	98	7,171	1	0	2	105
			T5VS	5,708	2	0	0	84	7,040	3	0	0	104	7,611	3	0	1	112
			T5S	5,639	2	0	0	83	6,955	2	0	0	102	7,519	3	0	0	111
			T5M	5,710	3	0	1	84	7,042	3	0	1	104	7,613	3	0	2	112
			T5W	5,551	3	0	1	82	6,847	3	0	2	101	7,401	3	0	2	109
	1000 mA	105 W	T1S	7,229	2	0	2	69	9,168	2	0	2	87	9,874	2	0	2	94
			T2S	7,572	2	0	2	72	9,603	2	0	2	91	10,342	2	0	2	98
			T2M	7,325	2	0	2	70	9,291	2	0	2	88	10,005	2	0	3	95
			T3S	7,488	2	0	2	71	9,496	2	0	2	90	10,227	2	0	2	97
			T3M	7,451	2	0	2	71	9,450	2	0	2	90	10,177	2	0	2	97
			T4M	7,464	2	0	2	71	9,467	2	0	2	90	10,195	2	0	2	97
			TFTM	7,351	1	0	2	70	9,323	2	0	2	89	10,040	2	0	3	96
			T5VS	7,801	3	0	1	74	9,894	3	0	1	94	10,655	3	0	1	101
			T5S	7,803	3	0	2	74	9,774	3	0	1	93	10,526	3	0	1	100
			T5M	7,707	3	0	0	73	9,897	3	0	2	94	10,658	4	0	2	102
			T5W	7,586	3	0	2	72	9,621	4	0	2	92	10,363	4	0	2	99
40C (40 LEDs)	700 mA	89 W	T1S	6,876	2	0	2	77	8,639	2	0	2	97	9,345	2	0	2	105
			T2S	7,202	2	0	2	81	9,049	2	0	2	102	9,788	2	0	2	110
			T2M	6,968	2	0	2	78	8,755	2	0	2	98	9,469	2	0	3	106
			T3S	7,122	2	0	2	80	8,948	2	0	2	101	9,679	2	0	2	109
			T3M	7,088	2	0	2	80	8,905	2	0	2	100	9,632	2	0	2	108
			T4M	7,100	2	0	2	80	8,920	2	0	2	100	9,649	2	0	2	108
			TFTM	6,992	1	0	2	79	8,785	2	0	2	99	9,502	2	0	2	107
			T5VS	7,421	3	0	0	83	9,323	3	0	1	105	10,085	3	0	1	113
			T5S	7,331	2	0	0	82	9,210	3	0	1	103	9,962	3	0	1	112
			T5M	7,423	3	0	2	83	9,326	3	0	2	105	10,087	4	0	2	113
			T5W	7,216	3	0	2	81	9,066	4	0	2	102	9,807	4	0	2	110
	1000 mA	138 W	T1S	9,521	2	0	2	69	11,970	2	0	2	87	12,871	3	3	0	93
			T2S	9,972	2	0	2	72	12,558	3	0	3	91	13,481	3	0	3	98
			T2M	9,648	2	0	3	70	12,149	3	0	3	88	13,043	3	0	3	95
			T3S	9,862	2	0	2	71	12,418	2	0	2	90	13,331	2	0	2	97
			T3M	9,814	2	0	2	71	12,358	3	0	3	90	13,267	3	0	3	96
			T4M	9,831	2	0	2	71	12,379	2	0	3	90	13,290	2	0	3	96
			TFTM	9,681	2	0	2	70	12,191	2	0	3	88	13,087	2	0	3	95
			T5VS	10,275	3	0	1	74	12,937	3	0	1	94	13,890	4	0	1	101
			T5S	10,150	3	0	1	74	12,782	3	0	1	93	13,721	3	0	1	99
			T5M	10,278	4	0	2	74	12,942	4	0	2	94	13,894	4	0	2	101
			T5W	9,991	4	0	2	72	12,582	4	0	2	91	13,507	4	0	2	98
60C (60 LEDs)	700 mA	131 W	T1S	10,226	2	0	2	78	12,871	3	0	3	98	13,929	3	0	3	106
			T2S	10,711	2	0	2	82	13,481	3	0	3	103	14,589	3	0	3	111
			T2M	10,363	2	0	3	79	13,043	3	0	3	100	14,115	3	0	3	108
			T3S	10,592	2	0	2	81	13,331	2	0	2	102	14,427	3	0	3	110
			T3M	10,541	2	0	2	80	13,267	3	0	3	101	14,357	3	0	3	110
			T4M	10,559	2	0	2	81	13,290	2	0	3	101	14,382	3	0	3	110
			TFTM	10,398	2	0	3	79	13,087	2	0	3	100	14,163	2	0	3	108
			T5VS	11,036	3	0	1	84	13,890	4	0	4	106	15,032	4	0	1	115
			T5S	10,902	3	0	1	83	13,721	3	0	1	105	14,849	4	0	1	113
			T5M	11,039	4	0	2	84	13,894	4	0	2	106	15,036	4	0	2	115
			T5W	10,732	4	0	2	82	13,507	4	0	2	103	14,617	4	0	2	112
	1000 mA	209 W	T1S	14,017	3	0	3	67	17,632	3	0	3	84	19,007	3	0	3	91
			T2S	14,681	3	0	3	70	18,467	3	0	3	88	19,908	3	0	3	95
			T2M	14,204	3	0	3	68	17,867	3	0	3	85	19,260	3	0	3	92
			T3S	14,518	3	0	3	69	18,262	3	0	3	87	19,687	3	0	3	94
			T3M	14,448	3	0	3	69	18,173	3	0	4	87	19,591	3	0	4	94
			T4M	14,473	3	0	3	69	18,205	3	0	3	87	19,625	3	0	4	94
			TFTM	14,253	2	0	3	68	17,928	3	0	4	86	19,326	3	0	4	92
			T5VS	15,127	4	0	1	72	19,028	4	0	1	91	20,512	4	0	1	98
			T5S	14,943	4	0	1	71	18,797	4	0	1	90	20,263	4	0	1	97
			T5M	15,131	4	0	2	72	19,033	4	0	2	91	20,517	5	0	3	98
			T5W	14,710	4	0	2	70	18,503	5	0	3	89	19,946	5	0	3	95

Note: Available with phosphor-converted amber LED's (nomenclature AMBPC). These LED's produce light with 97+% >530 nm. Output can be calculated by applying a 0.7 factor to 4000 K lumen values and photometric files.

Performance Data

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Multiplier
0°C	32°F	1.02
10°C	50°F	1.01
20°C	68°F	1.00
25°C	**77°F**	**1.00**
30°C	86°F	1.00
40°C	104°F	0.99

Electrical Load

			Current (A)					
Number of LEDs	Drive Current (mA)	System Watts	120	208	240	277	347	480
30	530	52	0.52	0.30	0.26	0.23	--	--
	700	68	0.68	0.39	0.34	0.30	0.24	0.17
	1000	105	1.03	0.59	0.51	0.45	0.36	0.26
40	530	68	0.67	0.39	0.34	0.29	0.23	0.17
	700	89	0.89	0.51	0.44	0.38	0.31	0.22
	1000	138	1.35	0.78	0.67	0.58	0.47	0.34
60	530	99	0.97	0.56	0.48	0.42	0.34	0.24
	700	131	1.29	0.74	0.65	0.56	0.45	0.32
	1000	209	1.98	1.14	0.99	0.86	0.69	0.50

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the platforms noted in a **25°C ambient**, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

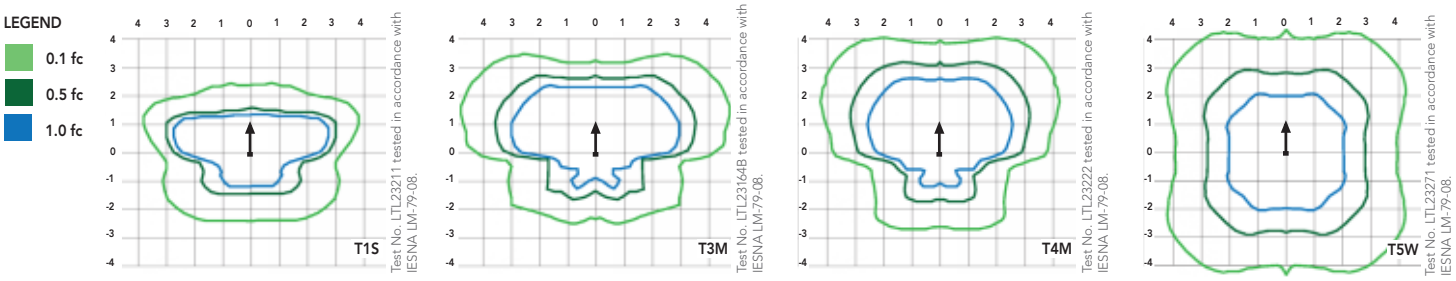
To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	0	25,000	50,000	100,000
Lumen Maintenance Factor	DSX1 LED 60C 1000			
	1.0	0.95	0.93	0.88
	DSX1 LED 60C 700			
	1.0	0.99	0.98	0.96

Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's D-Series Area Size 1 homepage.

Isofootcandle plots for the DSX1 LED 60C 1000 40K. Distances are in units of mounting height (20').



FEATURES & SPECIFICATIONS

INTENDED USE

The sleek design of the D-Series Size 1 reflects the embedded high performance LED technology. It is ideal for many commercial and municipal applications, such as parking lots, plazas, campuses, and streetscapes.

CONSTRUCTION

Single-piece die-cast aluminum housing has integral heat sink fins to optimize thermal management through conductive and convective cooling. Modular design allows for ease of maintenance and future light engine upgrades. The LED driver is mounted in direct contact with the casting to promote low operating temperature and long life. Housing is completely sealed against moisture and environmental contaminants (IP65). Low EPA (1.2 ft^2) for optimized pole wind loading.

FINISH

Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling. Available in both textured and non-textured finishes.

OPTICS

Precision-molded proprietary acrylic lenses are engineered for superior area lighting distribution, uniformity, and pole spacing. Light engines are available in standard 4000 K (70 minimum CRI) or optional 3000 K (80 minimum CRI) or 5000 K (70 CRI) configurations. The D-Series Size 1 has zero uplight and qualifies as a Nighttime Friendly™ product, meaning it is consistent with the LEED® and Green Globes™ criteria for eliminating wasteful uplight.

ELECTRICAL

Light engine configurations consist of 30, 40 or 60 high-efficacy LEDs mounted to metal-core circuit boards to maximize heat dissipation and promote long life (up to L96/100,000 hours at 25°C). Class 1 electronic drivers are designed to have a power factor >90%, THD <20%, and an expected life of 100,000 hours with <1% failure rate. Easily serviceable 10kV or 6kV surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).

INSTALLATION

Included mounting block and integral arm facilitate quick and easy installation. Stainless steel bolts fasten the mounting block securely to poles and walls, enabling the D-Series Size 1 to withstand up to a 3.0 G vibration load rating per ANSI C136.31. The D-Series Size 1 utilizes the AERIS™ series pole drilling pattern. Optional terminal block, tool-less entry, and NEMA photocontrol receptacle are also available.

LISTINGS

UL Listed for wet locations. Light engines are IP66 rated; luminaire is IP65 rated. Rated for -40°C minimum ambient. U.S. Patent No. D672,492 S. International patent pending.

DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org to confirm which versions are qualified.

WARRANTY

Five-year limited warranty. Full warranty terms located at:
www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

Note: Specifications subject to change without notice.

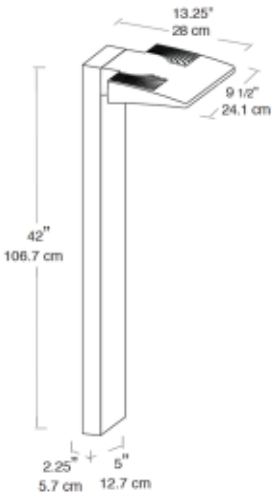
BLED20Y

TYPE: XB BOLLARDS

42" high rectangular Bollard with (1) 20 Watt LED fixture for a low level lighting applications. Equivalent to a 150 Watt MH. Great for pathway lighting! IESNA Full Cutoff, Fully Shielded optics. 5 year warranty.

Color: Bronze

Weight: 19.6 lbs



LED Info

Watts:	20W
Color Temp:	3000K (Warm)
Color Accuracy:	71
L70 Lifespan:	100000
LM79 Lumens:	985
Efficacy:	45 LPW

Driver Info

Type:	Constant Current
120V:	0.19A
208V:	0.12A
240V:	0.10A
277V:	0.08A
Input Watts:	22W
Efficiency:	92%

Technical Specifications

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

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

Junction Box:
Junction Box Not Included.

Driver:
Multi-chip 10W high output long life LED Driver Constant Current, Class II, 120V-240V, 50/60/ Hz, 350mA.

THD:
6.82% at 120V

Ambient Temperature:
Suitable for use in 50°C (122°F) ambient temperatures.

Cold Weather Starting:
The minimum starting temperature is -30°C.

Fixture Efficacy:
45 Lumens per Watt

Total Harmonic Distortion:
THD = 8.1%.

California Title 24:
See BLED20/PC for a 2013 California Title 24 compliant model.

Patents:
The BLED20 RCL design is protected under patents pending in Canada, U.S., China, Taiwan and Mexico.

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

Lumen Maintenance:
The LED will deliver 70% of its initial lumens at 100,000 hours of operation.

Housing:
Precision die cast aluminum housing, lens frame.

Mounting:
42" Bollard.

Gaskets:
High temperature silicone.

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

Anchor Bolt:
The anchor bolts for the BLED's have the following dimensions 1/2 - 13 x 12 1/4" long with 2 3/4" hook.

Green Technology:
BLEDs are Mercury, Arsenic and UV free.

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

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

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.

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 C78.377-2008.

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 the USA by RAB's IBEW Local 3 workers.

Buy American Act Compliant:
This product is a COTS item manufactured in the United States, and is compliant with the Buy American Act.

Recovery Act (ARRA) Compliant:
This product complies with the 52.225-21 "Required Use of American Iron, Steel, and Manufactured Goods-- Buy American Act-- Construction Materials (October 2010).

Trade Agreements Act Compliant:
This product is a COTS item manufactured in the United States, and is compliant with the Trade Agreements Act.

GSA Schedule:
Suitable in accordance with FAR Subpart 25.4.

LITHONIA LIGHTING®

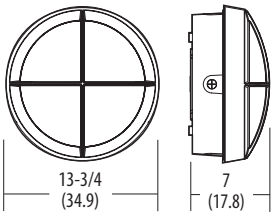
Catalog Number	
Notes	
Type	XC - EXTERIOR ENTRY DECORATIVE CEILING LIGHT, WITH OR WITHOUT CROSS BARS

GRS GATEWAY®

Architectural Rough Service Fixture

VGR4C

LED
Round Open Face
Deep Housing
Ceiling/Wall Mounted



All dimensions are inches (centimeters).

FEATURES & SPECIFICATIONS

INTENDED USE — Architectural deep-cast luminaire provides general illumination for rough service (vandal resistant) applications. Ideal for interior or exterior applications where safety and security are a concern. Designed to complement building architecture and to endure extreme environmental conditions and physical abuse. Amber LEDs available for applications requiring turtle-safe lighting. Certain airborne contaminants can diminish integrity of acrylic. Click here for Acrylic Environmental Compatibility table for suitable uses.

CONSTRUCTION — *Bezel* - One-piece, die-cast aluminum, low copper alloy (<1% copper). Encloses lens and secures to housing with stainless steel Torx® T-10 set screws (two included) or optional stainless steel tamper-resistant screws (see options).

Housing - One-piece, die-cast aluminum, low copper alloy (<1% copper), with post-painted polyester powder coat finish. Four hole mounting detail for use directly over outlet box, or conduit entry through three 1/2" threaded openings on side or 3/4" threaded opening on rear surface. .012 gauge aluminum sheet metal internal bracket and board plate for thermal conduction and support.

Gasket - Polycarbonate: Perimeter lens gasket is one-piece silicone "O" ring, mechanically held in lens channel. Glass: Perimeter lens gasket is closed-cell silicone. Pad mounting gasket is closed-cell neoprene and seals housing to mounting surface. Gaskets help cushion impact shock.

Finish - Standard finish is textured polyester powder coat in white, black or bronze. Optional architectural colors available (see paint finishes).

OPTICS — *Polycarbonate lens* – Injection-molded lens is .125 inch thick. Designed to enrich the LED color and lumen output. Smooth exterior allows for easy cleaning, and interior pattern diffuses light for even surface illumination.

Glass lens – Tempered borosilicate lens, .250 inch thick, has smooth exterior for easy cleaning and textured interior.

ELECTRICAL — Utilizes high-efficiency LEDs mounted to 3 metal core circuit boards. 3500 Kelvin temperature. Driver: 2 electronic drivers wired in parallel allows total power to be reduced by half while maintaining even illumination across the 3 boards. 70% lumen maintenance at 50,000 hours. 100V through 277V, 50-60HZ operation. 6KV pulse rated. Initial surge protection standard.

INSTALLATION — Unit may be wall or ceiling mounted.

LISTINGS — CSA Certified to UL and C-UL standards. NOM Certified (see Options). CSA Listed for 30ºC ambient and wet locations. IP65 rated.

WARRANTY — 5-year limited warranty. Complete warranty terms located at www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

For installed Rough Service Product(s), Acuity warrants that, for the lifetime of the product(s), the polycarbonate lens and/or polycarbonate housing will withstand breakage resulting from occasional physical abuse and rough handling (the "Rough Service Warranty"), notwithstanding the vandalism exclusion set forth at www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

Actual performance may differ as a result of end-user environment and application.

Note: Specifications subject to change without notice.

ORDERING INFORMATION

For shortest lead times, configure products using **bolded options**.

Example: VGR4C 50LED 120 DWHG SF LPI

VGR4C							
Series	**Lumen output[1]/Color temperature[2]**		**Lens**	**Voltage**	**Paint finishes[3]**	**Options**	**Lamp**
VGR4C	**Lumen output[1]** **50LED** 50W 40LED 40W	**Color temperature[2]** **(blank)** 3500K	**(blank)** Polycarbonate **GL** Borosilicate glass	**120** 277 **MVOLT**	Standard textured finishes **DWHG** White **DBLB** Black **DDBT** Dark bronze **DNAT** Natural aluminum **DSST** Sandstone	Shipped installed in fixture DF Double fuse[4] **SF** Single fuse **DS** Dual switching MSI8 Wet location motion sensor[5] **PE** Photoelectric cell[6,7] TRS Tamper-resistant screws[8] VGRDS Decorative shroud[9,10] **NOM** Meets Mexican standards	**LPI** Lamp included LPIAMB Amber LEDs

Accessories: *Order as separate catalog number.*

RK1 T10DRV	Torx TX10 screwdriver, for use with Gateway set screws.
RK1 T20BIT	Hex-base driver bit, Torx TX20, for tamper-resistant screws with center reject pin.
RK1 T20DRV	Torx TX20 screwdriver for use with tamper-resistant screws with center reject pin.
VGRDS XXX	Decorative shroud[10,11]

Notes

1 Refer to table on back page.
2 The CCT value provided is of lamp source and actual CCT will vary upon power levels.
3 For additional colors, refer to Architectural Paint brochure.
4 Must specify DS option.
5 Provided with lens for mounting up to 8'.
6 Must specify voltage. Not available with MVOLT.
7 Not available with DS option.
8 T-20 screws with center reject pin.
9 Color will be the same as the bezel.
10 Maximum operating ambient temperature is 25°C when using this accessory.
11 Must specify color (Example: VGRDS DWHG).

System watts	Initial delivered lumens through polycarbonate lens* 3500K	Initial delivered lumens through glass lens* 3500K	mA	Ambient temperature °C
50	1785	1265	700	30
40	1320	930	500	30

* 3500K is LED CCT

LITHONIA LIGHTING®
An AcuityBrands Company
SPECIAL APPLICATIONS: One Lithonia Way Conyers, GA 30012 Phone: 800.315.4963 Fax: 770-981-8191 www.lithonia.com

Anyx 13

ARV13 NRV13
BRV13 XRV13
CRV13

Vandal Resistant
High Performance LED

Project Information

Fixture Type **XC, RED LENS** Date

Job Name

Approved By

Catalog No. - - - - - -

WALL /CEILING MOUNT
LAMPS: LED

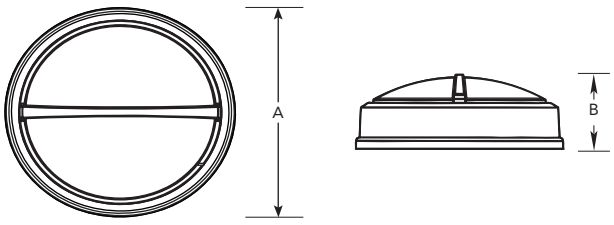
ADA Compliant

SPECIFICATIONS

Description	The Anyx 13 LED fixtures build on the highly successful Anyx line. The full cut-off, LED version features an upgraded, die cast, marine grade aluminum external trim, as well as an innovative twist-lock system. The Anyx 13 series has been installed successfully in large scale projects such as dorm rooms, unsecured hallways, transportation stations and public schools.
Trim	One piece injection molded UV stabilized polycarbonate mechanically interlocked to base plate and sealed against moisture and contaminants with two high temperature silicone O-rings. Color is molded through entire part for scratch resistant finish. Locked in place with one concealed tamper resistant set screw.
Lens	One piece injection molded opal prismatic polycarbonate with minimum 0.130" wall thickness. Secured to base plate by trim and sealed with two high temperature silicone O-rings.
Reflector	Die formed heavy gauge specular aluminim, shaped for maximum efficiency.
Base Plate	Pressure die cast marine grade aluminum. Chemically primed and finished with electrostatically applied polyester powder coat.
Driver	Constant current driver at 350mA, 100-277V only.
LED	Samsung SPM series @ 3500K or 4000K and 82 CRI. L_{70} projected life of over 130,000 hours at 50°C. Tested in accordance with LM-80. Ten year warranty on LED boards against operational defects.
Gaskets	Closed cell die cut neoprene gasket provided between fixture mounting plate and mounting surface. High temperature silicone O-ring between the trim and lens; between the lens and base plate; and between the mounting plate and base plate.
UL Listing	U.L., C.UL., Wet standard, 1598a.
Lifetime Warranty	Luminaire LED Incorporated will repair or replace any fixture damaged due to vandalism for the lifetime of the installation.

DIMENSIONAL DATA

	A	B
ARV13	13.13	3.85
BRV13	13.13	4.00
CRV13	13.13	4.00
NRV13	13.13	4.00
XRV13	13.13	4.00



5 Sutton Place• P.O. Box 2162 • Edison, NJ • 08818
P. 732.549.0056 F. 732.549.9737

Luminaire Led

www.luminaireled.net

Made in

Luminaire LED Incorporated products are manufactured in the USA with components purchased from USA suppliers, and meet the Buy American requirements under the ARRA.

Anyx 13

ARV13 NRV13
BRV13 XRV13
CRV13

Vandal Resistant
High Performance LED

Fixture Type **XC, RED LENS**

ORDERING INFORMATION

SERIES	LED	CCT	VOLTS	LENS	COLORS	OPTIONS	
							TX/SD (REQUIRED)

SERIES	LED	CCT	VOLTS	LENS	COLORS	OPTIONS
ARV13 BRV13 CRV13 NRV13 XRV13	25W HP	3500K 4000K	120 277	CP Clear Prismatic Optional OP Opal Standard	BLK - Black WHT - White BRZ - Bronze GRY - Gray CUST - Custom Color Consult Factory	DIM EMB23 EMB125R EMB375R SHCAB PC GLR

TRIM OPTIONS

OPTIONS

DIM	0-10V dimming driver.
EMB 23	450 lumen self contained 90 minute emergency battery pack. SHCAB option required and included. 0°C (32°F) to 50°C (122°F).
EMB 125R	Stand-alone inverter that will operate a 125W maximum load for 90 minutes. Select ceiling grid, recessed wall or surface mount. 20°C (68°F) to 30°C (86°F).
EMB 375R	Stand-alone inverter that will operate a 375W maximum load for 90 minutes. 20°C (68°F) to 30°C (86°F).
SHCAB	Low profile pressure die cast marine grade aluminum back box. Provided with (3) 1/2 " i.p.t. holes for conduit entry with threaded plugs. Chemically primed and finished with electrostatically applied polyester powder coat.
PC	Photoelectric switch. (requires SHCAB option).
GLR	Fuse and fuse holder.
TX/SD	TORX® head bit.

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Anyx 13

ARV13 NRV13
BRV13 XRV13
CRV13

Vandal Resistant
High Performance LED

Fixture Type **XC, RED LENS**

PHOTOMETRIC DATA

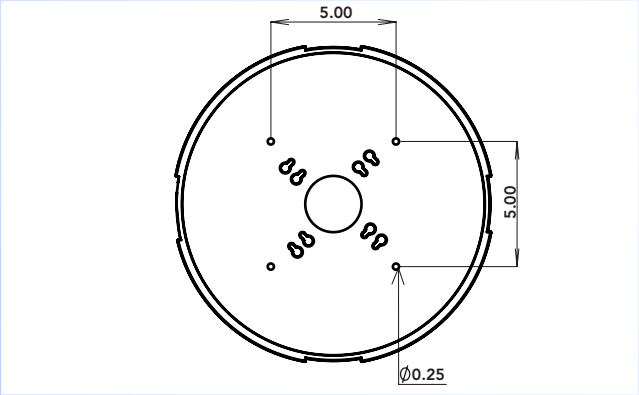
MODEL ARV13-25W HP-4000K-OP IES FILE: 101344396CRT-001
Light Output: 1688 Lumens Total Power: 24.86W
Testing was performed in accordance with IES LM-79-08.

Lumen Output

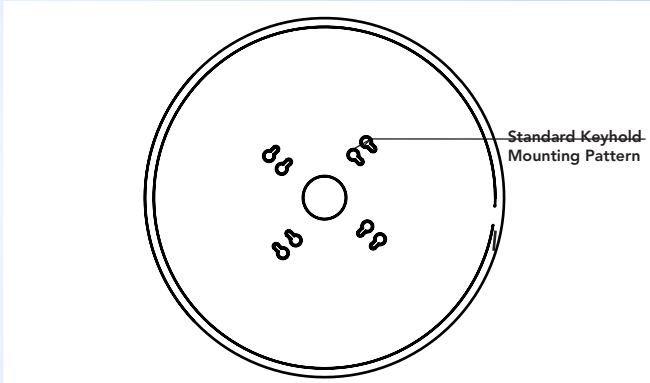
Wattage	Lumens
25W	1688
50W	3156

INSTALLATION DETAILS

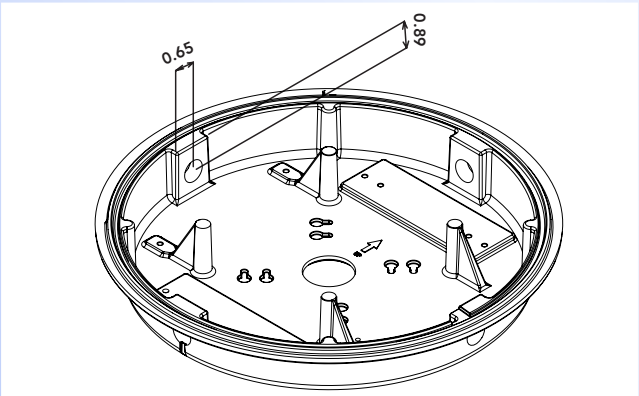
Base Plate

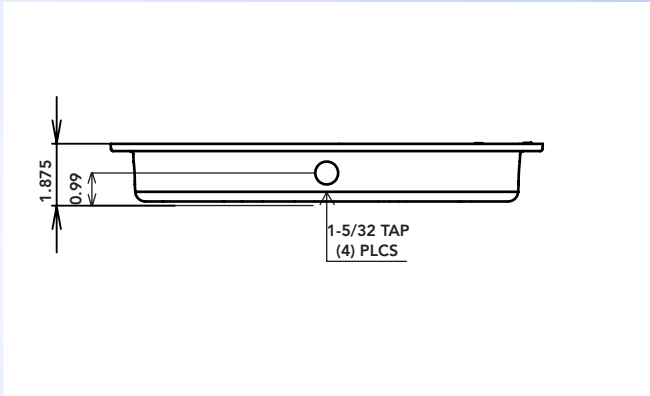


SHCAB



SHCAB KO DETAIL





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www.luminaireled.net

MILLENIUM™ ROUND

MR13 SERIES – DEEP PROFILE HOUSING

PROJECT INFORMATION

Job Name _____

Fixture Type XC WITH RED LED LIGHT SOURCE

Catalog Number _____

Approved by _____

FD

BD CD ED

PRODUCT FEATURES:

» Surface mount – ceiling or wall; 13"Dia.×6.5"D

» Peace of Mind Guarantee® against breakage

» Dust and water protected to IP64 standards

SPECIFICATIONS

HOUSING: Marine grade die-cast aluminum. Rib reinforced construction. Integral heat sinks. Housing flange interlocks and wraps around lens base producing maximum moisture deflection and resistance to prying. Housing provided with four-point mounting holes, one wireway hole and temporary junction box mounting drill points. Standard black, bronze or white exterior TGIC polyester powder coat – 5-step pre-treatment. See Ordering Information for optional finishes.

REFLECTOR: Compact Fluorescent and LED: Full reflector/wire cover – 90% reflectivity. HID: Full reflector/wire cover. High efficiency aluminum.

LENS: UV-stabilized, high impact resistant, virgin injection molded polycarbonate. High efficiency blondel fluted lens obscures lamp image and maximizes uniformity. Close tolerance push/turn/lock-in-place mating of injection molded lens and lens base. Lens and lens base secured with one concealed captive Torx® with center pin fastener.

LENS BASE: Lens base shields lamp from viewing angles. High impact resistant, injection molded opaque black, bronze or white polycarbonate. Optional Light Gray, Silver, Forest Green or Custom Color (see Ordering Information below) are chemically bonded, impact resistant finishes.

GASKETING: Die-cut, closed cell neoprene self adhesive gasket seals housing to mounting surface. Closed cell, silicone "O" ring gaskets positioned and friction secured in gasket channels of lens base and housing.

HARDWARE: One stainless steel Torx® with center pin fastener.

ELECTRICAL: Fluorescent magnetic ballasts – 120V/277V power factor corrected, fluorescent electronic 120/277/347 and dual voltage ballasts high power factor (<10% THD), HID ballasts high power factor. Metal halide lamps utilize pulse start technology. Shock absorbing, medium base lamp sockets provided for HID lamps. LED: Replaceable high-brightness ANSI 3500K (80 CRI min.), 4000K (70 CRI min.), or 5000K (70 CRI min.) white LED array. 120-277VAC, high power factor electronic driver. LED dimming capability controlled through compatible 0-10V dimmer (supplied by others); 10-100% dimming range. See options for higher CRI lamp availability.

INSTALLATION: For wall mount installation, mount lamp base up on all HID lamp sources.

PHOTOMETRICS: Photometry tested to the IESNA LM-79-08 standard by an ILAC/ISO17025 accredited laboratory. For additional photometric information, go to www.kenall.com.

WARRANTY: Standard four-point mounting and polycarbonate lens required for Peace of Mind Guarantee®. One (1) year warranty against defects in materials and workmanship. Five (5) year warranty on LED lamps and driver for defects resulting in a fixture lumen depreciation of 30% or greater.

PATENT: U.S. Patent No. 6,042,251.

LISTINGS: Luminaire is certified to UL Standards by either Underwriters Laboratory or Intertek Testing Laboratory for wet location (listing includes Emergency Battery Pack "EL" option). UL certified IP64 per IEC 60598.

LED | PEACE OF MIND Guarantee® | c UL us | c ETL us | IP64

ORDERING INFORMATION (Ex: MR13BD-PP-DB-50L40K-1-DV)

Model	Lens Type	Finish	Lamp Type	Lamp Qty	Voltage	Options	Accessories

Model

MR13BD	Bar
MR13CD	Cross
MR13ED	Eyelid
MR13FD	Full Face

Lens Type

PP	Pearlescent Polycarbonate
S	Clear Starburst Polycarbonate (n/a with LED)

Finish

DB	Dark Bronze
FG	Forest Green
LG	Light Gray
MB	Matte Black
MW	Matte White
SL	Silver
CC	Custom Color (Consult factory)

Lamp Type (Quantity/Ballast/Volt/Starting Temp)

50L35K▲	50 Watt 3500K LED (1/DCC/120-277V/-40°F)
50L40K▲	50 Watt 4000K LED (1/DCC/120-277V/-40°F)
50L50K▲	50 Watt 5000K LED (1/DCC/120-277V/-40°F)
7	7 Watt Twin (1,2/MB/120,277/0°F)
13	13 Watt Twin (1,2/MB/120,277/32°F)
13Q	13 Watt Quad (1,2/RS/120,277,347/0°F)
18Q	18 Watt Quad (1,2/RS/120,277,347/0°F)
26Q	26 Watt Quad (1,2/RS/120,277,DV,347/0°F)
32P	32 Watt PLT (1/RS/120,277,DV,347/0°F)
42P●	42 Watt PLT (1/RS/120,277,DV,347/0°F)
35S●	35 Watt HPS (1/HPF/120,277/-40°F)
50M†●	50 Watt MH (1/HPF/120,277,347/-20°F)
50S●	50 Watt HPS (1/HPF/120,277/-40°F)
70S●	70 Watt HPS (1/HPF/120,277,347/-20°F)

● n/a with PIA lens

▲ n/a with MR13ED

Lamp Quantity

See Lamp Type for availability

1	One Lamp
2	Two Lamps

Voltage

See Lamp Type for availability

120	120 Volts
277	277 Volts
347■	347 Volts
DV■	120-277 Volts electronic ballasts & LED driver only

Options

EL*	One-Lamp WL Emergency Pack (32°F) (max 32 total system watts)
BPC	Photo Control – Shielded Button Type (120 or 277V only, 277 Volt n/a with 70S)
10KV	IEEE C62.41.2 C High Surge Protector (LED only)
FS	Single Fuse & Holder
NAT	Natatorium Environment Option
QR	Quartz restrike system for maximum 75 Watt DC bayonet quartz lamp (see C-0796)
QRC	Hot/Cold Quartz restrike
QS	Quartz socket only
R80	Minimum 80 CRI (4000K LED only)

Accessories

C-0796	75 Watt DC Bay Quartz Lamp
9500	Torx® Screwdriver

† UV shielding lamp supplied

■ n/a with BPC

* 120-277 Volts only. n/a with LED lamp

KENALL®

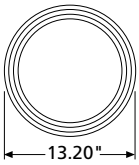
www.kenall.com **P: 800-4-Kenall** **F: 847-360-1781** **1020 Lakeside Drive Gurnee, Illinois 60031**

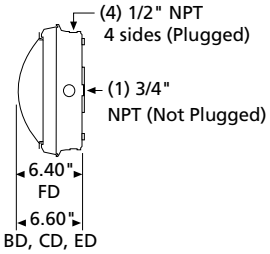
MILLENIUM™ ROUND

MR13 SERIES – DEEP PROFILE HOUSING

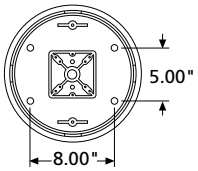
DIMENSIONAL DATA

CROSS SECTION





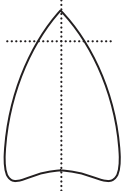
BACK VIEW



www.kenall.com P: 800-4-Kenall F: 847-360-1781 1020 Lakeside Drive Gurnee, Illinois 60031

TYPE: XD
EXTERIOR DOWNLIGHT

Luminaire Type:
Catalog Number (autopopulated):



Gotham Architectural Downlighting
LED Downlights

6" Evo®
Open Reflector

Solid-State Lighting

ENERGY STAR

FEATURES

OPTICAL SYSTEM
- Self-flanged semi-specular, matte-diffuse or specular lower reflector
- Patented Bounding Ray™ optical design (U.S. Patent No. 5,800,050)
- 45° cutoff to source and source image
- Top-down flash characteristic

MECHANICAL SYSTEM
- 16-gauge galvanized steel construction; maximum 1-1/2" ceiling thickness
- Telescopic mounting bars maximum of 32" and minimum of 15", preinstalled, 4" vertical adjustment
- Toolless adjustments post installation
- Junction box capacity: 8 (4 in, 4 out) 12AWG rated for 90°C
- Light engine and driver accessible through aperture

ELECTRICAL SYSTEM
- Fully serviceable and upgradeable lensed LED light engine
- 70% lumen maintenance at 60,000 hours based on IESNA LM-79-2008
- 120-277VAC, 50/60hz power supply with 0-10V dimming (10-100%)
- Overload and short circuit protected
- LEDs tested under LM80

LISTINGS
- Fixtures are CSA certified to meet US and Canadian standards; wet location, covered ceiling

WARRANTY
- 5-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

ORDERING INFORMATION

EXAMPLE: EVO 35/10 6AR 120

Series	Color temperature	Nominal lumen values	Aperture/Trim color	Distribution	Finish	Voltage
EVO	**27/** 2700 K **30/** 3000 K **35/** 3500 K **41/** 4100 K	**10** 1000 lumens **14** 1400 lumens **18** 1800 lumens **22** 2200 lumens	**6AR** Clear **6PR** Pewter **6WTR** Wheat **6GR** Gold **6WR**[1] White	(blank) 1.0 s/mh **VND** Very narrow (0.5 s/mh) **ND** Narrow (0.6 s/mh) **MD** Medium (0.8 s/mh) **WD** Wide (1.2 s/mh)	(blank) Semi-specular **LD** Matte diffuse **LS** Specular	**MVOLT** **120** **277** **347**[2]

Driver		Options			
(blank)[3]	0-10V dimming driver. Minimum dimming level 10%	**SF**	Single fuse	**TRBL**	Black painted flange
ECOS2[4,5]	Lutron® Hi-Lume® 2-wire forward-phase dimming driver. Minimum dimming level 1%	**RRL__**	RELOC®-ready luminaire connectors enable a simple and consistent factory installed option across all ABL luminaire brands. Refer to RRL for complete nomenclature.	**EL**[8,9]	Emergency battery pack with integral test switch
ECOS3[3,4]	Lutron® Hi-Lume® 3-wire or EcoSystem® dimming driver. Minimum dimming level 1%	**NEPP**[6]	Interface for Sensor Switch® nLight® network provided with integral power supply. Refer to TN-623-01.	**ELR**[8,9]	Emergency battery pack with remote test switch
		NSD[6]	Sensor Switch® nLight® one 5A relay with one 0-10 VDC dimming output; requires bus power, such as nPP16 power pack. Refer to nSP5-D.	**CP**[10]	Chicago plenum
		TRW[7]	White painted flange	**BGTD**	Bodine generator transfer device

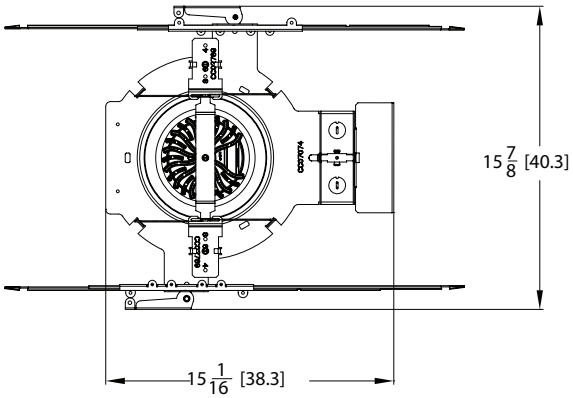
ACCESSORIES order as separate catalog numbers (shipped separately)

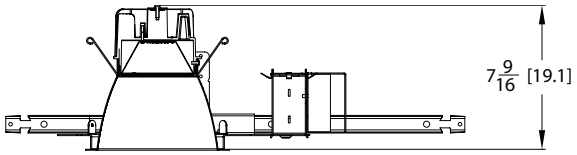
SCA6	Sloped ceiling adapter. Degree of slope must be specified (10D, 15D, 20D, 25D, 30D). Ex: SCA6 10D. Refer to TECH-190.
CTA4-8 YK	Ceiling thickness adapter (extends mounting frame to accommodate ceiling thickness up to 2").
GVRT	Vandal-resistant trim accessory. Refer to TECH-200.
ISD BC	0-10V wallbox dimmer. Refer to ISD-BC.
NSP5 D ER KIT	Sensor Switch nLight secondary relay and dimming pack device used to switch and dim luminaires powered via an emergency circuit. Refer to NSP5 D ER KIT.

GOTHAM ARCHITECTURAL DOWNLIGHTING | 1400 Lester Road Conyers GA 30012 | P 800.315.4982 | gothamlighting.com

DIMENSIONAL DATA

All dimensions are inches (centimeters) unless otherwise noted.





Aperture: 6-1/4 (15.9)
Ceiling Opening: 7-1/8 (18.1)
Overlap Trim: 7-1/2 (19.1)

ELECTRICAL

WATTAGE CONSUMPTION MATRIX		
LUMENS	**WATTAGE**	**LUMENS per WATT**
2200	32	67
1800	28	66
1400	25	63
1000	18	61

NOTES

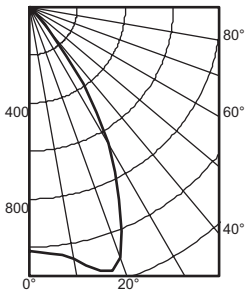
ORDERING NOTES

1. Not available with finishes.
2. Not valid with emergency options, i.e., EL and ELR.
3. Refer to TECH-240 for compatible dimmers.
4. Not available with NEPP option.
5. 120V only.
6. For Emergency generator/inverter applications order non-nLight-enabled fixture and NSP5 D ER KIT as an accessory. Refer to NSP5 D ER KIT.
7. Not available with white reflector.
8. For dimensional changes, refer to TECH-140. Not available with CP option. Not available with 347V.
9. Must specify 120 or 277V.
10. Not available with EL or ELR options.

Distribution Curve	Distribution Data	Output Data	Coefficient of Utilization	Illuminance: Single Luminaire 30" Above Floor

EVO 35/10 6AR LS

INPUT WATTS: 18.4, DELIVERED LUMENS: 1113.4, LM/W=60.5, 1.1 S/MH, TEST NO. LTL21133



	Ave	Lumens
0	1017	
5	1029	99
15	1139	319
25	885	404
35	391	240
45	53	48
55	1	2
65	1	1
75	0	0
85	0	0
90	0	

Zone	Lumens	% Lamp
0° - 30°	822.0	73.8
0° - 40°	1062.1	95.4
0° - 60°	1112.7	99.9
0° - 90°	1113.4	100.0
90° - 180°	0.0	0.0
0° - 180°	1113.4	*100.0

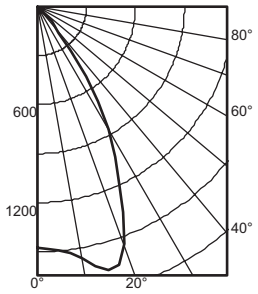
*Efficiency

pf / pc / pw	80% 50%	80% 30%	80% 10%	20% 70% 50%	20% 70% 30%	20% 70% 10%	20% 50% 50%	20% 50% 30%	20% 50% 10%
0	119	119	119	116	116	116	111	111	111
1	111	108	106	109	107	105	105	103	101
2	103	99	96	102	98	95	98	95	93
3	97	92	88	95	91	87	93	89	86
4	90	85	81	89	84	80	87	83	79
5	85	79	75	84	78	74	82	77	74
6	79	73	69	79	73	69	77	72	69
7	75	69	64	74	68	64	73	68	64
8	70	64	60	70	64	60	69	63	60
9	66	60	56	66	60	56	65	60	56
10	63	57	53	62	57	53	61	56	53

Mounting Height	Inital FC Center Beam	50% beam - 56.3° Diameter	50% beam - 56.3° FC	10% beam - 77.2° Diameter	10% beam - 77.2° FC
8.0	33.6	5.9	16.8	8.8	3.4
10.0	18.1	8.0	9.0	12.0	1.8
12.0	11.3	10.2	5.6	15.2	1.1
14.0	7.7	12.3	3.8	18.3	0.8
16.0	5.6	14.4	2.8	21.5	0.6

EVO 35/14 6AR LS

INPUT WATTS: 24.6, DELIVERED LUMENS: 1538.8, LM/W=62.6, 1.0 S/MH, TEST NO. LTL21127



	Ave	Lumens
0	1476	
5	1498	145
15	1673	462
25	1192	546
35	520	318
45	71	64
55	2	3
65	1	1
75	0	0
85	0	0
90	0	

Zone	Lumens	% Lamp
0° - 30°	1152.8	74.9
0° - 40°	1470.5	95.6
0° - 60°	1537.5	99.9
0° - 90°	1538.8	100.0
90° - 180°	0.0	0.0
0° - 180°	1538.8	*100.0

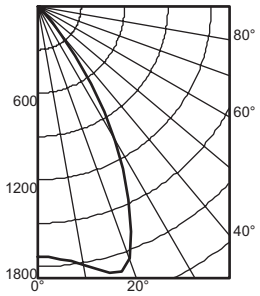
*Efficiency

pf / pc / pw	80% 50%	80% 30%	80% 10%	20% 70% 50%	20% 70% 30%	20% 70% 10%	20% 50% 50%	20% 50% 30%	20% 50% 10%
0	119	119	119	116	116	116	111	111	111
1	111	109	106	109	107	105	105	103	101
2	104	100	96	102	98	95	99	96	93
3	97	92	88	95	91	87	93	89	86
4	91	85	81	89	84	81	87	83	80
5	85	79	75	84	79	75	82	78	74
6	80	74	70	79	74	70	78	73	69
7	75	69	65	74	69	65	73	68	65
8	71	65	61	70	65	61	69	64	61
9	67	61	57	66	61	57	65	60	57
10	63	58	54	63	57	54	62	57	54

Mounting Height	Inital FC Center Beam	50% beam - 54.6° Diameter	50% beam - 54.6° FC	10% beam - 76.2° Diameter	10% beam - 76.2° FC
8.0	48.8	5.7	24.4	8.6	4.9
10.0	26.2	7.7	13.1	11.8	2.6
12.0	16.4	9.8	8.2	14.9	1.6
14.0	11.2	11.9	5.6	18.0	1.1
16.0	8.1	13.9	4.1	21.2	0.8

EVO 35/18 6AR LS

INPUT WATTS: 28.1, DELIVERED LUMENS: 1858.1, LM/W=66.1, 1.1 S/MH, TEST NO. LTL20947



	Ave	Lumens
0	1728	
5	1754	169
15	1912	535
25	1474	670
35	649	398
45	88	80
55	3	5
65	1	1
75	0	0
85	0	0
90	0	

Zone	Lumens	% Lamp
0° - 30°	1374.7	74.0
0° - 40°	1772.2	95.4
0° - 60°	1856.8	99.9
0° - 90°	1858.1	100.0
90° - 180°	0.0	0.0
0° - 180°	1858.1	*100.0

*Efficiency

pf / pc / pw	80% 50%	80% 30%	80% 10%	20% 70% 50%	20% 70% 30%	20% 70% 10%	20% 50% 50%	20% 50% 30%	20% 50% 10%
0	119	119	119	116	116	116	111	111	111
1	111	108	106	109	107	105	105	103	101
2	103	99	96	102	98	95	98	96	93
3	97	92	88	95	91	87	93	89	86
4	90	85	81	89	84	80	87	83	79
5	85	79	75	84	78	74	82	77	74
6	79	74	69	79	73	69	77	72	69
7	75	69	65	74	68	64	73	68	64
8	70	64	60	70	64	60	69	64	60
9	66	61	57	66	60	56	65	60	56
10	63	57	53	62	57	53	62	56	53

Mounting Height	Inital FC Center Beam	50% beam - 55.6° Diameter	50% beam - 55.6° FC	10% beam - 77.0° Diameter	10% beam - 77.0° FC
8.0	57.1	5.8	28.6	8.7	5.7
10.0	30.7	7.9	15.4	11.9	3.1
12.0	19.1	10.0	9.6	15.1	1.9
14.0	13.1	12.1	6.5	18.3	1.3
16.0	9.5	14.2	4.7	21.5	0.9

PHOTOMETRY NOTES

- Tested in accordance with IESNA LM-79-08.
- Tested to current IES and NEMA standards under stabilized laboratory conditions.
- Actual performance may differ as a result of end-user environment and application.
- Actual wattage may differ by +/- 10% when operating between 120-277V +/- 10%.
- CRI: 83 typical.
- Consult factory or IES file for microgroove baffle, black cone or other photometric reports.

TYPE XD1 EXTERIOR WALLWASHER

Luminaire Type:
Catalog Number (autopopulated):

Gotham Architectural Downlighting
LED Downlights

6" Evo®
Lensed Wallwash

Solid-State Lighting

FEATURES

OPTICAL SYSTEM
- Self-flanged semi-specular, matte-diffuse or specular lower reflector
- Proprietary mixing chamber delivers a uniform distribution of light to the wall
- For optimal uniformity, the recommended luminaire spacing is 3' from the wall and 3' centers

MECHANICAL SYSTEM
- 16-gauge galvanized steel construction; maximum 1-1/2" ceiling thickness
- Telescopic mounting bars maximum of 32" and minimum of 15", preinstalled, 4" vertical adjustment
- Toolless adjustments post installation
- Junction box capacity: 8 (4 in, 4 out) 12AWG rated for 90°C
- Light engine and driver accessible through aperture

ELECTRICAL SYSTEM
- Fully serviceable and upgradeable LED light engine
- 70% lumen maintenance at 60,000 hours based on IESNA LM-79-2008
- 120-277VAC, 50/60hz power supply with 0-10V dimming (10-100%); rated for 50,000-hour life
- Overload and short circuit protected

LISTINGS
- Fixtures are CSA certified to meet US and Canadian standards; wet location, covered ceiling

WARRANTY
- 5-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

ORDERING INFORMATION

EXAMPLE: EVO LW 35/10 6AR 120

Series	Type	Color temperature	Nominal lumen values	Aperture/Trim color	Finish	Voltage	Driver
EVO	**LW**	**27/** 2700 K **30/** 3000 K **35/** 3500 K **41/** 4100 K	**10** 1000 lumens **14** 1400 lumens **18** 1800 lumens **22** 2200 lumens	**6AR** Clear **6PR** Pewter **6WTR** Wheat **6GR** Gold **6WR**[1] White	(blank) Semi-specular **LD** Matte diffuse **LS** Specular	**120** **277** **347**	(blank)[2] 0-10V dimming driver. Minimum dimming level 10% **ECOS2**[3,4] Lutron® Hi-Lume® 2-wire forward-phase dimming driver. Minimum dimming level 1% **ECOS3**[2,3] Lutron® Hi-Lume® 3-wire or EcoSystem® dimming driver. Minimum dimming level 1%

Options

SF	Single fuse
RRL	RELOC®-ready luminaire. Provides compatibility with Lithonia RELOC system. Access above ceiling required.
NEPP	Interface for Sensor Switch® nLight® network with integral power supply. Refer to TN-623-01.
TRW[5]	White painted flange
NSD	Sensor Switch® nLight® dimming relay. One 5A relay with one 0-10 VDC dimming output, shipped installed. Refer to nSP5-D.
TRBL	Black painted flange
ELR[6,8]	Emergency battery pack with remote test switch
CP[7]	Chicago plenum

ACCESSORIES order as separate catalog numbers (shipped separately)

ISD BC	0-10V wallbox dimmer. Refer to ISD-BC.

NOTES

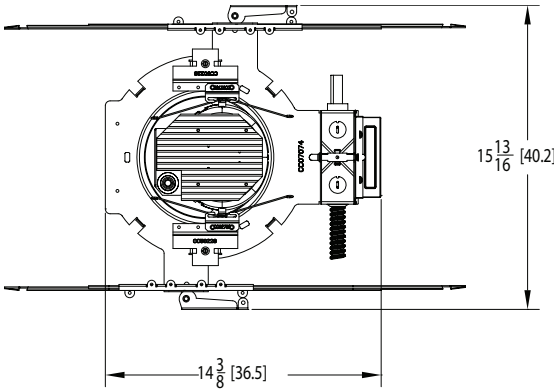
ORDERING NOTES

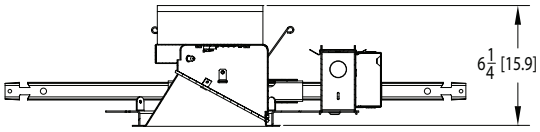
1. Not available with finishes.
2. Refer to TECH-240 for compatible dimmers.
3. Not available with NEPP option.
4. 120V only.
5. Not available with white reflector.
6. For dimensional changes, refer to TECH-140. Not available with CP option.
7. Not available with ELR options.
8. Must specify 120 or 277V.

GOTHAM ARCHITECTURAL DOWNLIGHTING I 1400 Lester Road Conyers GA 30012 I P 800.315.4982 I gothamlighting.com

DIMENSIONAL DATA

All dimensions are inches (centimeters) unless otherwise noted.





Aperture: 6-1/4(15.9)
Ceiling Opening: 7-1/8 (18.1)
Overlap Trim: 7-1/2 (19.1)

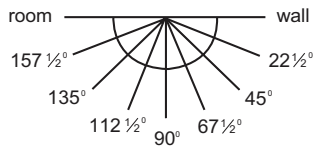
ELECTRICAL

WATTAGE CONSUMPTION MATRIX			
NOMINAL LUMENS	**DELIVERED LUMENS**	**WATTAGE**	**LUMENS per WATT**
1000	793	21.5	36.9
1400	1117	27.6	40.5
1800	1342	32	41.9
2200*	1516	37	41.0

*Estimated values

TECHNICAL INFORMATION

Footcandle values are initial and tables are based on minimum of six units. For fixture-to-wall distance other than those shown, use maximum of one-to-one spacing (distance between fixtures not more than distance to wall) for best results.



Candlepower Data — Footcandle values

EVO-LW 35/10 6AR

INPUT WATTS: 21.5, DELIVERED LUMENS: 793.4, LM/W=36.9, TEST NO. LTL20908

	Plane angle							
	Wall	22.5	45	67.5	90	112.5	135	157.5
0	602	602	602	602	602	602	602	602
5	595	590	590	588	585	581	576	573
15	490	485	492	497	493	481	465	453
25	404	404	411	412	397	369	334	306
35	356	353	350	334	297	242	189	155
45	286	274	259	226	172	116	76	57
55	184	172	152	114	70	38	21	12
65	114	104	82	48	23	9	2	2
75	53	42	27	12	4	1	1	1
85	6	3	2	1	1	0	0	0
90	0	0	0	0	0	0	0	0

Vertical Angle

	Wallwash Illuminance Study (fc) Illuminance on wall from 6 luminaires								
	Luminaire mounted 3 ft. from wall 3 ft. between luminaires			Luminaire mounted 3 ft. from wall 4 ft. between luminaires			Luminaire mounted 3 ft. from wall 5 ft. between luminaires		
ft. from ceiling	3	3.5	4	3	3.5	4	3	3.5	4
1	9	7	9	8	4	8	7	3	7
2	16	15	16	13	10	13	12	7	12
3	19	18	19	15	13	15	13	9	13
4	17	17	17	13	13	13	11	10	11
5	14	14	14	10	10	10	8	8	8
6	11	11	11	8	8	8	7	7	7
7	9	9	9	7	7	7	5	5	5
8	7	7	7	6	6	6	4	4	4
9	6	6	6	5	5	5	4	4	4
10	5	5	5	4	4	4	3	3	3

EVO-LW 35/14 6AR

INPUT WATTS: 27.6, DELIVERED LUMENS: 1116.5, LM/W=40.5, TEST NO. LTL20907

	Plane angle							
	Wall	22.5	45	67.5	90	112.5	135	157.5
0	844	844	844	844	844	844	844	844
5	834	827	828	828	823	817	810	805
15	696	690	702	709	701	681	655	636
25	576	576	585	587	564	521	473	432
35	507	501	495	472	421	343	270	221
45	398	382	361	315	241	165	110	82
55	252	237	210	158	98	54	30	17
65	155	140	110	66	32	12	4	2
75	71	57	36	17	6	1	1	1
85	7	4	3	1	1	1	0	0
90	0	0	0	0	0	0	0	0

Vertical Angle

	Wallwash Illuminance Study (fc) Illuminance on wall from 6 luminaires								
	Luminaire mounted 3 ft. from wall 3 ft. between luminaires			Luminaire mounted 3 ft. from wall 4 ft. between luminaires			Luminaire mounted 3 ft. from wall 5 ft. between luminaires		
ft. from ceiling	3	3.5	4	3	3.5	4	3	3.5	4
1	12	10	12	10	6	10	10	3	10
2	22	21	22	18	14	18	16	10	16
3	26	25	26	20	18	20	18	13	18
4	24	24	24	18	18	18	15	14	15
5	19	19	19	15	15	15	12	12	12
6	16	16	16	12	12	12	9	10	9
7	12	12	12	10	10	10	8	8	8
8	10	10	10	8	8	8	6	6	6
9	8	8	8	6	6	6	5	5	5
10	7	7	7	5	5	5	4	4	4

EVO-LW 35/18 6AR

INPUT WATTS: 32.0, DELIVERED LUMENS: 1341.8, LM/W=41.9, TEST NO. LTL21137

	Plane angle							
	Wall	22.5	45	67.5	90	112.5	135	157.5
0	1000	1000	1000	1000	1000	1000	1000	1000
5	995	994	993	988	980	968	954	947
15	844	843	852	852	834	804	768	741
25	695	697	705	701	670	613	549	499
35	609	605	597	565	501	404	312	254
45	484	467	440	383	290	194	128	95
55	310	294	260	196	119	64	34	20
65	193	176	139	83	39	15	5	3
75	91	74	48	22	8	1	1	1
85	10	6	4	1	1	1	1	0
90	0	0	0	0	0	0	0	0

Vertical Angle

	Wallwash Illuminance Study (fc) Illuminance on wall from 6 luminaires								
	Luminaire mounted 3 ft. from wall 3 ft. between luminaires			Luminaire mounted 3 ft. from wall 4 ft. between luminaires			Luminaire mounted 3 ft. from wall 5 ft. between luminaires		
ft. from ceiling	3	3.5	4	3	3.5	4	3	3.5	4
1	15	12	15	13	8	13	12	5	12
2	28	26	28	22	18	22	20	12	20
3	32	31	32	25	22	25	22	16	22
4	29	29	29	22	22	22	18	17	18
5	23	23	23	18	18	18	14	14	14
6	19	19	19	14	14	14	11	12	11
7	15	15	15	12	12	12	9	9	9
8	12	12	12	9	9	9	8	8	8
9	10	10	10	8	8	8	6	6	6
10	8	8	8	6	7	6	5	5	5

PHOTOMETRY NOTES

- Tested in accordance with IESNA LM-79-08.
- Tested to current IES and NEMA standards under stabilized laboratory conditions.
- Actual performance may differ as a result of end-user environment and application.
- Actual wattage may differ by +/- 10% when operating between 120-277V +/- 10%.
- CRI: 83 typical.
- Consult factory or IES file for microgroove baffle, black cone or other photometric reports.

TYPE XD2 EXTERIOR AREA LIGHT - GARAGE SOFFIT

gotham®

Luminaire Type:
Catalog Number (autopopulated):

Gotham Architectural Downlighting
LED Downlights

6” Incito®
Adjustable

Solid-State Lighting
(US and International Patents Pending)

FEATURES

OPTICAL SYSTEM
- Seven preset distribution patterns allow designers to achieve various objectives.
- Self-flanged semi-specular or matte-diffuse lower reflector utilized in combination with a highly transmissive lens.
- Patented Bounding Ray™ Optical Principle design (U.S. Patent No. 5,800,050) provides source before source image for a smooth transition from top of the reflector to bottom.

MECHANICAL SYSTEM
- Light engine and driver are accessible from above or below ceiling.
- 16-gauge black painted steel mounting frame with C-channel mounting bars included. Post-installation adjustment possible from above or below ceiling.
- Galvanized steel junction box with hinged access covers and spring latch. Three combination 1/2”-3/4” and one 1/2” knockout for straight-through conduit runs. Capacity: 8 (4in, 4out) No. 12 AWG conductors rated for 90°C.
- Accommodates up to 1½”-thick ceilings.
- Continuous vertical tilt from 0°–40°. Full horizontal rotation.

ELECTRICAL SYSTEM
- Solid-state LED light engine available in 2700 K, 3000 K, 3500 K or 4000 K color temperatures. CRI: 85 typical.
- eldoLED SOLOdrive 0-10V driver standard with <1% dimming level.
- eldoLED SOLOdrive DALI driver available with <1% dimming level.
- eldoLED POWERdrive DMX with RDM (remote device management) available with <1% dimming level.
- Rated system life of 50,000 hours at 70% output.
- Emergency battery pack with remote test switch available.

LISTINGS
- Fixtures are CSA certified to meet US and Canadian standards; damp location listed.

WARRANTY
- 5-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

ORDERING INFORMATION

EXAMPLE: ICO ADJ 30/50 6ACT00 20D 120 EZB

Series	Color temperature	Nominal lumen values[1]	Aperture/Trim color	Type	Finish	Beam	Voltage
ICO ADJ	**27/** 2700 K **30/** 3000 K **35/** 3500 K **40/** 4000 K	**20** 2000 lumens **25** 2500 lumens **30** 3000 lumens **35** 3500 lumens **40** 4000 lumens **45** 4500 lumens **50** 5000 lumens **55** 5500 lumens **60** 6000 lumens	**6AC** Clear **6PC** Pewter **6WTC** Wheat **6WC**[2] White **6BC**[2] Black	**T00** Cut for angles 0°-20° **T20** Cut for angles 20°-40°	(blank) Semi-specular **LD** Matte diffuse	**20D** 20° beam angle **25D** 25° beam angle **30D** 30° beam angle **35D** 35° beam angle **40D** 40° beam angle **45D** 45° beam angle **55D**[3] 55° beam angle	**120** **277** **347**

Driver		Options			
EZB	eldoLED SOLOdrive 0-10V dimming driver. Minimum dimming level <1%	**SF**	Single fuse	**RRL__**	RELOC®-ready luminaire connectors enable a simple and consistent factory installed option across all ABL luminaire brands. Refer to RRL for complete nomenclature.
EDAB	eldoLED SOLOdrive DALI dimming driver. Minimum dimming level <1%	**TRW**[4]	White painted flange		
EDXB	eldoLED POWERdrive DMX with RDM (remote device management). Minimum dimming level <1%. Includes termination resistor.	**TRBL**[5]	Black painted flange		
		ELR[6]	Emergency battery pack with remote test switch		

NOTES

ORDERING NOTES

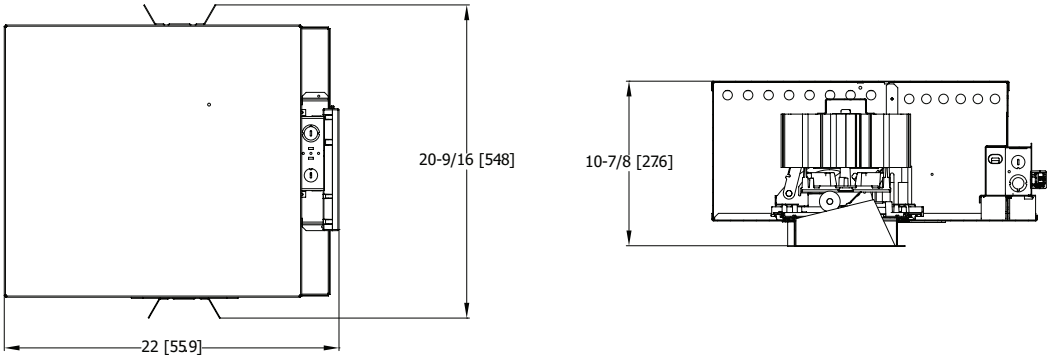
1. Nominal lumen values at 0° tilt, 30° beam.
2. Not available with finishes.
3. Maximum 4000 lumens.
4. Not required for WC reflector.
5. Not required for BC reflector.
6. Top access required.

GOTHAM ARCHITECTURAL DOWNLIGHTING | 1400 Lester Road Conyers GA 30012 | P 800.315.4982 | gothamlighting.com

gotham®

DIMENSIONAL DATA

All dimensions are inches (centimeters) unless otherwise noted.



Aperture: 6-1/4 [15.8]
Ceiling Opening: 6-15/16 [17.6]
Overlap Trim: 7-1/2 [19.1]

ELECTRICAL

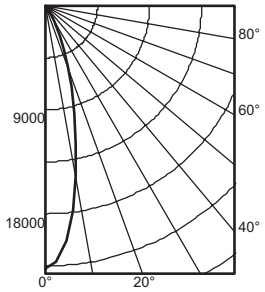
EL/ELR AVAILABILITY / COMPATIBILITY – Initial Lumens

LED			Initial Lumens	
Product	**Lumens**	**Watts**	**EL/ ELR**	**ELRHL**
ICO 6”	2000-6500	28-101	580	N/A

Distribution Curve	Distribution Data	Output Data	Coefficient of Utilization	Illuminance: Single Luminaire 30" Above Floor

ICO ADJ 35/60 6ACT00 30 120 (0 DEG TILT)

INPUT WATTS: 101.4, DELIVERED LUMENS: 6205.7, LM/W=61.2, 0.4 S/MH, TEST NO. LTL23300



	Ave	Lumens
0	22754	
5	20358	1759
15	9641	2653
25	2849	1357
35	552	377
45	53	50
55	8	6
65	3	3
75	0	1
85	0	0
90	0	

Zone	Lumens	% Lamp
0° - 30°	5768.5	93.0
0° - 40°	6145.7	99.0
0° - 60°	6201.9	99.9
0° - 90°	6205.6	100.0
90° - 180°	0.0	0.0
0° - 180°	6205.6	*100.0

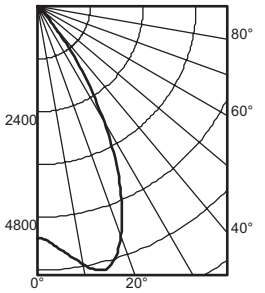
*Efficiency

pf	20%								
pc	80%			70%			50%		
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%
0	119	119	119	116	116	116	111	111	111
1	113	111	109	110	109	107	106	105	104
2	107	104	101	105	102	100	102	100	98
3	102	98	95	101	97	94	98	95	93
4	97	93	90	96	92	89	94	91	88
5	93	89	86	92	88	85	91	87	85
6	90	85	82	89	85	82	88	84	81
7	86	82	79	86	81	78	85	81	78
8	83	79	76	83	79	76	82	78	75
9	80	76	73	80	76	73	79	75	73
10	78	73	71	77	73	70	77	73	70

		50% beam - 25.0°		10% beam - 49.3°	
Mounting Height	Inital FC Center Beam	Diameter	FC	Diameter	FC
8.0	752.2	2.4	376.1	5.0	75.2
10.0	404.5	3.3	202.3	6.9	40.5
12.0	252.1	4.2	126.1	8.7	25.2
14.0	172.1	5.1	86.0	10.5	17.2
16.0	124.9	6.0	62.4	12.4	12.5

ICO ADJ 35/60 6ACT20 30 120 (20 DEG TILT)

INPUT WATTS: 101.5, DELIVERED LUMENS: 5597.2, LM/W=55.1, 1.0 S/MH, TEST NO. LTL23302



	Ave	Lumens
0	5272	
5	5527	541
15	6166	1698
25	4415	1990
35	1673	1050
45	300	243
55	14	17
65	20	15
75	20	22
85	20	21
90	20	

Zone	Lumens	% Lamp
0° - 30°	4228.5	75.5
0° - 40°	5278.5	94.3
0° - 60°	5538.7	98.9
0° - 90°	5597.5	100.0
90° - 180°	0.0	0.0
0° - 180°	5597.5	*100.0

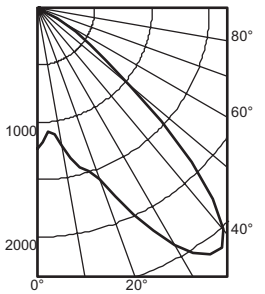
*Efficiency

pf	20%								
pc	80%			70%			50%		
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%
0	119	119	119	116	116	116	111	111	111
1	111	108	106	109	106	104	104	103	101
2	103	99	96	101	98	95	98	95	93
3	96	91	88	95	90	87	92	89	85
4	90	85	81	89	84	80	87	83	79
5	85	79	75	84	78	74	82	77	74
6	80	74	70	79	73	69	77	72	69
7	75	69	65	74	69	65	73	68	64
8	71	65	61	70	65	61	69	64	60
9	67	61	57	66	61	57	65	60	57
10	63	58	54	63	57	54	62	57	54

		50% beam - 54.8°		10% beam - 75.2°	
Mounting Height	Inital FC Center Beam	Diameter	FC	Diameter	FC
8.0	174.3	5.7	87.2	8.5	17.4
10.0	93.7	7.8	46.9	11.5	9.4
12.0	58.4	9.9	29.2	14.6	5.8
14.0	39.9	11.9	19.9	17.7	4.0
16.0	28.9	14.0	14.5	20.8	2.9

ICO ADJ 35/60 6ACT20 30 120 (40 DEG TILT)

INPUT WATTS: 101.4, DELIVERED LUMENS: 5084.9 LM/W=50.1, 2.0 S/MH, TEST NO. LTL23304



	Ave	Lumens
0	1232	
5	1088	109
15	1438	408
25	1986	932
35	2618	1612
45	1896	1416
55	567	516
65	15	45
75	23	22
85	28	25
90	16	

Zone	Lumens	% Lamp
0° - 30°	1447.9	28.5
0° - 40°	3060.1	60.2
0° - 60°	4991.6	98.2
0° - 90°	5084.8	100.0
90° - 180°	0.0	0.0
0° - 180°	5084.8	*100.0

*Efficiency

pf	20%								
pc	80%			70%			50%		
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%
0	119	119	119	116	116	116	111	111	111
1	108	105	102	106	103	100	101	99	97
2	97	91	87	95	90	86	92	88	84
3	87	80	75	85	79	74	83	77	73
4	78	71	65	77	70	64	74	68	64
5	70	62	57	69	62	56	67	61	56
6	63	55	50	62	55	49	61	54	49
7	57	49	44	57	49	43	55	48	43
8	52	44	39	51	44	39	50	43	38
9	47	40	34	47	39	34	46	39	34
10	43	36	31	43	36	31	42	35	31

		50% beam - 91.1°		10% beam - 108.6°	
Mounting Height	Inital FC Center Beam	Diameter	FC	Diameter	FC
8.0	40.7	11.2	20.4	15.3	4.1
10.0	21.9	15.3	11.0	20.9	2.2
12.0	13.7	19.4	6.8	26.4	1.4
14.0	9.3	23.5	4.7	32.0	0.9
16.0	6.8	27.5	3.4	37.5	0.7

PHOTOMETRY NOTES

- Tested in accordance with IESNA LM-79-08.
- Tested to current IES and NEMA standards under stabilized laboratory conditions.
- Actual performance may differ as a result of end-user environment and application.
- Actual wattage may differ by +/- 10% when operating between 120-277V +/- 10%.
- CRI: 83 typical.
- Consult factory or IES file for other photometric reports.

WSR LED

Architectural Wall Sconce

Inverted available with WLU option only.

Catalog Number

Notes

TYPE: XW BLDG MTD AREA LIGHTS

Type

Hit the Tab key or mouse over the page to see all interactive elements.

Introduction

The classic Architectural Wall Sconce is now available with the latest in LED technology. The result is a long-life, maintenance-free product with typical energy savings of 75% compared to metal halide versions. The integral battery backup option provides emergency egress lighting, without the use of a back-box or remote gear, so installations maintain their aesthetic integrity.

The WSR LED is ideal for replacing existing 50 – 175W metal halide wall-mounted products. The expected service life is 20+ years of nighttime use.

Specifications

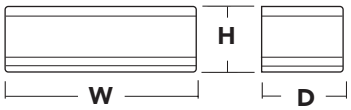
Luminaire

Height: 7-1/4" *(18.4 cm)*

Width: 18" *(45.7 cm)*

Depth: 9" *(22.8 cm)*

Weight: 17 lbs *(7.7 kg)*

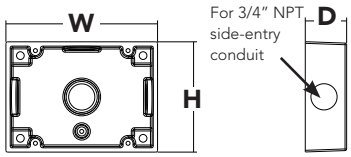


Optional Back Box (BBW)

Height: 4" *(10.2 cm)*

Width: 5-1/2" *(14.0 cm)*

Depth: 1-1/2" *(3.8 cm)*



Ordering Information

EXAMPLE: WSR LED 2 10A700/40K SR3 MVOLT DDBTXD

WSR LED							
Series	**Light Engines**	**Performance Package**	**Distribution**	**Voltage**	**Mounting**	**Options[3]**	**Finish *(required)***
WSR LED	1 One engine (10 LEDs) 2 Two engines (20 LEDs)	**700 mA options:** 10A700/30K 3000K 10A700/40K 4000K 10A700/50K 5000K	SR2 Type II SR3 Type III SR4 Type IV	MVOLT [1] 120 [1] 208 [1] 240 [1] 277 [1] 347 480	**Shipped included** (blank) Surface mount **Shipped separately [2]** BBW Surface-mounted back box UT5 Uptilt 5 degrees	**Shipped installed** PE Photoelectric cell, button type [4,5] SF Single fuse (120, 277, 347V) [4] DF Double fuse (208, 240, 480V) [4] DMG 0-10V dimming driver (no controls) ELCW Emergency battery backup [6] WLU Wet location door for up orientation [7] PIR Motion/ambient light sensor [8] **Shipped separately** VG Vandal guard WG Wire guard	DDBXD Dark bronze DBLXD Black DNAXD Natural aluminum DWHXD White DSSXD Sandstone DDBTXD Textured dark bronze DBLBXD Textured black DNATXD Textured natural aluminum DWHGXD Textured white DSSTXD Textured sandstone

Emergency Battery Operation

The emergency battery backup (ELCW option) is integral to the luminaire - no external housing required! This design provides reliable emergency operation while maintaining the aesthetics of the product.

All ELCW configurations include an independent secondary driver with an integral relay to immediately detect AC power loss. Dual light engines are wired in parallel so both engines operate in emergency mode and provide additional component redundancy. These design features meet various interpretations of NFPA 70/NEC 2008 - 700.16

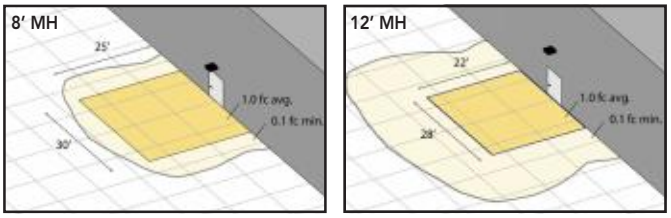
The emergency battery will power the luminaire for a minimum duration of 90 minutes (maximum duration of three hours) from the time supply power is lost, per International Building Code Section 1006 and NFPA 101 Life Safety Code Section 7.9, provided luminaires are mounted at an appropriate height and illuminate an open space with no major obstructions.

The examples at right show illuminance of 1 fc average and 0.1 fc minimum of the single-engine Type IV product in emergency mode.

WST LED 1 10A700/40K SR4 MVOLT ELCW

10′ x 10′ Gridlines

8′ and 12′ Mounting Height



NOTES

1. MVOLT driver operates on any line voltage from 120-277V (50/60 Hz). Specify 120, 208, 240 or 277 options only when ordering with photocell (PE option) or fusing (SF, DF options).
2. May also be ordered separately as an accessory. Ex: WSBBW DDBXD U. Must specify finish.
3. Must be ordered with fixture; cannot be field installed.
4. Not available with MVOLT option. Button photocell (PE) can be ordered with a dedicated voltage option. Single fuse (SF) requires 120, 277 or 347 voltage option. Double fuse (DF) requires 208, 240 or 480 voltage option.
5. Not available with 480V option. Not available with motion/ambient light sensor (PIR).
6. Integral battery pack is rated for -20° to 60°C operating temperature. ELCW warranty is 3-year period. Not available with 347V or 480V. Not available with WLU.
7. WLU not available with PIR or ELCW.
8. Specifies the SensorSwitch SFD-7-ODP control (photocell included); see Motion Sensor Guide for details. Not available with "PE" option (button type photocell). Dimming driver standard. Not available with WLU, VG or WG.

LITHONIA LIGHTING

One Lithonia Way • Conyers, Georgia 30012 • Phone: 800.279.8041 • Fax: 770.918.1209 • www.lithonia.com

Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Actual wattage may differ by +/- 8% when operating between 120-480V +/- 10%. Actual performance may differ as a result of end-user environment and application.

Light Engines	Drive Current (mA)	Performance Package	System Watts (MVOLT[1])	Dist. Type	40K (4000K, 70 CRI)				
					Nominal Lumens	B	U	G	LPW
1 (10 LEDs)	700	10A700/--K	24W	SR2	2,005	1	0	1	84
				SR3	2,029	1	0	1	84
				SR4	1,959	1	0	1	82
2 (20 LEDs)	700	10A700/--K	47W	SR2	3,944	1	0	1	84
				SR3	4,028	1	0	1	86
				SR4	3,851	1	0	1	82

1 See electrical load chart for 347/480V system watts.

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Multiplier
0°C	32°F	1.10
10°C	50°F	1.06
20°C	68°F	1.02
25°C	**77°F**	**1.00**
30°C	86°F	0.98
40°C	104°F	0.92

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the **WSR LED 2 10A700** platform in a **25°C ambient**, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	0	25,000	50,000	100,000
Lumen Maintenance Factor	1.0	0.94	0.88	0.77

Electrical Load

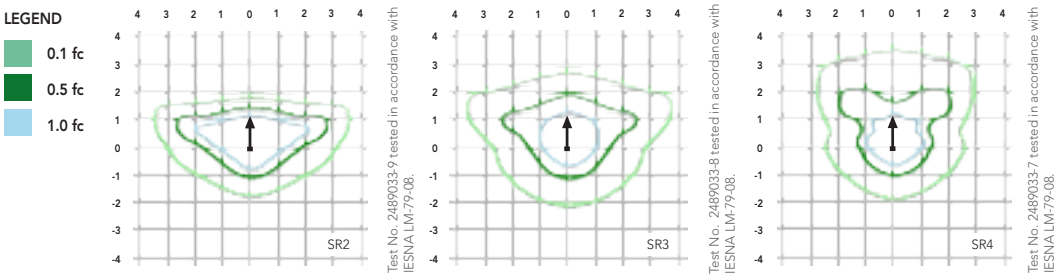
Light Engines	Drive Current (mA)	System Watts	Current (A)					
			120	208	240	277	347	480
1	700	24W	0.24	0.14	0.12	0.1	-	-
		29W[1]	-	-	-	-	0.09	0.07
2	700	47W	0.44	0.27	0.23	0.20	-	-
		53W[1]	-	-	-	-	0.17	0.12

1 Higher wattage is due to electrical losses from step-down transformer.

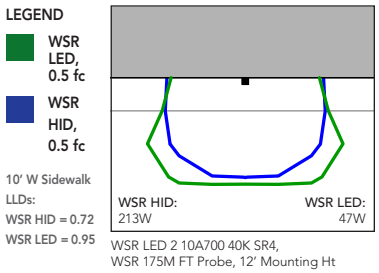
Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's WSR LED homepage.

Isofootcandle plots for the WSR LED 2 10A700/40K SR2, SR3, and SR4. Distances are in units of mounting height (12').



Distribution overlay comparison to 175W metal halide.



WSR LED 2 10A700 40K SR4, WSR 175M FT Probe, 12' Mounting Ht

FEATURES & SPECIFICATIONS

INTENDED USE

The classic architectural shape of the WSR LED was designed for applications such as hospitals, schools, malls, restaurants, and commercial buildings. The long life LEDs and driver make this luminaire nearly maintenance-free.

CONSTRUCTION

The single-piece die-cast aluminum housing integrates secondary heat sinks to optimize thermal transfer from the internal light engine heat sinks and promote long life. The driver is mounted in direct contact with the casting for a low operating temperature and long life. The die-cast door frame is fully gasketed with a one-piece solid silicone gasket to keep out moisture and dust, providing an IP65 rating for the luminaire.

FINISH

Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling. Standard Super Durable colors include dark bronze, black, natural aluminum, sandstone and white. Available in textured and non-textured finishes.

OPTICS

Precision-molded acrylic lenses are engineered for superior distribution, uniformity, and spacing in wall-mount applications. Light engines are 4000K (70 CRI). The WSR LED has zero uplight and qualifies as a Nighttime Friendly™ product, meaning it is consistent with the LEED® and Green Globes™ criteria for eliminating wasteful uplight.

ELECTRICAL

Light engine(s) consist of 10 high-efficacy LEDs mounted to a metal core circuit board and integral aluminum heat sinks to maximize heat dissipation and promote long life (100,000 hrs at 25°C, L77). Class 2 electronic driver has a power factor >90%, THD <20%. Easily-serviceable surge protection device meets a minimum Category B (per ANSI/IEEE C62.41.2).

INSTALLATION

A universal mounting plate with integral mounting support arms allows the fixture to hinge down for easy access while making wiring connections. The integral bubble level on the mounting plate provides assistance for level placement on every installation.

LISTINGS

CSA certified to U.S. and Canadian standards. Light engines are IP66 rated; luminaire is IP65 rated and suitable for wet locations when mounted with the lenses down. WLU option offers wet location listing in "up" orientation. Rated for -30°C minimum ambient.

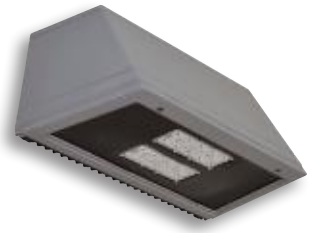
DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org to confirm which versions are qualified.

WARRANTY

Five year limited warranty. Full warranty terms located at www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx.

Note: Specifications subject to change without notice.

WST LED
Architectural Wall Sconce



Inverted available with WLU option only.

Catalog Number

Notes

Type TYPE: XW BLDG MTD AREA LIGHTS

Hit the Tab key or mouse over the page to see all interactive elements.

Introduction

The classic Architectural Wall Sconce is now available with the latest in LED technology. The result is a long-life, maintenance-free product with typical energy savings of 75% compared to metal halide versions. The integral battery backup option provides emergency egress lighting, without the use of a back-box or remote gear, so installations maintain their aesthetic integrity.

The WST LED is ideal for replacing existing 50 – 175W metal halide wall-mounted products. The expected service life is 20+ years of nighttime use.

Specifications

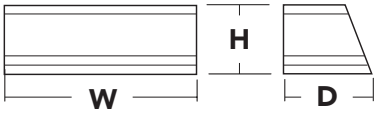
Luminaire

Height: 7-1/4" *(18.4 cm)*

Width: 16-1/4" *(41.3 cm)*

Depth: 9-1/8" *(23.2 cm)*

Weight: 17 lbs *(7.7 kg)*

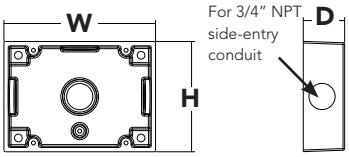


Optional Back Box (BBW)

Height: 4" *(10.2 cm)*

Width: 5-1/2" *(14.0 cm)*

Depth: 1-1/2" *(3.8 cm)*



Ordering Information

EXAMPLE: WST LED 2 10A700/40K SR3 MVOLT DDBTXD

WST LED							
Series	**Light Engines**	**Performance Package**	**Distribution**	**Voltage**	**Mounting**	**Options[3]**	**Finish *(required)***
WST LED	1 One engine (10 LEDs) 2 Two engines (20 LEDs)	**700 mA options:** 10A700/30K 3000K 10A700/40K 4000K 10A700/50K 5000K	SR2 Type II SR3 Type III SR4 Type IV	MVOLT [1] 120 [1] 208 [1] 240 [1] 277 [1] 347 480	**Shipped included** (blank) Surface mount **Shipped separately [2]** BBW Surface-mounted back box UT5 Uptilt 5 degrees	**Shipped installed** PE Photoelectric cell, button type [4,5] SF Single fuse (120, 277, 347V) [4] DF Double fuse (208, 240, 480V) [4] DMG 0-10V dimming driver (no controls) ELCW Emergency battery backup [6] WLU Wet location door for up orientation [7] PIR Motion/ambient light sensor [8] **Shipped separately** VG Vandal guard WG Wire guard	DDBXD Dark bronze DBLXD Black DNAXD Natural aluminum DWHXD White DSSXD Sandstone DDBTXD Textured dark bronze DBLBXD Textured black DNATXD Textured natural aluminum DWHGXD Textured white DSSTXD Textured sandstone

Emergency Battery Operation

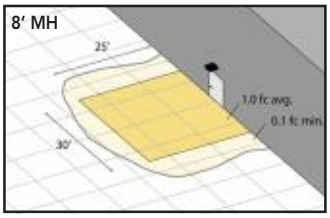
The emergency battery backup (ELCW option) is integral to the luminaire - no external housing required! This design provides reliable emergency operation while maintaining the aesthetics of the product.

All ELCW configurations include an independent secondary driver with an integral relay to immediately detect AC power loss. Dual light engines are wired in parallel so both engines operate in emergency mode and provide additional component redundancy. These design features meet various interpretations of NFPA 70/NEC 2008 - 700.16

The emergency battery will power the luminaire for a minimum duration of 90 minutes (maximum duration of three hours) from the time supply power is lost, per International Building Code Section 1006 and NFPA 101 Life Safety Code Section 7.9, provided luminaires are mounted at an appropriate height and illuminate an open space with no major obstructions.

The examples at right show illuminance of 1 fc average and 0.1 fc minimum of the single-engine Type IV product in emergency mode.

WST LED 1 10A700/40K SR4 MVOLT ELCW
10′ x 10′ Gridlines
8′ and 12′ Mounting Height



NOTES
1. MVOLT driver operates on any line voltage from 120-277V (50/60 Hz). Specify 120, 208, 240 or 277 options only when ordering with photocell (PE option) or fusing (SF, DF options).
2. May also be ordered separately as an accessory. Ex: WSBBW DDBXD U. Must specify finish.
3. Must be ordered with fixture; cannot be field installed.
4. Not available with MVOLT option. Button photocell (PE) can be ordered with a dedicated voltage option. Single fuse (SF) requires 120, 277 or 347 voltage option. Double fuse (DF) requires 208, 240 or 480 voltage option.
5. Not available with 480V option. Not available with motion/ambient light sensor (PIR).
6. Integral battery pack is rated for -20° to 60°C operating temperature. ELCW warranty is 3-year period. Not available with 347V or 480V. Not available with WLU.
7. WLU not available with PIR or ELCW.
8. Specifies the SensorSwitch SFOD-7-ODP control (photocell included); see Motion Sensor Guide for details. Not available with "PE" option (button type photocell). Dimming driver standard. Not available with WLU, VG or WG.

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Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Actual wattage may differ by +/- 8% when operating between 120-480V +/- 10%. Actual performance may differ as a result of end-user environment and application.

Light Engines	Drive Current (mA)	Performance Package	System Watts (MVOLT[1])	Dist. Type	40K (4000K, 70 CRI)				
					Nominal Lumens	B	U	G	LPW
1 (10 LEDs)	700	10A700/--K	24W	SR2	2,005	1	0	1	84
				SR3	2,029	1	0	1	84
				SR4	1,959	1	0	1	82
2 (20 LEDs)	700	10A700/--K	47W	SR2	3,944	1	0	1	84
				SR3	4,028	1	0	1	86
				SR4	3,851	1	0	1	82

1 See electrical load chart for 347/480V system watts.

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Multiplier
0°C	32°F	1.10
10°C	50°F	1.06
20°C	68°F	1.02
25°C	**77°F**	**1.00**
30°C	86°F	0.98
40°C	104°F	0.92

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the **WST LED 2 10A700** platform in a **25°C ambient**, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	0	25,000	50,000	100,000
Lumen Maintenance Factor	1.0	0.94	0.88	0.77

Electrical Load

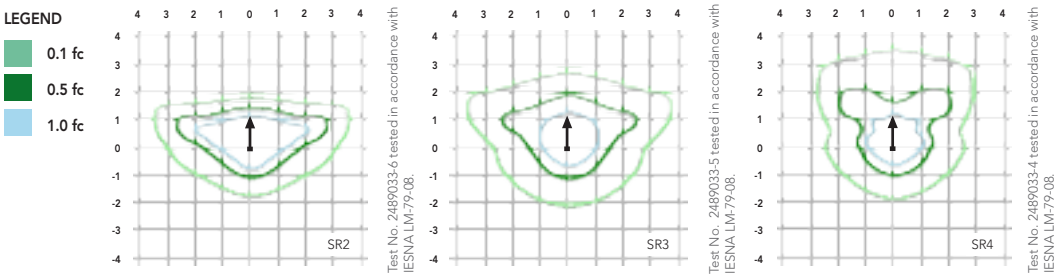
Light Engines	Drive Current (mA)	System Watts	Current (A)					
			120	208	240	277	347	480
1	700	24W	0.24	0.14	0.12	0.1	-	-
		29W[1]	-	-	-	-	0.09	0.07
2	700	47W	0.44	0.27	0.23	0.20	-	-
		53W[1]	-	-	-	-	0.17	0.12

1 Higher wattage is due to electrical losses from step-down transformer.

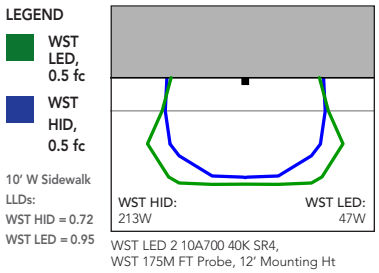
Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's WST LED homepage.

Isofootcandle plots for the WST LED 2 10A700/40K SR2, SR3, and SR4. Distances are in units of mounting height (12').



Distribution overlay comparison to 175W metal halide.



WST LED 2 10A700 40K SR4, WST 175M FT Probe, 12' Mounting Ht

FEATURES & SPECIFICATIONS

INTENDED USE

The classic architectural shape of the WST LED was designed for applications such as hospitals, schools, malls, restaurants, and commercial buildings. The long life LEDs and driver make this luminaire nearly maintenance-free.

CONSTRUCTION

The single-piece die-cast aluminum housing integrates secondary heat sinks to optimize thermal transfer from the internal light engine heat sinks and promote long life. The driver is mounted in direct contact with the casting for a low operating temperature and long life. The die-cast door frame is fully gasketed with a one-piece solid silicone gasket to keep out moisture and dust, providing an IP65 rating for the luminaire.

FINISH

Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling. Standard Super Durable colors include dark bronze, black, natural aluminum, sandstone and white. Available in textured and non-textured finishes.

OPTICS

Precision-molded acrylic lenses are engineered for superior distribution, uniformity, and spacing in wall-mount applications. Light engines are 4000K (70 CRI). The WST LED has zero uplight and qualifies as a Nighttime Friendly™ product, meaning it is consistent with the LEED® and Green Globes™ criteria for eliminating wasteful uplight.

ELECTRICAL

Light engine(s) consist of 10 high-efficacy LEDs mounted to a metal core circuit board and integral aluminum heat sinks to maximize heat dissipation and promote long life (100,000 hrs at 25°C, L77). Class 2 electronic driver has a power factor >90%, THD <20%. Easily-serviceable surge protection device meets a minimum Category B (per ANSI/IEEE C62.41.2).

INSTALLATION

A universal mounting plate with integral mounting support arms allows the fixture to hinge down for easy access while making wiring connections. The integral bubble level on the mounting plate provides assistance for level placement on every installation.

LISTINGS

CSA certified to U.S. and Canadian standards. Light engines are IP66 rated; luminaire is IP65 rated and suitable for wet locations when mounted with the lenses down. WLU option offers wet location listing in "up" orientation. Rated for -30°C minimum ambient.

DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org to confirm which versions are qualified.

WARRANTY

Five year limited warranty. Full warranty terms located at www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx.

Note: Specifications subject to change without notice.

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