



STEWART + REINDERSMA ARCHITECTURE, PLLC

October 5, 2015

RE: Salad and Go – Project Description
1040 W. Southern Ave.
Mesa, AZ 85210
SRA Project No.: 15-062

Salad and Go is a Gourmet Salad Drive-thru with a mission to make drive-thru fast food better and healthier. Our vision is one day on every corner of America where there is a traditional drive-thru fast food restaurant there will be a better and healthier drive-thru fast food restaurant. We are committing our first 40 stores to the State of Arizona and have plans for 6 Salad and Go locations in Mesa, with our first at Power and Broadway. We have no interior seating and we focus exclusively in providing the best drive-thru experience with better and healthier food while offering the same price, convenience and speed as traditional drive-thru fast food. Our menu consists of 10 made to order entree salads that can be converted into a wrap, super food smoothies, and a kids menu that parents and kids love.

Sincerely,

Stewart + Reindersma Architecture, PLLC

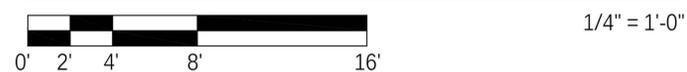
Sake Reindersma, AIA
Sr. Partner



a west elevation



b east elevation



color/ material

	COLOR	MATERIAL		COLOR	MATERIAL
1	"ANGORA" - (SW 6036) BY SHERWIN WILLIAMS	STUCCO/ MEDIUM FINISH	4	ALUMINUM GRAY	PRE-FINISHED ALUMINUM PANELS
2	"TANGERINE DREAM" - (DE5160) BY DUNN EDWARDS	STUCCO/ MEDIUM FINISH			
3	"GET UP AND GO" - (DE5636) BY DUNN EDWARDS	STUCCO/ MEDIUM FINISH			



STEWART + REINDERSMA ARCHITECTURE, PLLC

5450 e high street, suite 200
 phoenix, az 85054
 p: 480.515.5123 f: 602.513.7193
 www.sra360.com

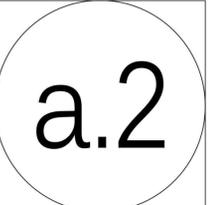


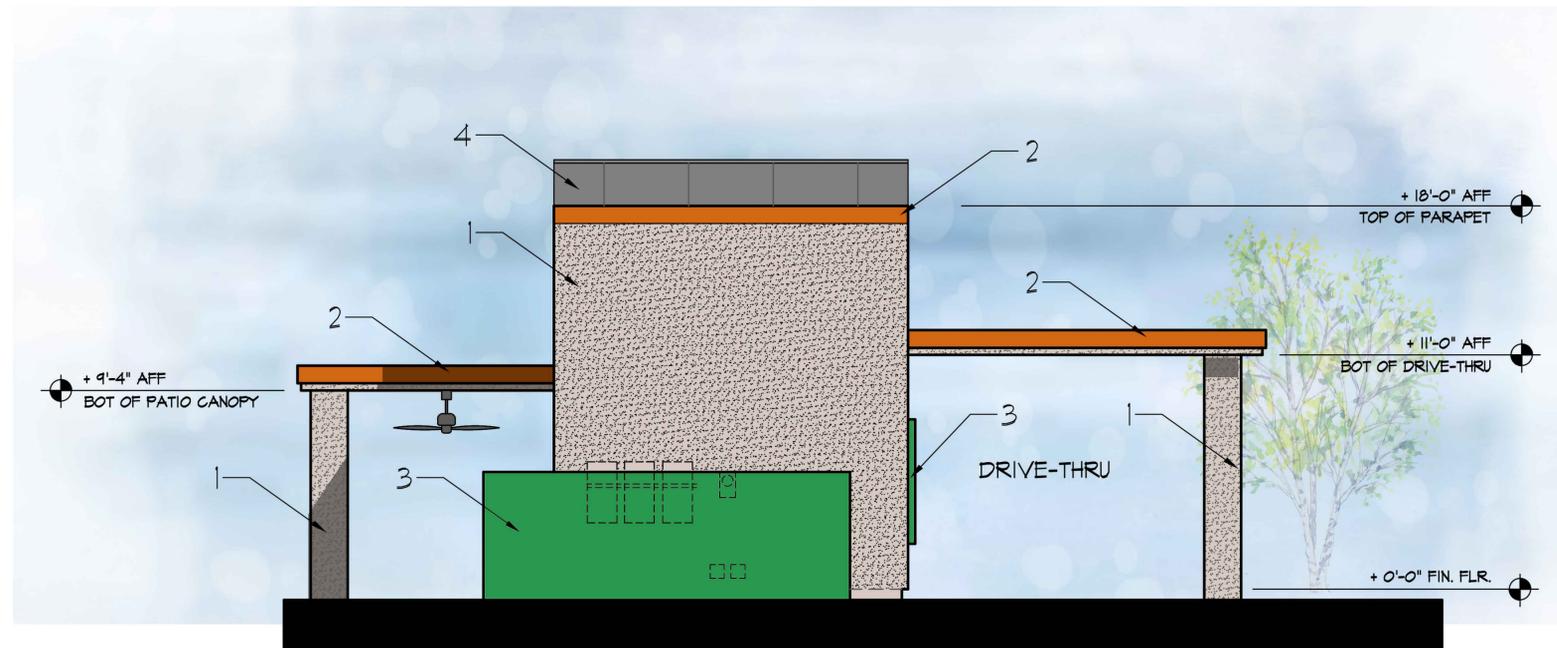
applicant/contact:
 hinkson company, llc
 5050 n. 40th st, suite 350
 phoenix, az 85018
 contact: chris hinkson
 t: (480) 794-1887
 c: (480) 329-8887

Fiesta Commons Shopping Center
 1040 W. Southern Ave.
 Mesa, AZ 85210

project:
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date: 10/5/15
 issued for: DESIGN REVIEW
 job no.: 15-062
 sheet title: EXTERIOR ELEVATIONS
 sheet no.:

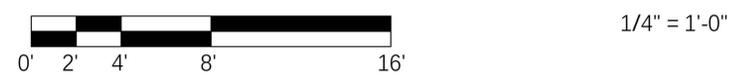




b north elevation



a south elevation



color/ material

	COLOR	MATERIAL		COLOR	MATERIAL
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2	 "TANGERINE DREAM" - (DE5160) BY DUNN EDWARDS	STUCCO/ MEDIUM FINISH			
3	 "GET UP AND GO" - (DE5636) BY DUNN EDWARDS	STUCCO/ MEDIUM FINISH			



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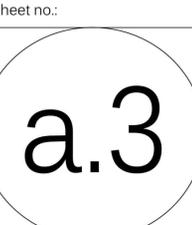
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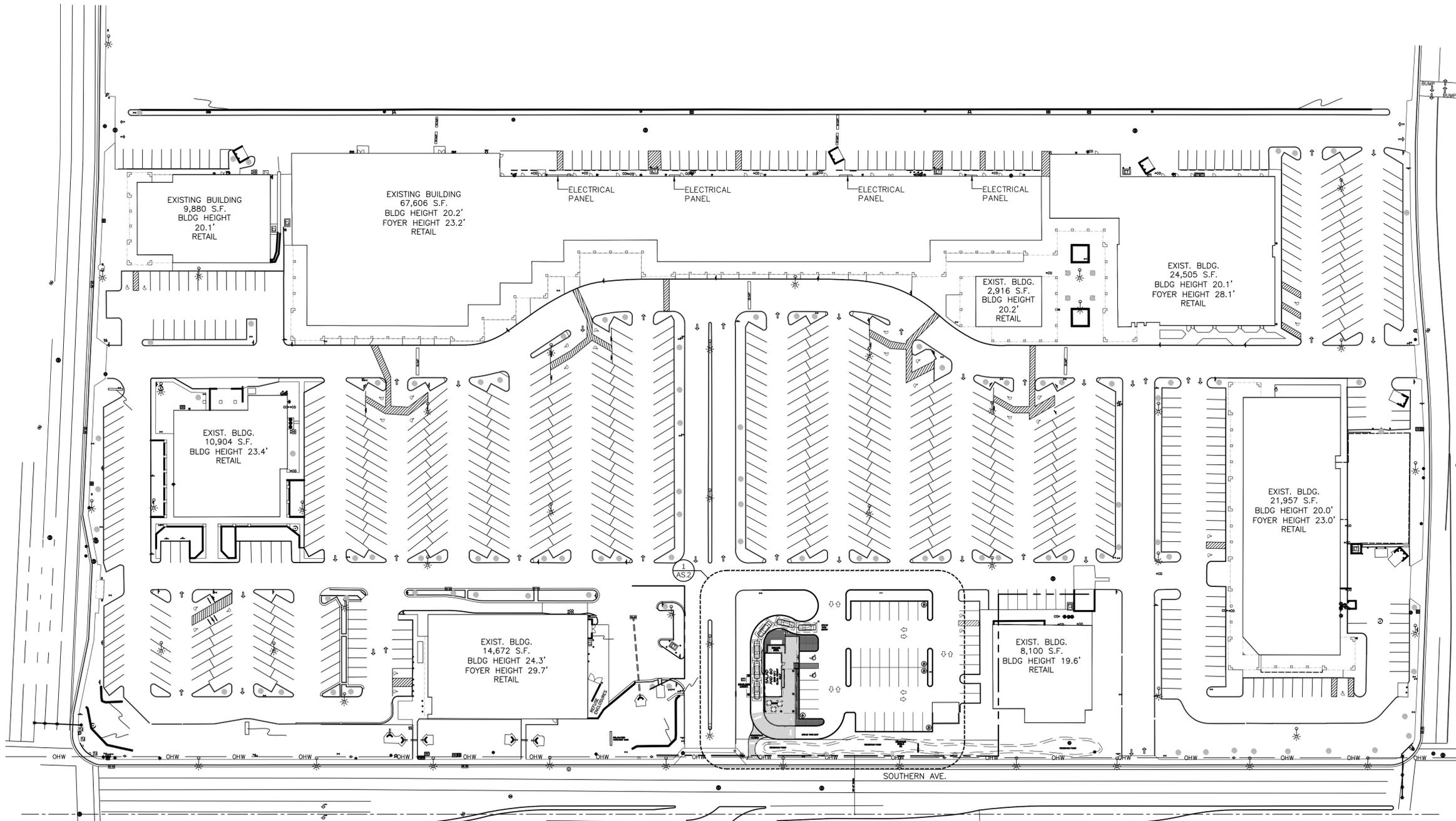


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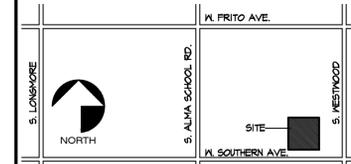




GENERAL NOTES

1. DEVELOPMENT AND USE OF THIS SITE WILL CONFORM WITH ALL APPLICABLE CODES AND ORDINANCES.
2. ALL NEW OR RELOCATED UTILITIES WILL BE PLACED UNDERGROUND.
3. STRUCTURES AND LANDSCAPING WITHIN A TRIANGLE MEASURED BACK 10 FEET FROM THE PROPERTY LINE TO 20 FEET ALONG THE PROPERTY LINE ON EACH SIDE OF THE DRIVEWAYS ENTRANCES WILL BE MAINTAINED AT A MAXIMUM HEIGHT OF 3 FEET.
4. ANY LIGHTING WILL BE PLACED SO AS TO DIRECT LIGHT AWAY FROM ADJACENT RESIDENTIAL DISTRICTS AND WILL NOT EXCEED ZERO FOOT CANDLE AT THE PROPERTY LINE. NO NOISE, ODOR OR VIBRATION WILL BE EMITTED AT ANY LEVEL EXCEEDING THE GENERAL LEVEL OF NOISE, ODOR OR VIBRATION EMITTED BY USES IN THE AREA OUTSIDE THE SITE.
5. "ALL SERVICES AREAS SHALL BE SCREENED TO CONCEAL TRASH CONTAINERS, LOADING DOCKS, TRANSFORMERS, BACK-FLOW PREVENTERS AND OTHER MECHANICAL OR ELECTRICAL EQUIPMENT FROM EYE LEVEL ADJACENT TO ALL PUBLIC STREETS."
6. ASPHALTIC CONCRETE SURFACE PAVING, PAVING ALLOCATION PER CITY OF MESA REQUIREMENTS.
7. "ALL SITE IMPROVEMENTS, INCLUDING LANDSCAPE AND SITE CLEANUP, MUST BE COMPLETED PRIOR TO CERTIFICATE OF OCCUPANCY FOR ANY BUILDING WITHIN A PHASE."
8. MAXIMUM NOISE LEVEL 55 DECIBELS (NORMAL SPEAKING VOICE) AT PROPERTY LINE).
9. SEE CIVIL DRAWINGS FOR LAYOUT DIMENSIONS OF BUILDING, CURB DIMENSIONS, HORIZONTAL CONTROL, PROPERTY DIMENSIONS AND DRIVES.
10. SEE CIVIL DRAWINGS FOR SITE GRADING AND DRAINAGE.
11. SEE LANDSCAPE DRAWINGS FOR SITE LANDSCAPE PLANS, DIMENSIONS, TEXTURES, PATTERNS, AND SITE DETAILS.
12. ALL REQUIRED PUBLIC FIRE HYDRANTS SHALL BE INSTALLED, TESTED, AND ACCEPTED PRIOR TO CONSTRUCTION.
13. VEHICULAR ACCESS MUST BE PROVIDED AND MAINTAINED SERVICEABLE THROUGHOUT CONSTRUCTION.
14. WALKWAYS ARE STANDARD GRAY CONCRETE U.N.O. WITH SALTED FINISH.
15. ALL TRANSFORMER BOXES, METER PANELS AND ELECTRIC EQUIPMENT, BACK-FLOW DEVICES AND ANY OTHER UTILITY EQUIPMENT, NOT ABLE TO BE SCREENED BY LANDSCAPING OR WALLS SHALL BE PAINTED TO MATCH THE BUILDING COLOR.

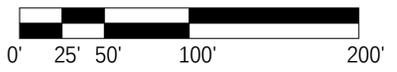
VICINITY MAP



APN: 134-23-002C COMMERCIAL

APN: 134-23-009C COMMERCIAL

1 site plan - fiesta commons shopping center



1" = 50'-0"



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architect:

applicant/contact:
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SA&G AND GO
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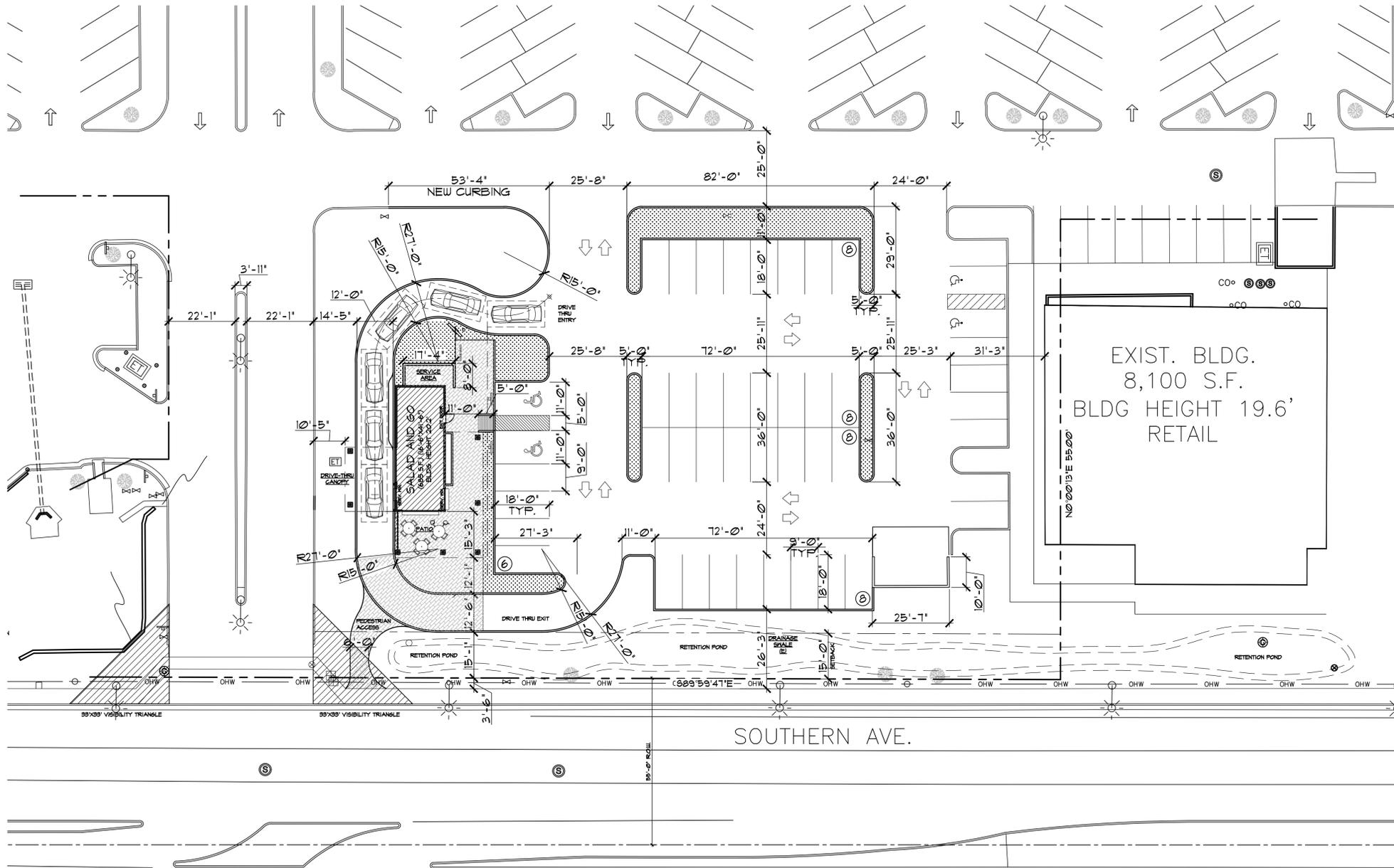
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sheet title: SITE PLAN

sheet no.:





APN:
134-23-002C
COMMERCIAL

APN:
134-23-009C
COMMERCIAL

1 enlarged site plan



1" = 20'-0"



PARKING CALCS.

BUILDING AREA:
SALAD & GO: 685 SF.
SHADE CANOPY: 985 SF
DRIVE THRU CANOPY: 354 SF.
TOTAL BLDG. SF.: 2,024 SF.

BUILDING HEIGHT: 20'-2"

PARKING REQ'D: 1/ 100 PREP: 7
1/ 200 OUTDOOR: 2

SITE PARKING PROVIDED: 38
INCLUDES: 2 ACCESSIBLE

FIESTA COMMONS PARK'G. REQ'D: 729

FIESTA COMMONS PARK'G. PROVIDED: 111
INCLUDES: 30 ACCESSIBLE

BREAKDOWN OF FIESTA COMMONS
REQUIRED PARKING BY USE:

BIG LOTS: 30,000 SF / 375 = 80 SPACES

EASY HOME: 5,401 SF / 375 = 15 SPACES

FRIMERICA: 1,800 SF / 375 = 5 SPACES

INTERMOUNTAIN STAFFING: 900 SF / 375 = 3 SPACES

CUSTOM CREATIONS: 1,735 / 375 = 5 SPACES

AVENUE: 5,000 SF / 375 = 14 SPACES

DOLLAR TREE: 9,460 SF / 375 = 26 SPACES

EPIC THRIFT: 12,383 SF / 375 = 34 SPACES

BLAST FITNESS: 20,700 SF / 100 = 207 SPACES

KIDS CAN DOODLE: 9,405 SF / 375 SF = 26 SPACES

BOULDERS ON SOUTHERN:

4,940 SF INDOOR / 75 = 66 SPACES

1,260 SF OUTDOOR / 200 = 7 SPACES

HIBACHI GRILL: 10,800 SF / 75 = 144 SPACES

SALAD AND GO:

685 SF INDOOR PREP / 100 = 7 SPACES

226 SF OUTDOOR SEATING / 200 = 2 SPACES

NON-TENANT SPACES: 24,023 SF / 275 = 88 SPACES

TOTAL REQUIRED SPACES: 729

SITE DATA

SCOPE: A NEW DRIVE THRU SALAD & GO AND COVERED PATIO AREA

ADDRESS: 1040 W. SOUTHERN AVE. MESA, ARIZONA 85210

PROPOSED USE: DRIVE-THRU SALAD & GO

ZONING: LC (CITY OF MESA)

CONST. TYPE V-B (SPRINKLERED)

SECT./TWN./RG. 28 IN 5E

OCCUPANCY: B, LESS THAN 50 (A-2)

BUSINESS AREA: 685 S.F./100 = 7 OCC.

OUTDOOR SEATING: 226 S.F./15 = 16 OCC.

TOTAL OCC: 23 OCCS.

APN: 134-19-007F

CASE HISTORY: SPM19-007, Z74-078, Z76-013, SPR19-001, BA80-021, BA14-020, ZA89-022, Z11-001

SITE AREA (GROSS & NET): 691,035 S.F.

LOT DISTURBANCE: 14,956 S.F. (.34 AC)

BLDG. AREA: 161,225 S.F.

LOT COVERAGE: 23.3%

LANDSCAPED AREA: 94,147 S.F.

LANDSCAPE COVERAGE: 13.6%



42451
SAKE H. REINDERSMA
ARCHITECT
EXPI. 3/31/2017

applicant/contact:
hinkson company, llc
5050 n. 40th st. suite 350
phoenix, az 85018
contact: chris hinkson
t: (480) 794-1887
c: (480) 329-3887

SALAD AND GO
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project:
date: 10/5/15
issued for: DESIGN REVIEW
job no.: 15-062
sheet title: ENLARGED SITE PLAN



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1 aerial map



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architect:
SAKE H. REINDERSMA
NO. 42451
STATE OF ARIZONA
EXPIRES 3/31/2017

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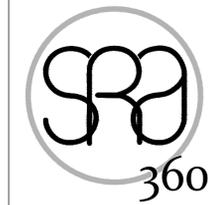
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sheet title: AERIAL MAP

sheet no.:

AM.1

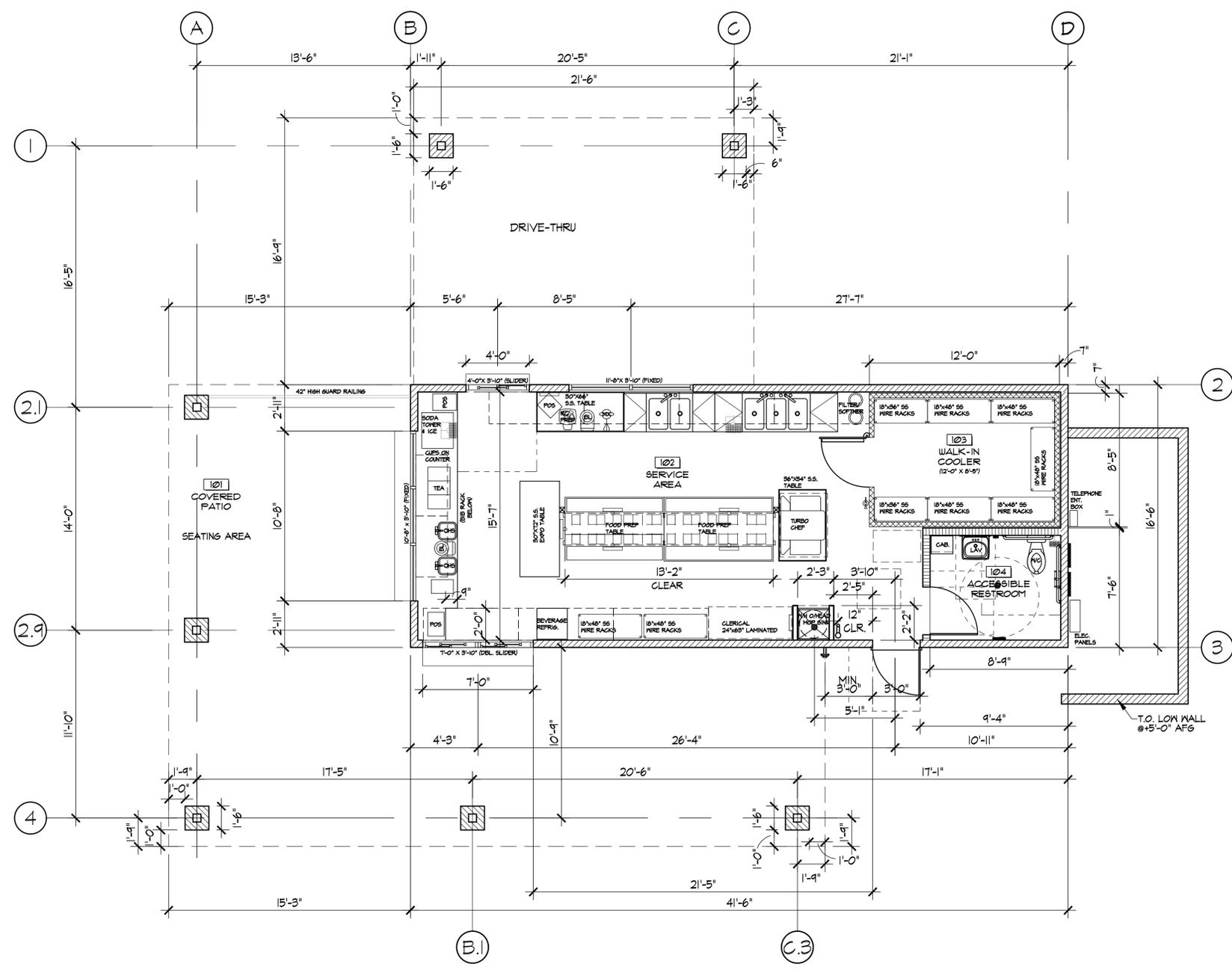


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1 floor plan
1/4" = 1'-0"
NORTH
0' 1' 2' 4' 8' 16'

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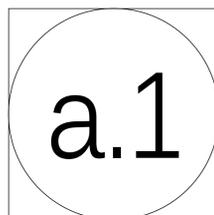
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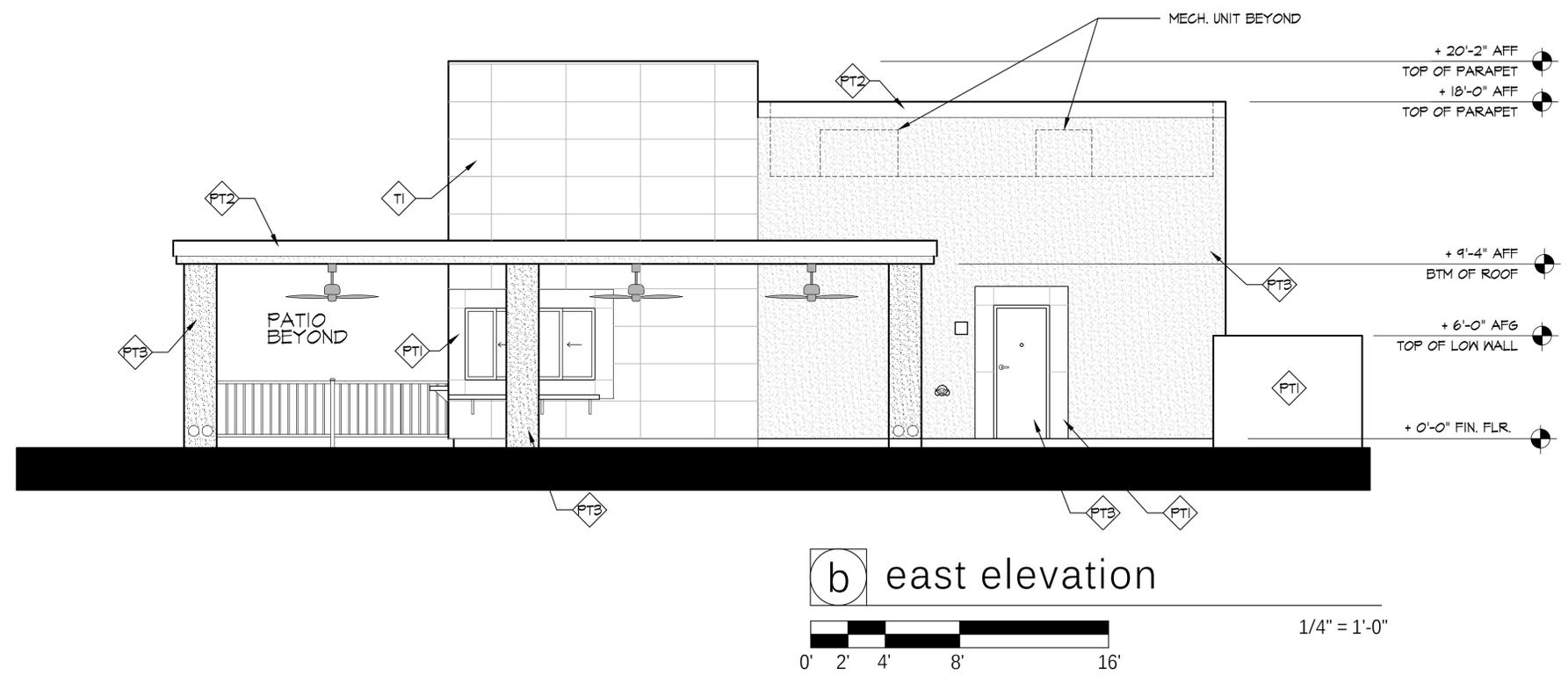
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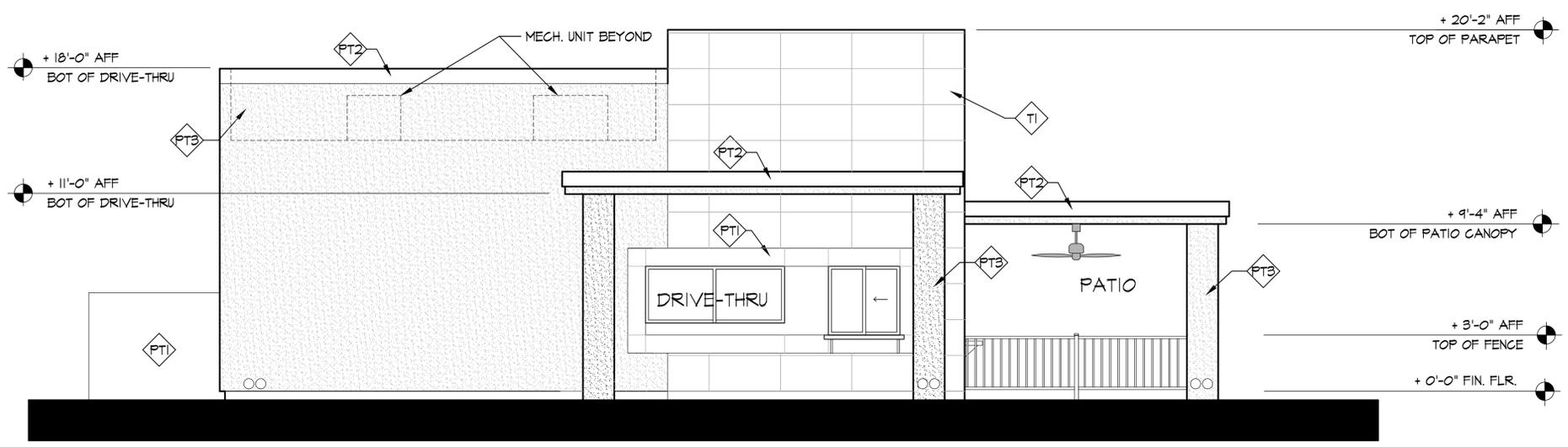
sheet title: FLOOR PLAN

sheet no.:





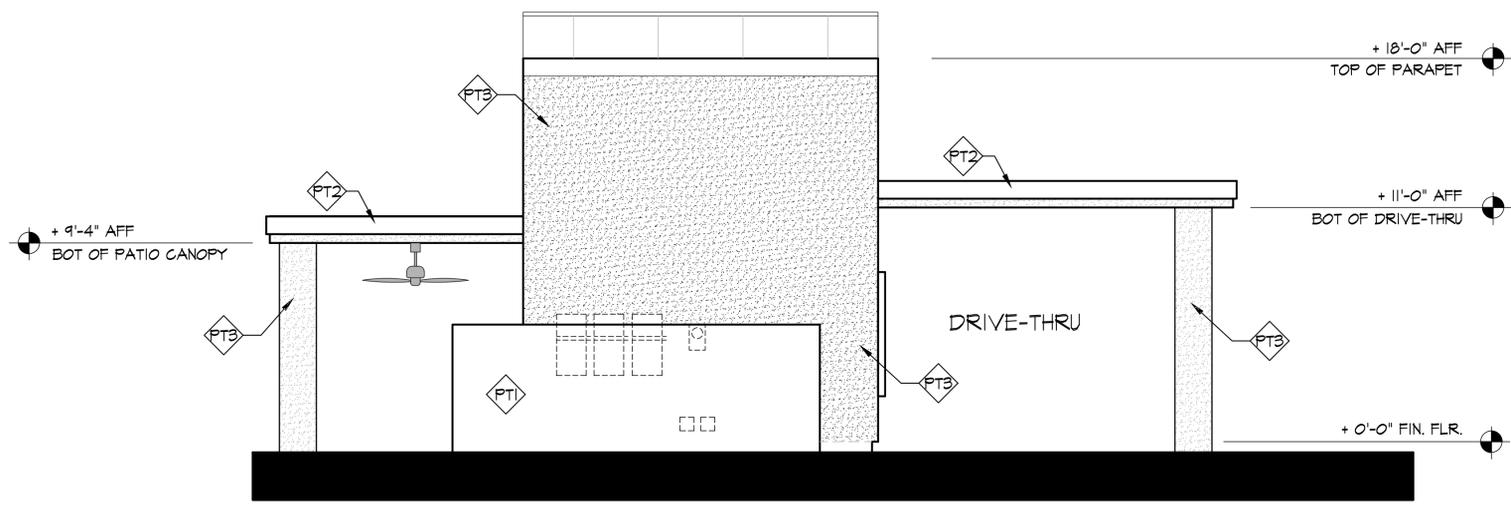
b east elevation



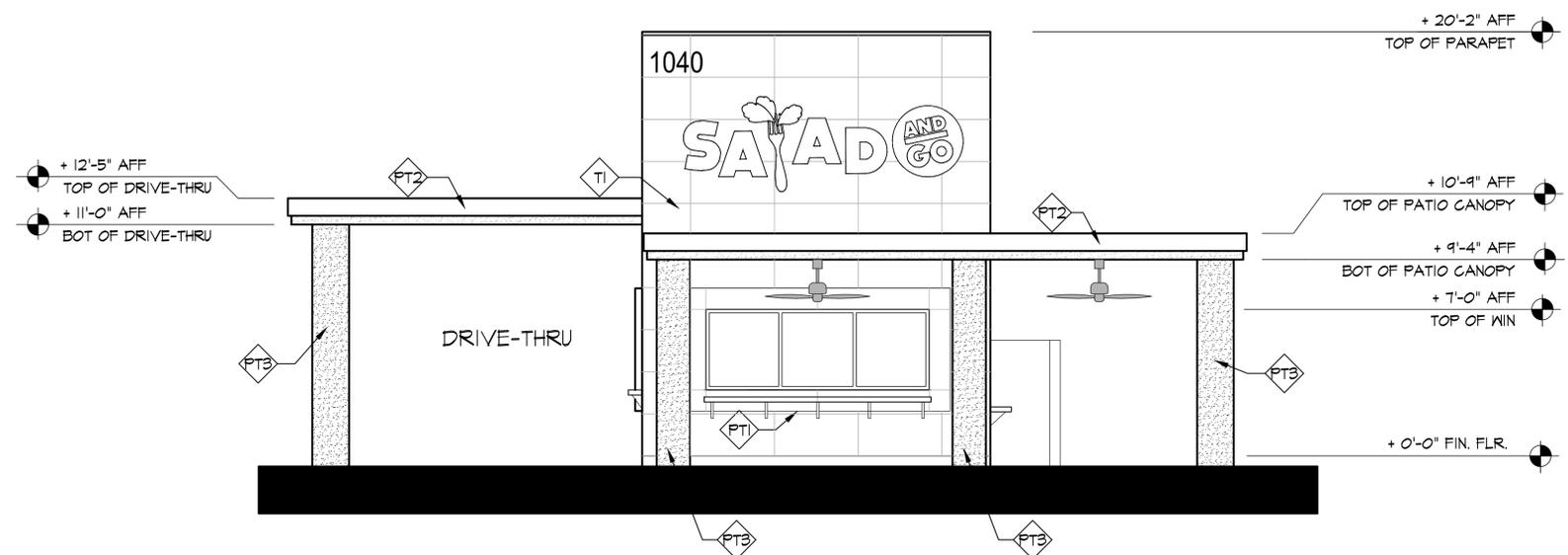
a west elevation

FINISH LEGEND & SYM.

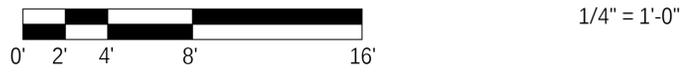
-  PAINT - DUNN EDWARDS: "GET UP AND GO" (DES636)
-  PAINT - DUNN EDWARDS: "TANGERINE DREAM" (DES160)
-  PAINT - SHERWIN WILLIAMS: "ANGORA" (SW 6036)
-  PRE-FINISHED ALUMINUM PANELS



b north elevation



a south elevation



FINISH LEGEND & SYM.

-  PAINT - DUNN EDWARDS: "GET UP AND GO" (DES636)
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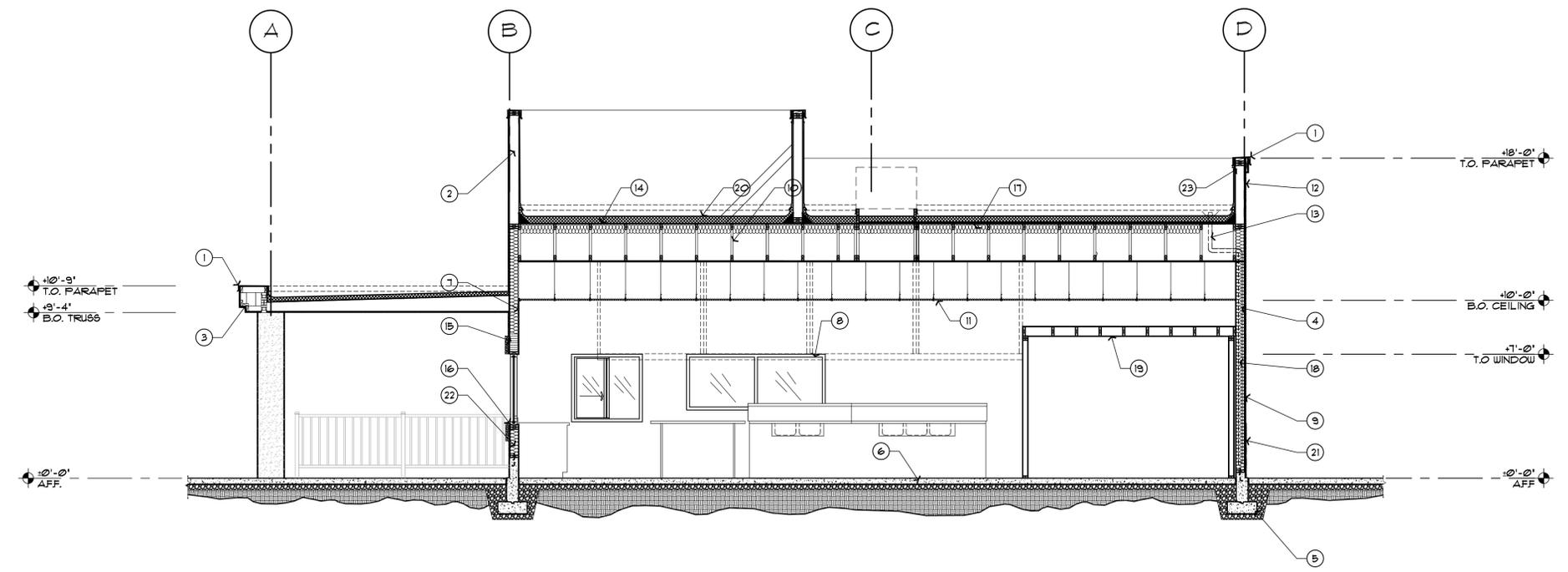
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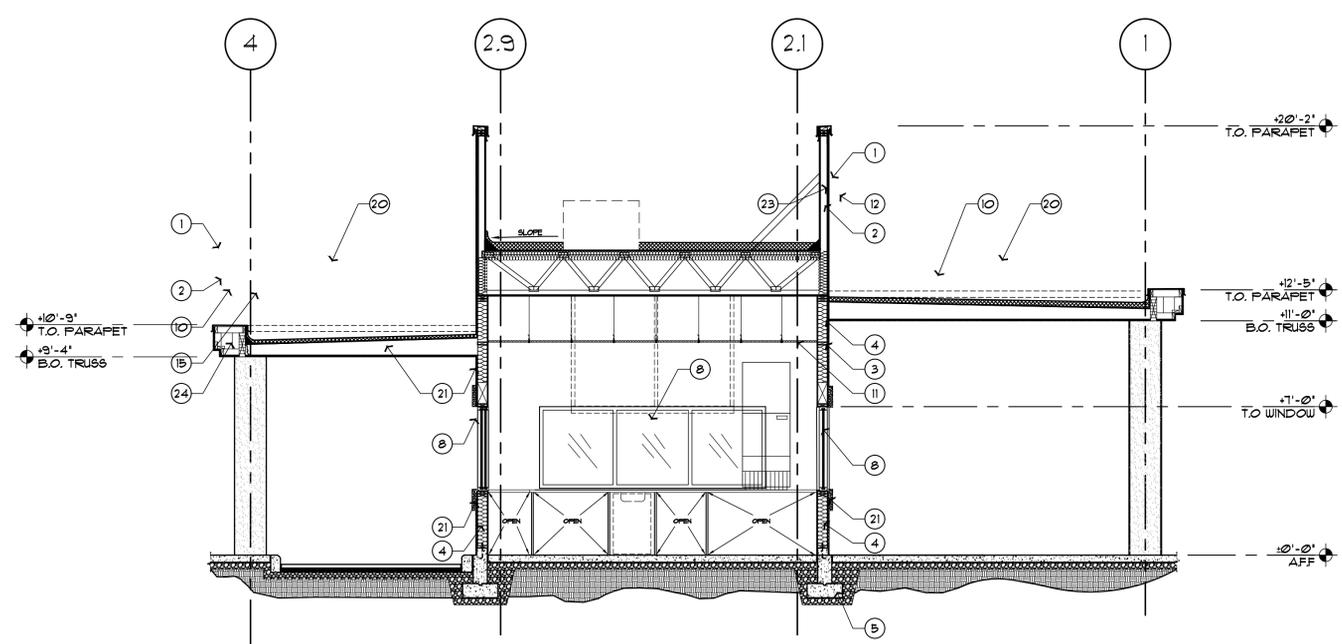
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KEYED NOTES

- ① SHEET METAL CAP
- ② 2x6 PARAPET - INTEGRAL TO TRUSS, WHERE OCCURS
- ③ 2X BLOCKING
- ④ WOOD FRAMED EXTERIOR WALLS
- ⑤ CONCRETE FOOTING
- ⑥ CONCRETE SLAB
- ⑦ 5/8" CDX PLYWOOD W/ FRP
- ⑧ WINDOW - SEE WINDOW SCHEDULE
- ⑨ TILE BAND. SEE EXTERIOR ELEVATIONS.
- ⑩ MANUFACTURED ROOF TRUSS
- ⑪ SUSPENDED CEILING SYSTEM
- ⑫ STUCCO FOAM SHAPED PARAPET
- ⑬ ROOF DRAIN AND OVERFLOW
- ⑭ 1/2" SHEATHING
- ⑮ GLU-LAM BEAM
- ⑯ DRIP EDGE FLASHING W/ SEALANT
- ⑰ R-38 INSULATION
- ⑱ R-19 INSULATION
- ⑲ WALK-IN COOLER, PER MANUFACTURER
- ⑳ FOAM ROOF SYSTEM
- ㉑ WESTERN ONE-KOTE EXT. FIN. SYSTEM (PER ICC REPORT ESR-1607)
- ㉒ 2x6 STUD
- ㉓ DOUBLE TOP PLATE
- ㉔ 2x WOOD FRAMING



b preliminary building section



a preliminary building section



project:

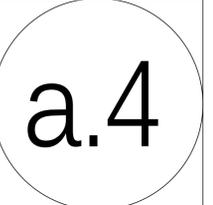
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CITY OF MESA — GENERAL NOTES

- ALL WORK AND MATERIALS SHALL CONFORM TO THE CURRENT UNIFORM STANDARD SPECIFICATIONS AND DETAILS FOR PUBLIC WORKS CONSTRUCTION AS FURNISHED BY THE MARICOPA ASSOCIATION OF GOVERNMENTS AND AS AMENDED BY THE CITY OF MESA. ALL WORK AND MATERIALS NOT IN CONFORMANCE WITH THESE AMENDED SPECIFICATIONS AND DETAILS ARE SUBJECT TO REMOVAL AND REPLACEMENT AT THE CONTRACTOR'S EXPENSE.
- SEPARATE RIGHT-OF-WAY PERMITS ARE REQUIRED FOR ALL PUBLIC UTILITIES, PUBLIC STREET IMPROVEMENTS, AND RIGHT-OF-WAY LANDSCAPING. FOR INFORMATION REGARDING AVAILABILITY AND COST OF RIGHT-OF-WAY PERMITS, CONTACT THE PERMIT SERVICES SECTION OF THE BUILDING SAFETY DIVISION AT (480) 644-4273 OR AT HTTP://WWW.MESA.AZ.GOV/DEVSUSTAIN/CONSTRUCTIONPERMITS.ASPX. THE CONTRACTOR SHALL OBTAIN ALL PERMITS REQUIRED UNLESS OTHERWISE NOTED. CONTRACTORS MUST HOLD THE APPROPRIATE CLASS OF LICENSE AND SHALL HAVE ON FILE WITH THE PERMIT SERVICES SECTION PROOF OF INSURANCE COVERAGE. PERMITS BECOME INVALID AND MUST BE UPDATED IF WORK HAS NOT BEGUN WITHIN NINETY (90) DAYS. PERMITS ALSO BECOME INVALID IF THE CONTRACTOR'S INSURANCE LAPSES OR IS VOIDED.
- TWENTY FOUR (24) HOURS PRIOR TO THE COMMENCEMENT OF ANY WORK, CONSTRUCTION OR INSTALLATIONS ASSOCIATED WITH THIS PERMIT, THE PERMITTEE SHALL NOTIFY CITY OF MESA ENGINEERING CONSTRUCTION SERVICES AT (480) 644-2253 OF INTENT TO BEGIN AND REQUEST/SCHEDULE PRELIMINARY FIELD REVIEW AT THE PROJECT SITE WITH THE CITY OF MESA ENGINEERING CONSTRUCTION INSPECTOR. FAILURE TO PROVIDE PROPER INSPECTION NOTIFICATION AS PRESCRIBED ABOVE, SHALL RESULT IN THIS PERMIT BECOMING INVALID AND WORK BEING STOPPED.
- CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS TO OBTAIN THE NECESSARY RIGHT-OF-WAY PERMITS AND SHALL COMPLY WITH THE RIGHT-OF-WAY PERMIT CONDITIONS AS FOUND ON THE BACK OF THE PERMIT FORM.
- THE CITY OF MESA PARKS & RECREATION DIVISION IS NOT REPRESENTED BY BLUE STAKE. WHEN THE CONTRACTOR EXCAVATES NEAR OR ADJACENT TO A CITY PARK, THE CONTRACTOR SHALL CONTACT THE PARKS & RECREATION ADMINISTRATION SECTION AT (480) 644-2354 TO REQUEST ASSISTANCE IN LOCATING ALL THEIR UNDERGROUND FACILITIES.
- THE CONTRACTOR SHALL OBTAIN AN EARTH-MOVING PERMIT FROM THE MARICOPA COUNTY ENVIRONMENTAL SERVICES DEPARTMENT AND SHALL COMPLY WITH ITS REQUIREMENTS FOR DUST CONTROL.
- THE ENGINEER HEREBY CERTIFIES AS EVIDENCED BY A PROFESSIONAL SEAL & SIGNATURE, THAT ALL AFFECTED UTILITY COMPANIES BOTH PUBLIC AND PRIVATE HAVE BEEN CONTACTED AND ALL EXISTING AND/OR PROPOSED UTILITY LINES AND OTHER RELATED INFORMATION HAVE BEEN TRANSFERRED ONTO THESE PLANS. THE ENGINEER OR ARCHITECT ALSO HEREBY CERTIFIES THAT ALL EXISTING AND/OR PROPOSED PUBLIC RIGHT-OF-WAY OR EASEMENT HAVE BEEN CORRECTLY PLOTTED/SHOWN.
- THE ENGINEER, OR LAND SURVEYOR OF RECORD SHALL CERTIFY UPON COMPLETION OF CONSTRUCTION THAT ALL PUBLIC IMPROVEMENTS (WATER AND SEWER UTILITIES, STORM SEWER, CONCRETE, PAVING, STREET LIGHTS, ETC.) HAVE BEEN INSTALLED AT THE LOCATIONS AND ELEVATIONS SHOWN ON THE APPROVED PLANS. ANY CHANGES SHALL BE REFLECTED ON "AS-BUILT" DRAWINGS PROVIDED BY THE ENGINEER TO THE CITY'S ENGINEERING DEPARTMENT.
- THE REGISTERED ENGINEER OR LAND SURVEYOR SHALL CERTIFY THAT THE MINIMUM HORIZONTAL AND VERTICAL SEPARATION BETWEEN UTILITIES WITHIN PUBLIC RIGHT-OF-WAY OR EASEMENTS HAS BEEN MAINTAINED AS REQUIRED BY LAW OR POLICY.
- THE DEVELOPER SHALL PROVIDE ALL CONSTRUCTION STAKING FOR THE PROJECT.
- THE DEVELOPER OR THE ENGINEER IS RESPONSIBLE FOR ARRANGING FOR THE RELOCATION OR REMOVAL OF ALL UTILITIES OR FACILITIES THAT ARE IN CONFLICT WITH THE PROPOSED PUBLIC IMPROVEMENTS. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE RELOCATION OF ALL UTILITIES, POWER POLES, IRRIGATION DRY-UPS, RESETS REMOVALS BY OTHERS, ETC.
- THE CONTRACTORS SHALL LOCATE ALL UTILITIES PRIOR TO EXCAVATION AND AVOID DAMAGE TO SAME. CALL (602) 263-1100 FOR BLUE STAKE TWO WORKING DAYS PRIOR TO DIGGING. CALL SALT RIVER PROJECT FOR POLE BRACING, ELECTRIC SERVICE OR CONSTRUCTION SCHEDULING AT (602) 273-8888.
- WHEN GAS MAINS AND/OR SERVICES ARE EXPOSED, CONTACT THE CITY OF MESA AT (480) 644-2261 FOR INSPECTION OF THE EXPOSED PIPE AND COATING PRIOR TO BACKFILLING OF THE TRENCH.
- CONTRACTORS SHALL COMPLY WITH THE PROVISIONS FOR TRAFFIC CONTROL AND BARRICADING PER THE CURRENT CITY OF MESA TRAFFIC BARRICADE MANUAL.
- IF A FIRE HYDRANT IS NEEDED TO OBTAIN CONSTRUCTION WATER, THE CONTRACTOR SHALL OBTAIN A FIRE HYDRANT METER FROM PERMIT SERVICES AND PAY ALL APPLICABLE FEES AND CHARGES.
- IF DURING THE CONSTRUCTION OF A PUBLIC FACILITY, THE CONTRACTOR FAILS TO OR IS UNABLE TO COMPLY WITH A REQUEST OF THE ENGINEERING CONSTRUCTION INSPECTOR, AND IT IS NECESSARY FOR CITY FORCES TO DO WORK THAT IS NORMALLY THE CONTRACTOR'S RESPONSIBILITY, THE CITY SHALL BE JUSTIFIED IN BILLING THE CONTRACTOR. EACH INCIDENT REQUIRING WORK BY CITY FORCES SHALL BE COVERED BY A SEPARATE BILLING AT THE CURRENT APPLICABLE RATES.
- THE CONTRACTOR IS ADVISED THAT DAMAGE TO PUBLIC SERVICES OR SYSTEMS AS A RESULT OF THIS PROJECT SHALL BE REPAIRED BY THE CONTRACTOR AND INSPECTED BY THE CITY INSPECTOR. UNLESS OTHERWISE APPROVED BY THE CITY, ALL REPAIRS SHALL BE DONE WITHIN 24 HOURS. THE CONTRACTOR IS ADVISED THAT ANY COSTS RELATED TO REPAIR OR REPLACEMENT OF DAMAGED PUBLIC SERVICES AND SYSTEMS AS A RESULT OF CONTRACTOR'S ACTIVITIES SHALL BE BORNE BY THE CONTRACTOR.

ENGINEER NOTES

- CONTRACTOR SHALL NOTIFY SITE CONSULTANTS INC. OF ANY DISCREPANCIES BETWEEN THE CIVIL PLANS AND SITE CONDITIONS, A MINIMUM OF 48 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION IN THE AFFECTED AREA. FAILURE TO DO SO SHALL RESULT IN ANY DISCREPANCIES BEING THE RESPONSIBILITY OF THE CONTRACTOR.
- DURING CONSTRUCTION, THE CONTRACTOR WILL BE RESPONSIBLE FOR THE CONTROL OF EARTH SPILLAGE, RUNOFF AND CONSTRUCTION WATER AND SHALL PROTECT ADJACENT PROPERTY AND EXISTING STRUCTURES FROM SUCH.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CARE, MAINTENANCE, REPAIR OR REPLACEMENT OF EXISTING IMPROVEMENTS AND UTILITIES IN THE WORK AREA AND ON ADJACENT PROPERTIES WHICH HAVE BEEN REMOVED OR DAMAGED DURING THE COURSE OF CONSTRUCTION. ALL REPAIR, REPLACEMENT OR CLEANUP SHALL BE DONE TO THE SATISFACTION OF AND AT NO ADDITIONAL EXPENSE TO THE UTILITY COMPANY AND OWNER.
- THE CONTRACTOR SHALL GIVE FORTY-EIGHT (48) HOURS NOTICE WHEN HE SHALL REQUIRE THE SERVICES OF THE ENGINEER OR ANY OTHER PERSON PROPERLY AUTHORIZED FOR SUCH PURPOSE FOR LAYING OUT OR TESTING ANY PORTION THE WORK.
- THE CONTRACTOR SHALL PRESERVE ALL STAKES SET FOR THE LINES, LEVELS OR MEASUREMENTS OF THE WORK IN THEIR PROPER PLACES UNTIL AUTHORIZED TO REMOVE THEM BY THE ENGINEER. ANY EXPENSE INCURRED IN REPLACING ANY STAKES WHICH THE CONTRACTOR OR HIS SUBORDINATES MAY HAVE FAILED TO PRESERVE SHALL BE CHARGED TO THE CONTRACTOR.
- ESTIMATED QUANTITIES SHOWN ARE FOR BONDING & PERMIT PURPOSES ONLY. CONTRACTOR TO MAKE HIS OWN DETERMINATION OF QUANTITIES.
- EXISTING UNDER GROUND UTILITIES SHOWN ARE PER UTILITY COMPANY RECORDS. CONTRACTOR TO FIELD VERIFY LOCATION/ELEVATION OF ALL UTILITIES PRIOR TO BEGINNING CONSTRUCTION.

CITY OF MESA — PUBLIC WATER UTILITY NOTES

- ALL PUBLIC WATER MAIN MATERIALS SHALL BE PER SECTION 610.3 OF THE M.A.G. UNIFORM STANDARD SPECIFICATIONS. ALL DUCTILE IRON PIPE (D.I.P.) WATER MAINS SHALL HAVE POLYETHYLENE CORROSION PROTECTION PER SECTION 610.5 OF THE M.A.G. UNIFORM STANDARD SPECIFICATIONS.
- ALL NEW WATERLINES THAT REQUIRE SERVICE DISRUPTION IN ORDER TO CONNECT TO THE CITY SYSTEM SHALL REQUIRE A DAYTIME TIE-IN. THE CONTRACTOR SHALL COMPLETE ALL WORK NECESSARY TO RESTORE UTILITY SERVICE AND FULLY OPEN THE TIE-IN AREA TO VEHICULAR TRAFFIC WITHIN THE TIME FRAME ALLOWED BY THE CITY OF MESA ENGINEERING CONSTRUCTION INSPECTOR.
- THE CONTRACTOR SHALL INSTALL A TEMPORARY PLUG OR VALVE ON A SECTION OF NEW WATER LINE TO TEST LINES BEFORE CONNECTING TO THE EXISTING PUBLIC WATER SYSTEM WHERE THERE IS NO WATER VALVE ON THE EXISTING LINE.
- WATER LINE TESTS SHALL BE CONDUCTED SO THAT EXISTING WATER LINES WILL NOT BE INCLUDED IN THE TEST OF THE NEW LINE.
- THE REQUIRED BACKFLOW PREVENTION ASSEMBLY SHALL BE A MANUFACTURER AND MODEL DESIGNATED IN THE CURRENT LIST OF APPROVED BACKFLOW PREVENTION ASSEMBLIES AS PUBLISHED BY THE FOUNDATION FOR CROSS-CONNECTION CONTROL AND HYDRAULIC RESEARCH, UNIVERSITY OF SOUTHERN CALIFORNIA.
- THE BACKFLOW PREVENTION ASSEMBLY SHALL BE TESTED AND APPROVED BY A CERTIFIED TECHNICIAN DESIGNATED IN THE CURRENT CITY OF MESA LIST OF APPROVED INSPECTORS PRIOR TO THE REQUEST FOR FINAL INSPECTION.
- IN ACCORDANCE WITH ARIZONA ADMINISTRATIVE CODE (A.A.C.) R18-4-213, ALL MATERIALS ADDED AFTER JANUARY 1, 1993, WHICH MAY COME INTO CONTACT WITH DRINKING WATER, SHALL CONFORM TO NATIONAL SANITATION FOUNDATION STANDARDS 60 AND 61.
- PER CITY ORDINANCE NO. 2341, ALL WATER METERS ARE TO BE PURCHASED FROM THE CITY OF MESA. METERS TWO INCHES OR LESS WILL BE DELIVERED AND INSTALLED BY CITY FORCES. METERS LARGER THAN TWO INCHES WILL BE DELIVERED BY THE CITY AND INSTALLED BY THE CONTRACTOR AND REQUIRE SCHEDULING AND INSPECTIONS WITH CITY FORCES (CONTACT BUILDING SAFETY -PERMIT SERVICES (480)-644-4850 FOR THE SPECIFIC PROCEDURE).

CITY OF MESA — PUBLIC WASTEWATER UTILITY NOTES

- CONTRACTORS SHALL VERIFY ALL INVERT ELEVATIONS BEFORE PROCEEDING WITH THE BACKFILL OF THE UTILITY TRENCHING.
- ALL MANHOLES PER M.A.G. DETAILS MUST NECK DOWN TO USE THE STANDARD 30INCH FRAME AND COVER. STEPS SHALL NOT BE INSTALLED WITHIN THE MANHOLE.

CITY OF MESA — STORMWATER DRAINAGE & RETENTION NOTES

- THE ENGINEER, OR LAND SURVEYOR SHALL CERTIFY THAT THE REQUIRED STORM WATER RETENTION HAS BEEN PROVIDED. THE CERTIFICATION SHALL ALSO INDICATE THE ACTUAL VOLUME PROVIDED. SUCH CERTIFICATION SHALL BE PROVIDED TO BUILDING SAFETY DIVISION — BUILDING INSPECTIONS WHEN THE RETENTION AREA IS TO REMAIN PRIVATE PROPERTY AND TO ENGINEERING CONSTRUCTION SERVICES WHEN THE RETENTION AREA IS TO BECOME CITY OF MESA PROPERTY.
- ALL DRYWELLS SHOWN ON THIS PROJECT SHALL BE MAINTAINED BY THE OWNERS AND ARE TO BE REPLACED BY THE OWNERS WHEN THEY CEASE TO DRAIN WATER IN A 36HOUR PERIOD. REGULAR MAINTENANCE OF THE DRYWELL—SILTING CHAMBER IS REQUIRED TO ACHIEVE THE BEST OPERATION OF THE DRYWELL. IN ACCORDANCE WITH ARIZONA REVISED STATUTES, DRYWELLS ARE REQUIRED TO BE REGISTERED WITH THE ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY (A.D.E.Q.) IT IS THE OWNER'S RESPONSIBILITY TO REGISTER ALL DRYWELLS. AN AQUIFER PROTECTION PERMIT MAY BE REQUIRED BY A.D.E.Q. FOR DRYWELLS DEEMED TO BE HAZARDOUS TO GROUNDWATER.

CITY OF MESA — MISCELLANEOUS NOTES

VERTICAL CONSTRUCTION WITH COMBUSTIBLE MATERIALS SHALL NOT BEGIN PRIOR TO THE ACCEPTANCE OF FIRE ACCESS ROAD AND FIRE HYDRANTS, 2006 I.F.C. SECTION 501.4

STRUCTURE CONSTRUCTION, ALTERATION OR DEMOLITION SHALL COMPLY WITH REQUIREMENTS OF I.F.C. CHAPTER 14 AND N.F.P.A. 241, 2006 I.F.C. SECTION 1401.1

ASSESSORS PARCEL NUMBER

A.P.N. 134-19-007F

BASIS OF BEARING

THE SOUTH LINE OF THE SOUTHWEST QUARTER, OF THE SOUTHWEST QUARTER OF SECTION 28, TOWNSHIP 1 NORTH, RANGE 5 EAST OF GILA AND SALT RIVER BASE & MERIDIAN; THE SAID LINE BEARS SOUTH 89°59 MINUTES 47 SECONDS EAST.

BENCHMARK

CITY OF MESA BRASS TAG ON SOUTHEAST ON TOP OF CURB AT SOUTHEAST CORNER OF BROADWAY ROAD AND ALMA SCHOOL ROAD.

ELEVATION= 1225.19' NAVD 88

NOTE: CITY OF MESA BENCHMARK ON SOUTHERN AVENUE AND ALMA SCHOOL DID NOT EXIST.

SITE TEMPORARY BENCHMARK (T.B.M.): "X" ON SQUARE ON NORTHEAST CORNER OF CONCRETE TRASH ENCLOSURE PAD. ELEVATION= 1212.87'

FLOOD PLAIN

THE SUBJECT PROPERTY IS LOCATED WITHIN SHADED ZONE "X" DEFINED AS "AREAS OF 0.2% ANNUAL CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD; AS SHOWN ON FIRM MAP NO. 04013C2265L, DATED OCTOBER 16, 2013.

ZONING

SUBJECT PROPERTY IS CURRENTLY ZONED "LC", COMMUNITY COMMERCIAL.

ENGINEER

SITE CONSULTANTS, INC.
113 SOUTH ROCKFORD DRIVE
TEMPE, ARIZONA 85281
TELE: 480-894-2820
FAX: 480-894-2847
CONTACT: MICHAEL CAYLOR P.E.
EMAIL: MCAYLOR@SITECONSULTANTS.NET

ARCHITECT

SRA
5450 E. HIGH STREET, SUITE 200
PHOENIX, ARIZONA 85054
CONTACT: SAKÉ REINDERSMA

PRELIMINARY NOT FOR CONSTRUCTION



PRELIMINARY CIVIL IMPROVEMENT PLANS

SALAD & GO

BEING A PORTION OF THE SOUTHWEST QUARTER OF SECTION 28, TOWNSHIP 1 NORTH, RANGE 5 EAST, OF THE GILA & SALT RIVER BASE & MERIDIAN, MARICOPA COUNTY, ARIZONA

LEGAL DESCRIPTION

PARCEL NO.1:
THE SOUTH HALF OF THE SOUTHWEST QUARTER OF SECTION 28, TOWNSHIP 1 NORTH, RANGE 5 EAST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA;

EXCEPTING THEREFROM, THE FOLLOWING DESCRIBED PARCEL:

BEGINNING FOR REFERENCE AT THE SOUTHWEST CORNER OF SAID SECTION 28; THENCE SOUTH 89 DEGREES 59 MINUTES 47 SECONDS EAST ALONG THE SOUTHERLY LINE OF SAID SECTION 28 AND THE MEDIAN LINE OF SOUTHERN AVENUE A DISTANCE OF 912.39 FEET TO A POINT;

THENCE NORTH 00 DEGREES 00 MINUTES 13 SECONDS EAST AND PERPENDICULAR TO THE SOUTHERLY LINE OF SAID SECTION 28 A DISTANCE OF 55.00 FEET TO A POINT AND THE TRUE POINT OF BEGINNING;

THENCE CONTINUING NORTH 00 DEGREES 00 MINUTES 13 SECONDS EAST 150.00 FEET;

THENCE SOUTH 89 DEGREES 59 MINUTES 47 SECONDS EAST A DISTANCE OF 100.00 FEET;

THENCE SOUTH 00 DEGREES 00 MINUTES 13 SECONDS WEST A DISTANCE OF 150.00 FEET TO A POINT 55.00 FEET NORTHERLY FROM THE SOUTHERLY LINE OF SAID SECTION 28; THENCE NORTH 89 DEGREES 59 MINUTES 47 SECONDS WEST AND PARALLEL TO THE SOUTHERLY LINE OF SAID SECTION 28 AND THE MEDIAN LINE OF SOUTHERN AVENUE, A DISTANCE OF 100.00 FEET TO THE TRUE POINT OF BEGINNING; AND

ALSO EXCEPTING THEREFROM, THE FOLLOWING DESCRIBED PARCEL:

COMMENCING AT THE SOUTHEAST CORNER OF THE SOUTH HALF OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 28, TOWNSHIP 1 NORTH, RANGE 5 EAST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA;

THENCE NORTHERLY ALONG THE EAST LINE OF SAID SOUTH HALF OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 28 TO THE SOUTHEAST CORNER OF COUNTRY VILLAGE UNIT ONE, ACCORDING TO THE PLAT OF RECORD IN THE OFFICE OF THE COUNTY RECORDER OF MARICOPA COUNTY, ARIZONA, RECORDED IN BOOK 121 OF MAPS, PAGE 34 THEREOF;

THENCE WESTERLY ALONG THE SOUTH LINE OF SAID COUNTRY VILLAGE UNIT ONE A DISTANCE OF 30.00 FEET;

THENCE SOUTHEASTERLY ALONG A CURVE CONCAVE TO THE EAST HAVING A RADIUS OF 1504.75 FEET A CENTRAL ANGLE OF 07 DEGREES 45 MINUTES 31 SECONDS AND A TANGENT OF 102.03 FEET A DISTANCE OF 203.76 FEET;

THENCE ALONG A CURVE CONCAVE TO THE WEST HAVING A RADIUS OF 1444.75 FEET A CENTRAL ANGLE OF 07 DEGREES 45 MINUTES 31 SECONDS AND A TANGENT OF 97.97 FEET, A DISTANCE OF 195.64 FEET;

THENCE SOUTHERLY PARALLEL TO AND 03.00 FEET WEST OF THE EAST LINE OF SAID SOUTH HALF OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 28 A DISTANCE OF 263.27 FEET TO A POINT IN THE SOUTH LINE OF SAID SECTION 28; THENCE EAST ALONG THE SOUTH LINE OF SAID SECTION 28 TO THE POINT OF BEGINNING;

ALSO EXCEPTING THEREFROM THE FOLLOWING DESCRIBED PARCEL:

BEGINNING AT A POINT 55.00 FEET NORTH AND 40.00 FEET EAST OF THE SOUTHWEST CORNER OF THE SOUTH HALF OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 28, TOWNSHIP 1 NORTH, RANGE 5 EAST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA;

THENCE NORTH 25.00 FEET PARALLEL TO THE WEST LINE OF SAID SOUTHWEST QUARTER; THENCE SOUTHEASTERLY TO A POINT 55.00 FEET NORTH AND 65.00 FEET EAST OF SAID SOUTHWEST CORNER;

THENCE WEST 25.00 FEET TO THE POINT OF BEGINNING;

AND EXCEPTING THEREFROM THE FOLLOWING DESCRIBED: THAT PART OF THE SOUTHWEST QUARTER OF SECTION 28, TOWNSHIP 1 NORTH, RANGE 5 EAST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA, DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHWEST CORNER OF SAID SECTION 28:

THENCE NORTH ALONG THE WEST LINE OF SAID SECTION 28, A DISTANCE OF 95.56 FEET; THENCE EAST TO A POINT ON THE EAST RIGHT OF WAY LINE OF ALMA SCHOOL ROAD, A DISTANCE OF 55.00 FEET TO THE TRUE POINT OF BEGINNING;

THENCE NORTH ALONG THE EAST RIGHT OF WAY LINE OF ALMA SCHOOL ROAD, A DISTANCE OF 187.35 FEET;

THENCE SOUTH 13 DEGREES 46 MINUTES 41 SECONDS EAST, A DISTANCE OF 39.77 FEET; THENCE EAST, A DISTANCE OF 04.23 FEET;

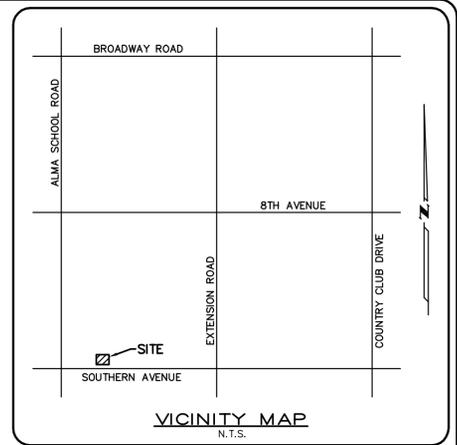
THENCE SOUTH, A DISTANCE OF 55.34 FEET;

THENCE WEST, A DISTANCE OF 03.00 FEET;

THENCE SOUTH, A DISTANCE OF 25.39 FEET;

THENCE SOUTH 08 DEGREES 56 MINUTES 43 SECONDS WEST, A DISTANCE OF 68.83 FEET TO THE TRUE POINT OF BEGINNING.

PARCEL NO.2:
ALL OF TRUSTOR'S RIGHT, TITLE AND INTEREST IN AND TO THAT CERTAIN RECIPROCAL EASEMENT AGREEMENT, DATED SEPTEMBER 17, 1987, BY AND BETWEEN ALMA INVESTMENT COMPANY, AN ARIZONA GENERAL PARTNERSHIP AND RED LOBSTER, A DIVISION OF GENERAL MILLS RESTAURANT GROUP, INC., A FLORIDA CORPORATION, RECORDED AT DOCKET 15885, PAGE 389 AND FIRST AMENDMENT RECORDED AS 99-502298 OF OFFICIAL RECORDS.



SHEET INDEX

COVER SHEET C-1
GRADING & DRAINAGE PLAN C-2
STORM DRAIN DETAILS C-3

DRAINAGE STATEMENT

PROJECT NARRATIVE:

THE PROPOSED PROJECT CONSISTS OF A FREESTANDING SINGLE STORY BUILDING FAST FOOD TAKE OUT RESTAURANT BUILDING. THE PROPOSED SITE DEVELOPMENT IS LOCATED IN AN EXISTING COMMERCIAL SHOPPING CENTER DEVELOPMENT. THE PROPOSED SITE DEVELOPMENT AREA IS CURRENT BEING UTILIZED AS PAVED ASPHALT PARKING LOT WITH ASSOCIATED LANDSCAPE ISLANDS AND SURFACE LANDSCAPE RETENTION BASIN.

PROJECT LOCATION:

THE SUBJECT SITE IS LOCATED IN THE SOUTHWEST QUARTER OF SECTION 28, TOWNSHIP 1 SOUTH, RANGE 5 EAST OF THE GILA AND SALT RIVER BASE AND MERIDIAN GILBERT, ARIZONA. THE SITE IS LOCATED IN AN EXISTING SHOPPING CENTER LOCATED AT 1110 WEST SOUTHERN AVENUE, MESA ARIZONA.

EXISTING DRAINAGE CONDITIONS:

BASED ON A SITE SURVEY IT IS APPARENT THAT THE PROPOSED SITE DEVELOPMENT AREA IS CURRENT BEING UTILIZED AS PAVED ASPHALT PARKING LOT WITH ASSOCIATED LANDSCAPE ISLANDS AND A LARGE LANDSCAPE BUFFER AREA LOCATED ALONG THE SITE'S SOUTHERN AVENUE STREET FRONTAGE. IT IS ALSO APPARENT BASED ON THE EXISTING TOPOGRAPHY THAT THE EXISTING PARKING LOT AND LANDSCAPE BUFFER AREA IS BEING UTILIZED FOR STORMWATER RETENTION STORAGE, PONDING DEPTHS OF APPROXIMATELY 1.0-FOOT ON PARKING LOT AND 3.5-FOOT DEEP IN THE LANDSCAPE BUFFER AREA. THE STORMWATER IS DISSIPATED BY AN EXISTING DRYWELL LOCATED IN THE LANDSCAPE BUFFER AREA LOCATED EAST OF THE PROPOSED SITE REDEVELOPMENT AREA. THE EXISTING HIGHWATER ELEVATION FOR THE STORMWATER RETENTION IS 1213.5-FOOT AND OUTFALLS INTO SOUTHERN AVENUE.

PROPOSED DRAINAGE CONDITIONS:

THE PROPOSED RE-DEVELOPMENT WILL DISPLACE EXISTING RETENTION VOLUME LOCATED IN BOTH THE PAVED PARKING AREA AND THE LANDSCAPE RETENTION BASIN. THE PROPOSED SITE DEVELOPMENT IMPROVEMENTS WILL INCLUDE THE INSTALLATION OF A RETAINING WALL IN THE LANDSCAPE RETENTION BASIN AND THE INSTALLATION OF STORMTECH CHAMBERS TO PROVIDE ON-SITE STORMWATER STORAGE FACILITIES TO REPLACE THE EXISTING RETENTION VOLUME THAT IS BEING DISPLACED BY THE PROPOSED IMPROVEMENTS. THE DEPTH OF THE STORMWATER PONDING IN THE EXISTING LANDSCAPE RETENTION BASIN WILL NOT CHANGE, THE DEPTH OF THE STORMWATER PONDING ON THE PAVEMENT WILL BE REDUCED TO A MAXIMUM OF 0.5-FOOT. THE SITE OUTFALL LOCATION AND ELEVATION WILL NOT BE ALTERED BY THE PROPOSED SITE DEVELOPMENT.

THE PROPOSED DEVELOPMENT FINISH FLOOR ELEVATION WILL BE 1215.00- FEET WHICH WILL PROVIDE A 1.5- FOOT FREEBOARD BETWEEN THE FINISH FLOOR ELEVATION AND THE ULTIMATE SITE OUTFALL ELEVATION OF 1213.5- FEET.

THE SITE IS LOCATED IN FLOOD ZONE 'X' AND IS NOT IMPACTED BY OFF-SITE FLOWS. THE PROPOSED SITE DEVELOPMENT WILL NOT HAVE ANY ADVERSE IMPACT ON THE ON-SITE AND OFFSITE DRAINAGE PATTERNS.

RETENTION VOLUME PROVIDED:

DISTURBED AREA:
SURFACE RETENTION: 7,522 cu.ft.
UNDERGROUND STORAGE: 12,161 cu.ft.

TOTAL VOLUME PROVIDED IN DISTURBED AREA = 19,683 C.F.

RETENTION VOLUME SUMMARY

TOTAL EX. VOLUME DISPLACED = 19,320 cu.ft.

TOTAL VOLUME PROVIDED = 19,683 cu.ft.

AS-BUILT CERTIFICATION

I HEREBY CERTIFY THAT THE "RECORD DRAWING" MEASUREMENTS AS SHOWN HEREON WERE MADE UNDER MY SUPERVISION OR AS NOTED AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED ENGINEER / LAND SURVEYOR _____ DATE _____

REGISTRATION NUMBER _____

APPROVALS

APPROVED: _____ DATE _____
MARICOPA COUNTY ENVIRONMENTAL SERVICES DEPARTMENT

COVER SHEET

SALAD & GO
1110 WEST SOUTHERN AVENUE
MESA, ARIZONA

PROJECT NO.: 2076
SCALE: NONE
DRAWN BY: MGO
CHECKED BY: MJC
DATE: 10-5-2015
DWG: 2076-C-C-5

C-1
OF
3

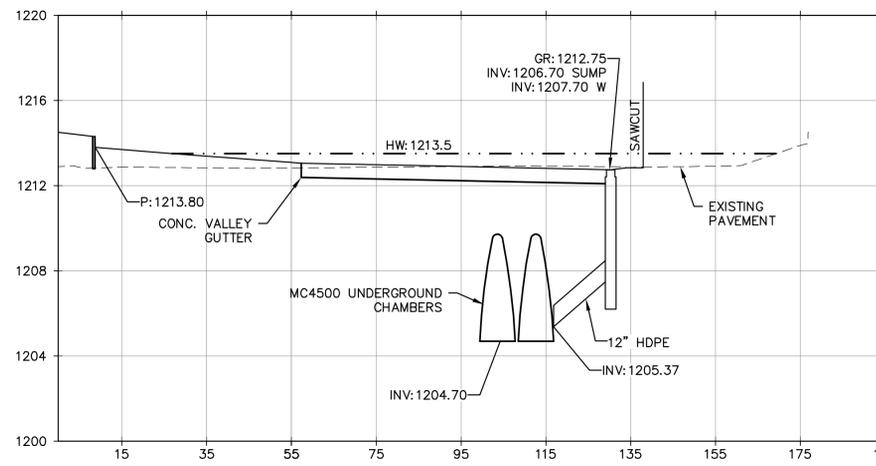
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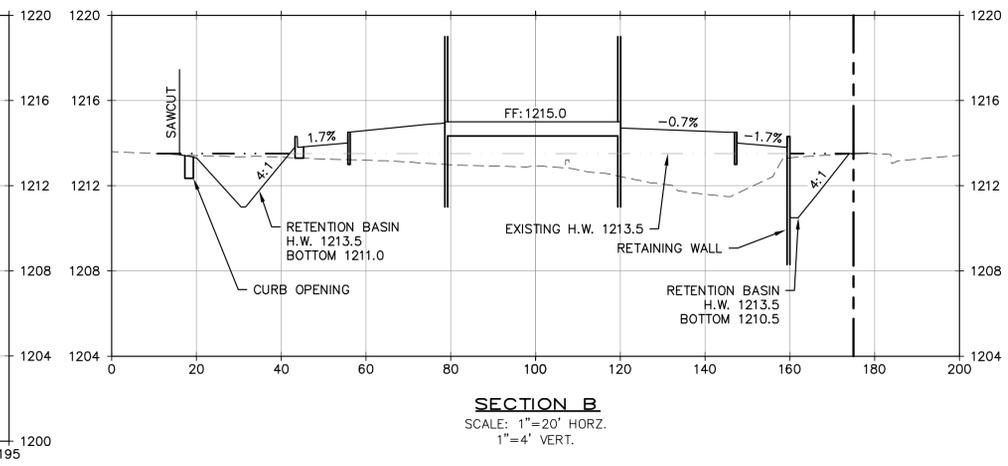
Site Consultants, Inc.
ENGINEERS • SURVEYORS • CONSULTANTS
113 SOUTH ROCKFORD DRIVE, TEMPE, ARIZONA 85281
TEL: (480) 894-2820, FAX: (480) 894-2847

COVER SHEET
SALAD & GO
1110 WEST SOUTHERN AVENUE
MESA, ARIZONA

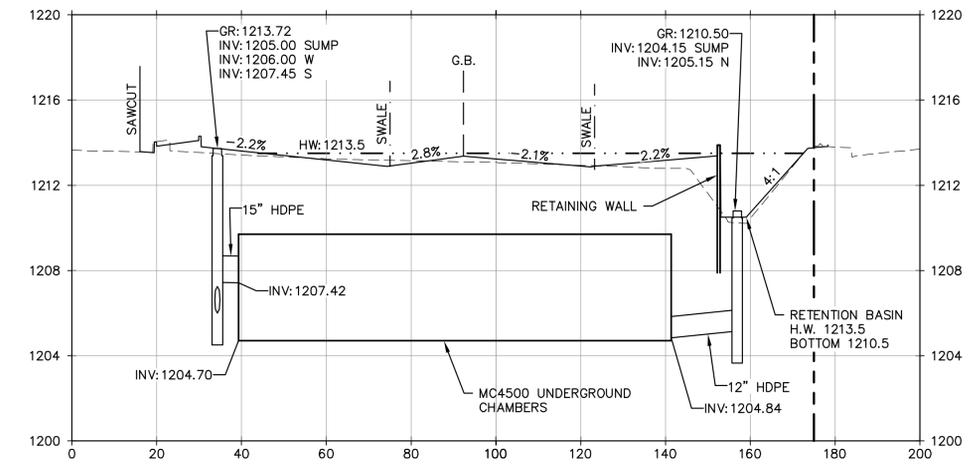
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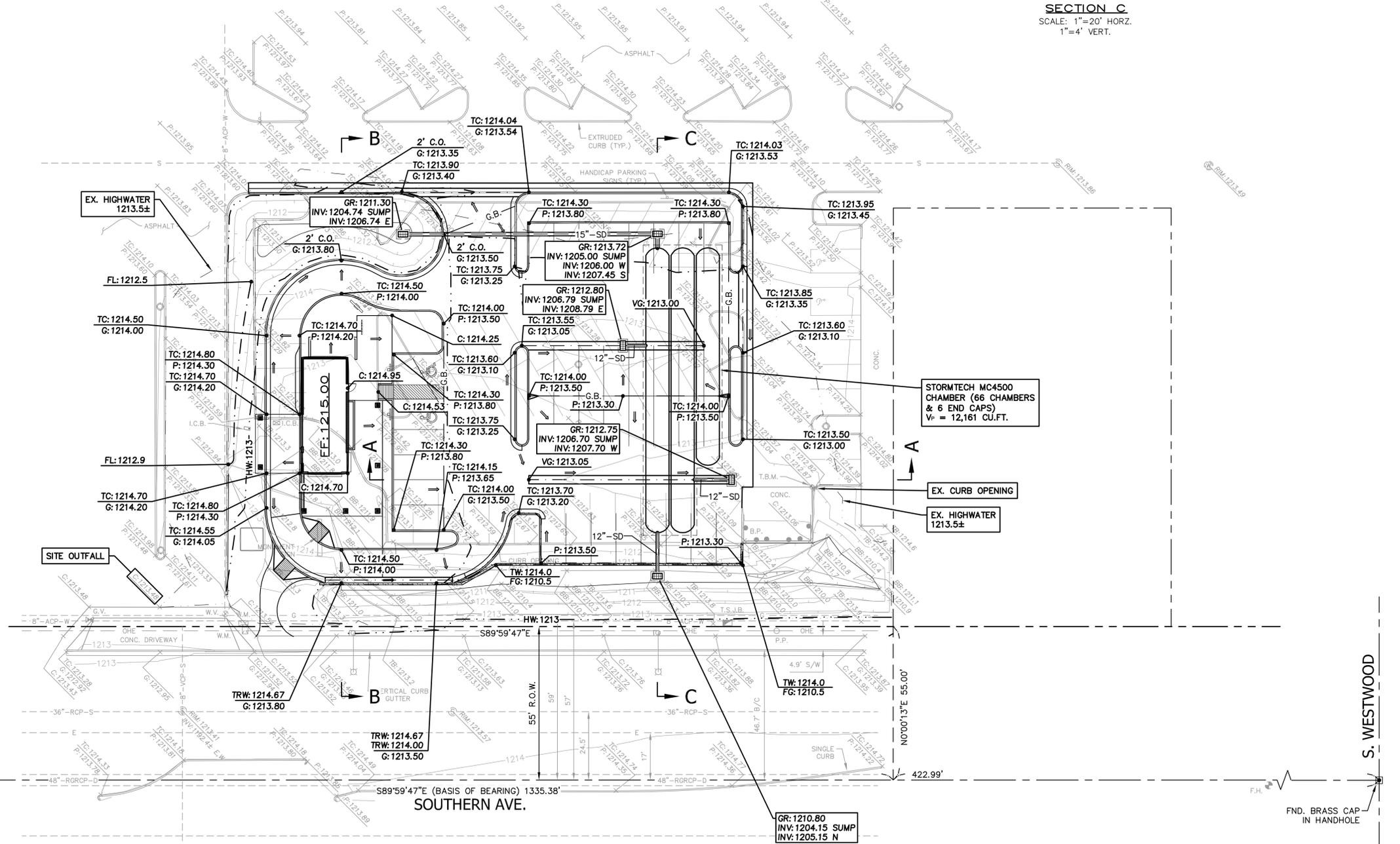
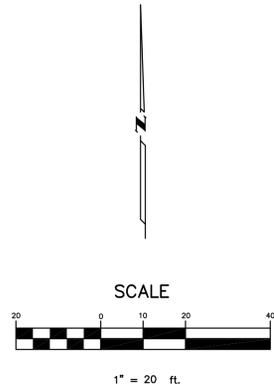
SECTION A
SCALE: 1"=20' HORZ.
1"=4' VERT.



SECTION B
SCALE: 1"=20' HORZ.
1"=4' VERT.



SECTION C
SCALE: 1"=20' HORZ.
1"=4' VERT.



ALMA SCHOOL RD.
S.W. CORNER SECTION 28,
T. 1N., R. 5E., G.&S.R.B.&M.;
FND. BRASS CAP IN HANDHOLE

FND. BRASS CAP
IN HANDHOLE

PRELIMINARY NOT FOR
CONSTRUCTION

REV.



Site Consultants, Inc.
ENGINEERS • SURVEYORS • CONSULTANTS
113 SOUTH ROCKFORD DRIVE, TEMPE, ARIZONA 85281
TEL: (480) 894-2820, FAX: (480) 894-2847

GRADING & DRAINAGE PLAN
SALAD & GO
1110 WEST SOUTHERN AVE
MESA, AZ.

PROJECT NO.: 2076
SCALE: 1" = 20'
DRAWN BY: MGO
CHECKED BY: MJC
DATE: 10-5-2015
DWG: 2076-C-GP-Prelim

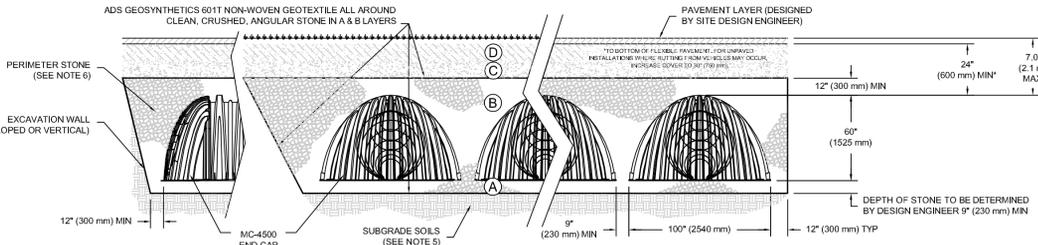
C-2
OF
3

EXPIRES 3-31-2016

ACCEPTABLE FILL MATERIALS: STORMTECH MC-4500 CHAMBER SYSTEMS

MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE (B' LAYER) TO 24" (600 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	AASHTO M145 ¹ A-1, A-2-4, A-3 OR AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 24" (600 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 12" (300 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 90% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS.
B	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE (A' LAYER) TO THE 'C' LAYER ABOVE.	AASHTO M43 ¹ 3, 4	NO COMPACTION REQUIRED.
A	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	AASHTO M43 ¹ 3, 4	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. **

PLEASE NOTE:
 1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE."
 2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9" (230 mm) [MAX] LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
 3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.



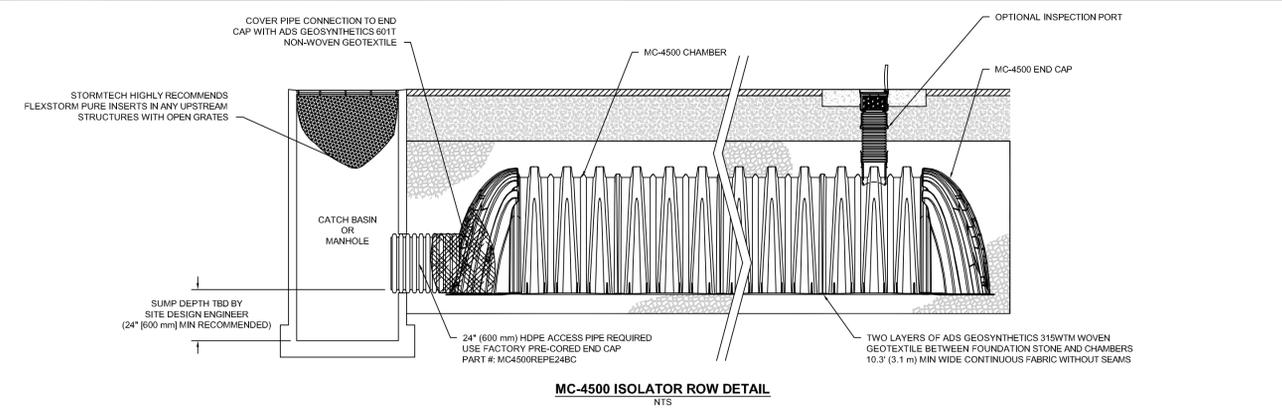
- NOTES:**
- MC-4500 CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2418 "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
 - MC-4500 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
 - "ACCEPTABLE FILL MATERIALS" TABLE ABOVE PROVIDES MATERIAL LOCATIONS, DESCRIPTIONS, GRADATIONS, AND COMPACTION REQUIREMENTS FOR FOUNDATION, EMBEDMENT, AND FILL MATERIALS.
 - THE "SITE DESIGN ENGINEER" REFERS TO THE ENGINEER RESPONSIBLE FOR THE DESIGN AND LAYOUT OF THE STORMTECH CHAMBERS FOR THIS PROJECT.
 - THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
 - PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
 - ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.

STANDARD CROSS SECTION
 MC-4500
 DATE: 11/18/14
 DRAWN: JLM
 CHECKED: JLM
 PROJECT #:
 DESCRIPTION:
 REV. DRW. CHK. DATE

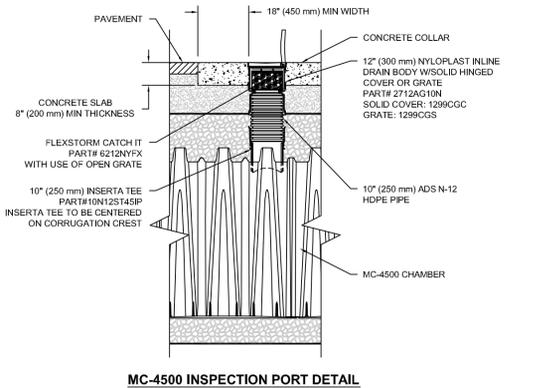
1460 TRUBMAN BLVD
 HILLIARD, OH 43026
 1-800-733-7473

StormTech
 1460 TRUBMAN BLVD
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 1-800-733-7473

SHEET 1 OF 1



- INSPECTION & MAINTENANCE**
- STEP 1) INSPECT ISOLATOR ROW FOR SEDIMENT
 A. INSPECTION PORTS (IF PRESENT)
 A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
 A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
 A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
 A.4. LOWER A CAMERA INTO ISOLATOR ROW FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
 A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
 B. ALL ISOLATOR ROWS
 B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW
 B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW THROUGH OUTLET PIPE
 i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
 ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
 B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- STEP 2) CLEAN OUT ISOLATOR ROW USING THE JETVAC PROCESS
 A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45" (1.1 m) OR MORE IS PREFERRED
 B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKLASH WATER IS CLEAN
 C. VACUUM STRUCTURE SUMP AS REQUIRED
- STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.
- STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.
- NOTES**
- INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
 - CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.



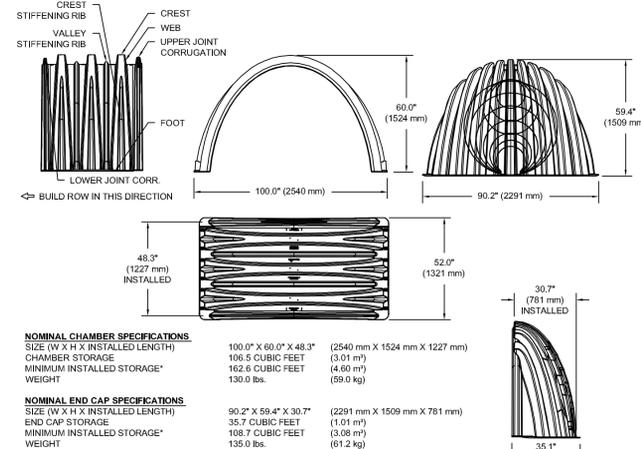
DESCRIPTION
 MC-4500 ISOLATOR ROW DETAILS
 DATE: 11/18/14
 DRAWN: JLM
 CHECKED: JLM
 PROJECT #:
 REV. DRW. CHK. DATE

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SHEET 1 OF 1

MC-4500 TECHNICAL SPECIFICATION



NOMINAL CHAMBER SPECIFICATIONS

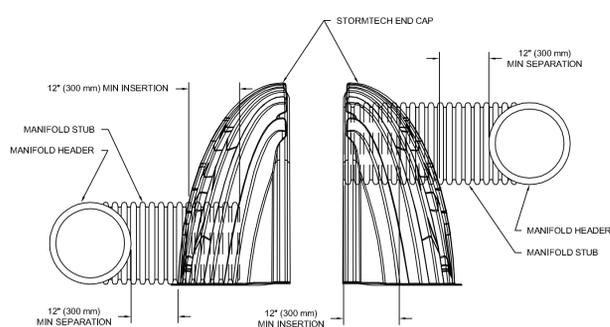
SIZE (W X H X INSTALLED LENGTH)	100.0" X 60.0" X 48.3" (2540 mm X 1524 mm X 1227 mm)
CHAMBER STORAGE	106.5 CUBIC FEET (3.01 m ³)
MINIMUM INSTALLED STORAGE*	162.0 CUBIC FEET (4.60 m ³)
WEIGHT	130.0 lbs (59.0 kg)

NOMINAL END CAP SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	90.2" X 59.4" X 30.7" (2291 mm X 1509 mm X 781 mm)
END CAP STORAGE	35.7 CUBIC FEET (1.01 m ³)
MINIMUM INSTALLED STORAGE*	108.7 CUBIC FEET (3.08 m ³)
WEIGHT	138.0 lbs (62.1 kg)

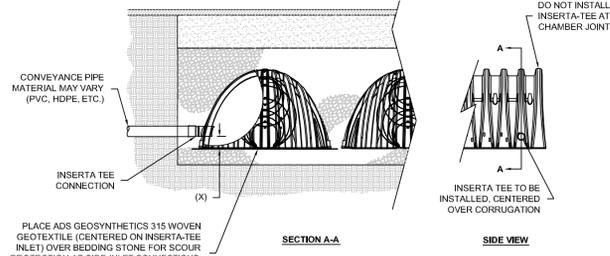
*ASSUMES 12" (305 mm) STONE ABOVE, 9" (229 mm) STONE FOUNDATION AND BETWEEN CHAMBERS, 12" (305 mm) STONE PERIMETER IN FRONT OF END CAPS AND 40% STONE POROSITY.

MC-SERIES END CAP INSERTION DETAIL



NOTE: MANIFOLD STUB MUST BE Laid HORIZONTAL FOR A PROPER FIT IN END CAP OPENING.

INSERTA TEE DETAIL



CHAMBER	MAX DIAMETER OF INSERTA TEE	HEIGHT FROM BASE OF CHAMBER (X)
SC-310	6" (150 mm)	4" (100 mm)
SC-740	10" (250 mm)	4" (100 mm)
DC-780	10" (250 mm)	4" (100 mm)
MC-3500	12" (300 mm)	6" (150 mm)
MC-4500	12" (300 mm)	8" (200 mm)

INSERTA TEE FITTINGS AVAILABLE FOR SDR 26, SDR 35, SCH 40 IPS GASKETED & SOLVENT WELD, N-12, HP STORM, C-900 OR DUCTILE IRON

STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"
 STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"

PART #	STUB	B	C
MC4500REPED0T	6" (150 mm)	42.54" (1081 mm)	—
MC4500REPED0B	—	—	0.86" (22 mm)
MC4500REPED0T	8" (200 mm)	40.50" (1029 mm)	—
MC4500REPED0B	—	—	1.01" (26 mm)
MC4500REPED10T	10" (250 mm)	38.37" (975 mm)	—
MC4500REPED10B	—	—	1.33" (34 mm)
MC4500REPED12T	12" (300 mm)	35.69" (907 mm)	—
MC4500REPED12B	—	—	1.55" (39 mm)
MC4500REPED15T	15" (375 mm)	32.72" (831 mm)	—
MC4500REPED15B	—	—	1.70" (43 mm)
MC4500REPED18T	18" (450 mm)	29.36" (746 mm)	—
MC4500REPED18B	—	—	1.97" (50 mm)
MC4500REPED24T	24" (600 mm)	23.05" (585 mm)	—
MC4500REPED24B	—	—	2.26" (57 mm)
MC4500REPED30T	30" (750 mm)	—	2.95" (75 mm)
MC4500REPED36T	36" (900 mm)	—	3.25" (83 mm)
MC4500REPED42T	42" (1050 mm)	—	3.55" (90 mm)

NOTE: ALL DIMENSIONS ARE NOMINAL
 CUSTOM PRECURED INVERTS ARE AVAILABLE UPON REQUEST. INVENTORIED MANIFOLDS INCLUDE 12-24" (300-600 mm) SIZE ON SIZE AND 15-48" (375-1200 mm) ECCENTRIC MANIFOLDS.
 CUSTOM INVERT LOCATIONS ON THE MC-4500 END CAP CUT IN THE FIELD ARE NOT RECOMMENDED FOR PIPE SIZES GREATER THAN 10" (250 mm).
 THE INVERT LOCATION IN COLUMN 'B' ARE THE HIGHEST POSSIBLE FOR THE PIPE SIZE.

StormTech
 Subsurface Stormwater Management™
MC-4500 Site Calculator

Project Information:
 Project Name: SALAD & GO
 Location: 1110 W. Southern Ave. Mesa Az.
 Date: 10/3/2015
 Engineer: Site Consultants Inc.
 StormTech RPM:

System Requirements		System Sizing	
Units	Imperial	Number of Chambers Required	66 each
Required Storage Volume	12000 CF	Number of End Caps Required	6 each
Stone Porosity (Industry Standard = 40%)	40 %	Bed Size (including perimeter stone)	2,718 square feet
Stone Above Chambers (12 inch min.)	12 inches	Stone Required (including perimeter stone)	690 tons
Stone Foundation Depth (9 inch min.)	9 inches	Volume of Excavation	956 cubic yards
Average Cover over Chambers (24 inch min.)	24 inches	Non-woven Filter Fabric Required (20% Safety Factor)	989 square yards
Bed size controlled by WIDTH or LENGTH?	LENGTH	Length of Isolator Row	103.7 feet
Limiting WIDTH or LENGTH dimension	105 feet	Woven Isolator Row Fabric (20% Safety Factor)	285 square yards
Storage Volume per Chamber	173.5 CF	Installed Storage Volume	12,161 cubic feet
Storage Volume per End Cap	118.3 CF		

Controlled by Length

Configuration	Maximum Length	Maximum Width
2 rows of 24 chambers	105 feet	36 inches
1 row of 18 chambers	103.7 feet	12 inches
	28.5 feet	18 inches

PRELIMINARY NOT FOR CONSTRUCTION

CALL TWO WORKING DAYS BEFORE YOU DIG
602-263-1100
1-800-STAKE-IT
 (OUTSIDE MARICOPA COUNTY)

Professional Engineer
 25960
 MICHAEL JAMES
 CAYLOR
 LICENSED PROFESSIONAL ENGINEER
 STATE OF ARIZONA

Site Consultants, Inc.
 ENGINEERS • SURVEYORS • CONSULTANTS
 113 SOUTH ROCKFORD DRIVE, TEMPE, ARIZONA 85281
 TEL: (480) 894-2820, FAX: (480) 894-2847

STORM DRAIN DETAILS
 SALAD & GO
 1110 WEST SOUTHERN AVE
 MESA, AZ.

PROJECT NO.: 2076
 SCALE: AS NOTED
 DRAWN BY: MGO
 CHECKED BY: MJC
 DATE: 10-5-2015
 DWG: 2076-C-GD-Prelim

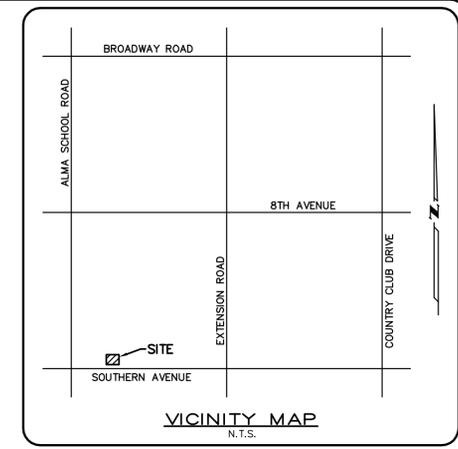
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EXPIRES 3-31-2016

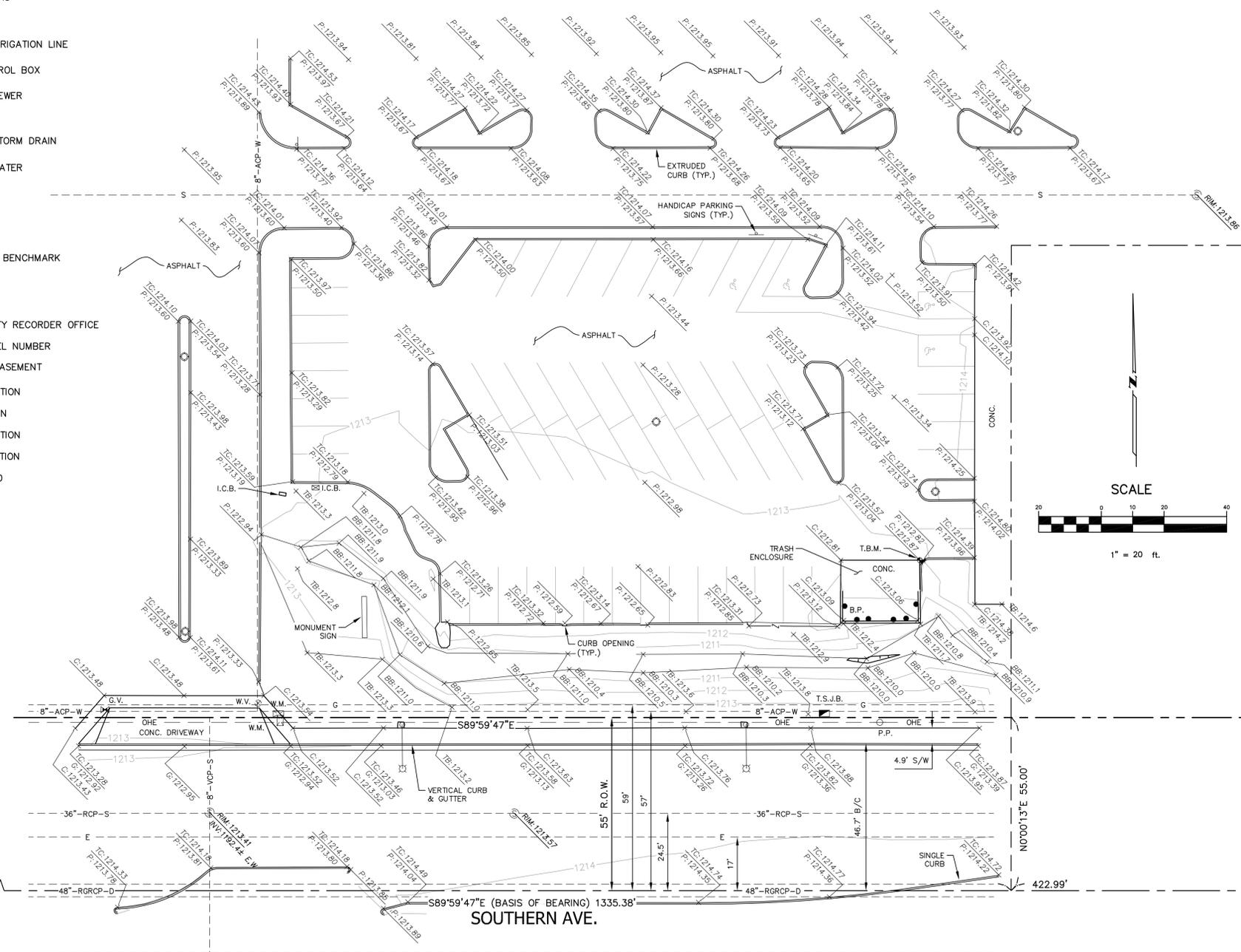
SALAD & GO

TOPOGRAPHIC SURVEY

BEING A PORTION OF THE SOUTHWEST QUARTER OF SECTION 28, TOWNSHIP 1 NORTH, RANGE 5 EAST, OF THE GILA & SALT RIVER BASE & MERIDIAN, MARICOPA COUNTY, ARIZONA



- LEGEND**
- PROPERTY LINE
 - RIGHT OF WAY LINE
 - CENTER LINE
 - 1180 --- CONTOUR LINE
 - 12"-DIP-W --- UNDERGROUND UTILITY
 - B.P. BARRIER POST
 - ⊠ PARKING LIGHT W/BASE
 - T.S.J.B. TRAFFIC SIGNAL J-BOX
 - TRAFFIC SIGNAL W/ MAST ARM
 - E UNDERGROUND ELECTRIC
 - OHE OVERHEAD ELECTRIC
 - P.P. POWER POLE
 - STREET LIGHT W/ MAST ARM
 - G UNDERGROUND GAS
 - GV GAS VALVE
 - IRR UNDERGROUND IRRIGATION LINE
 - I.C.B. IRRIGATION CONTROL BOX
 - S UNDERGROUND SEWER
 - ⊙ SEWER MANHOLE
 - D UNDERGROUND STORM DRAIN
 - W UNDERGROUND WATER
 - W.M. WATER METER
 - W.S. WATER SERVICE
 - W.V. WATER VALVE
 - T.B.M. SITE TEMPORARY BENCHMARK
 - C.O.M. CITY OF MESA
 - R.O.W. RIGHT OF WAY
 - M.C.R. MARICOPA COUNTY RECORDER OFFICE
 - A.P.N. ASSESSOR PARCEL NUMBER
 - P.U.E. PUBLIC UTILITY EASEMENT
 - TC TOP CURB ELEVATION
 - G GUTTER ELEVATION
 - P PAVEMENT ELEVATION
 - C CONCRETE ELEVATION
 - NG NATURAL GROUND
 - INV INVERT
 - TB TOP BANK
 - BB BOTTOM BANK
 - TW TOP WALL



SITE ADDRESS
1110 W. SOUTHERN AVENUE, MESA ARIZONA 85210

ASSESSORS PARCEL NUMBER
A.P.N. 134-19-007F

BASIS OF BEARING
THE SOUTH LINE OF THE SOUTHWEST QUARTER, OF THE SOUTHWEST QUARTER OF SECTION 28, TOWNSHIP 1 NORTH, RANGE 5 EAST OF GILA AND SALT RIVER BASE & MERIDIAN; THE SAID LINE BEARS SOUTH 89°59 MINUTES 47 SECONDS EAST.

BENCHMARK
CITY OF MESA BRASS TAG ON SOUTHEAST ON TOP OF CURB AT SOUTHEAST CORNER OF BROADWAY ROAD AND ALMA SCHOOL ROAD.
ELEVATION= 1225.19' NAVD 88
NOTE: CITY OF MESA BENCHMARK ON SOUTHERN AVENUE AND ALMA SCHOOL DID NOT EXIST.
SITE TEMPORARY BENCHMARK (T.B.M.): "X" ON SQUARE ON NORTHEAST CORNER OF CONCRETE TRASH ENCLOSURE PAD.
ELEVATION= 1212.87'

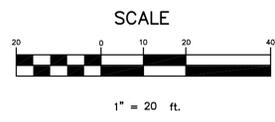
FLOOD PLAIN
THE SUBJECT PROPERTY IS LOCATED WITHIN SHADED ZONE "X" DEFINED AS "AREAS OF 0.2% ANNUAL CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD; AS SHOWN ON FIRM MAP NO. 04013C2265L, DATED OCTOBER 16, 2013.

ZONING
SUBJECT PROPERTY IS CURRENTLY ZONED LC. (COMMUNITY COMMERCIAL)

SURVEYOR'S UTILITY NOTE
UNDERGROUND UTILITIES LOCATIONS SHOWN HEREON ARE BASED ON FIELD OBSERVATIONS AND AVAILABLE MAPS OBTAINED FROM UTILITY COMPANIES AND THE CITY OF SCOTTSDALE, AZ. ACTUAL LOCATIONS MAY VARY FROM LOCATIONS SHOWN HEREON.

PREPARED FOR
SRA
5450 E. HIGH STREET, SUITE 200
PHOENIX, ARIZONA 85054
CONTACT: SAKE REINDERSMA

SURVEYOR
SITE CONSULTANTS, INC.
113 SOUTH ROCKFORD DRIVE
TEMPE, ARIZONA 85281
TELE: 480-894-2820
CONTACT: GARY E. STOCKER, P.E., R.L.S.



ALMA SCHOOL RD.
S.W. CORNER SECTION 28,
T. 1N., R. 5E., G.&S.R.B.&M.;
FND. BRASS CAP IN HANDHOLE

S. WESTWOOD
FND. BRASS CAP IN HANDHOLE

CERTIFICATION:
THIS IS TO CERTIFY THAT THE TOPOGRAPHIC INFORMATION SHOWN HEREON IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND WAS SURVEYED AND DRAWN UNDER MY DIRECTION DURING THE MONTH OF AUGUST, 2015.
GARY E. STOCKER R.L.S. #17516 DATE 8-26-2015

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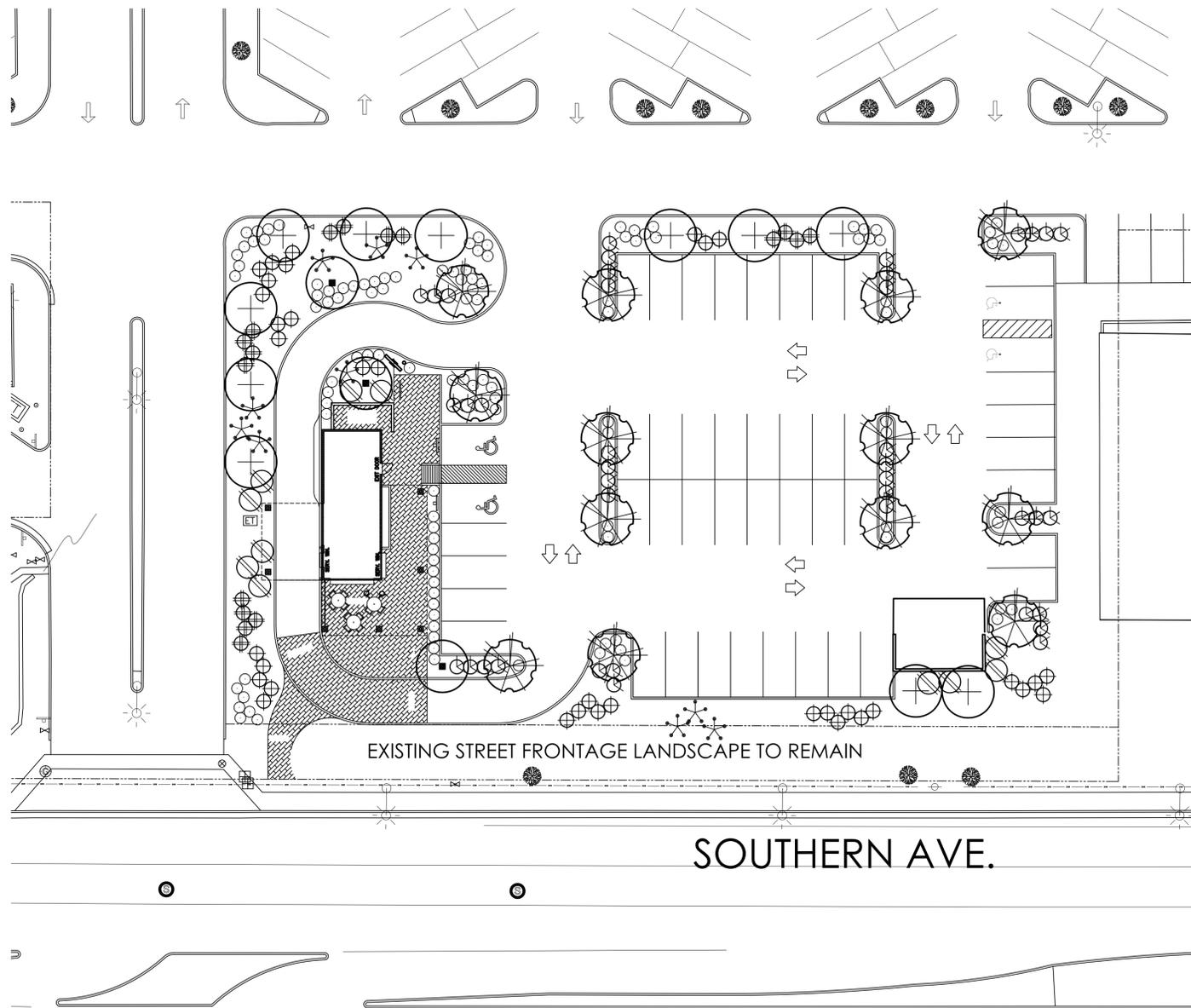
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ENGINEERS • SURVEYORS • CONSULTANTS
113 SOUTH ROCKFORD DRIVE, TEMPE, ARIZONA 85281
TEL: (480) 894-2820, FAX: (480) 894-2847

TOPOGRAPHIC SURVEY
SALAD & GO
1110 W. SOUTHERN AVENUE
MESA, ARIZONA



PROJECT NO.:	2076
SCALE:	1" = 20'
DRAWN BY:	HTO
CHECKED BY:	GES
DATE:	8-26-2015
OWG:	2076-V-TOPO

1
OF
1



LANDSCAPE LEGEND

- CERCIDIUM 'DESERT MUSEUM'
DESERT MUSEUM PALO VERDE
36" BOX (MATCHING)
 - PROSOPIS CHILENSIS
CHILEAN MESQUITE
24" BOX
 - ACACIA STENOPHYLLA
SHOESTRING ACACIA
36" BOX (MATCHING)
 - RUELLIA PENINSULARIS
BAJA RUELLIA
5 GALLON
 - CAESALPINIA MEXICANA
MEXICAN BIRD OF PARADISE
5 GALLON
 - TECOMA 'ORANGE JUBILEE'
ORANGE JUBILEE
5 GALLON
 - HESPERALOE PARVIFLORA
RED YUCCA
5 GALLON
 - DASYLIRION WHEELERII
DESERT SPOON
5 GALLON
 - LANTANA MONTEVIDENSIS
'GOLD MOUND'
1 GALLON
- MATCH EXISTING GRANITE
DECOMPOSED GRANITE
2" DEPTH IN ALL LANDSCAPE AREAS

CITY OF MESA LANDSCAPE NOTES

1. ALL LANDSCAPE AREAS TO RECEIVE 2" LAYER DECOMPOSED GRANITE
2. ALL LANDSCAPE AREA TO BE WATERED BY UNDERGROUND AUTOMATIC IRRIGATION SYSTEM.
3. THE HEIGHTS AND CALIPERS SHALL COMPLY WITH 'ARIZONIA NURSERY ASSOCIATION SPECIFICATIONS' FOR THAT SIZE AND TYPE OF TREE.
4. REQUIRED TREES SHALL BE PROVIDED IN EQUAL NUMBERS OF 15 GALLON SIZE AND 24" BOX SIZE OR LARGER.
5. REQUIRED SHRUBS SHALL HAVE A MATURE GROWTH HEIGHT OF 18" AT LEAST 50% OF REQUIRE SHRUBS SHALL BE 5 GALLON SIZE.
6. PLANT MATERIAL SHALL BE CALCULATED BASED ON A LINEAR MODULE OF 25 FEET. TREES AND SHRUBS MAY BE CLUSTERED.

- ARTERIAL STREET:**
(2) TREES AND (6) SHRUBS PER 25' OF STREET FRONTAGE
- MAJOR, MIDSECTION COLLECTOR STREET:**
(2) TREES AND (6) SHRUBS PER 25' OF STREET FRONTAGE
- COLLECTOR/INDUSTRIAL/COMMERCIAL STREET:**
(1) TREES AND (4) SHRUBS PER 25' OF STREET FRONTAGE
- PUBLIC OR PRIVATE LOCAL STREET:**
(1) TREES AND (4) SHRUBS PER 25' OF STREET FRONTAGE

7. PLANT MATERIAL SIZES REQUIRED:

- TREES: (TOTAL REQUIRED TREES:)**
25% SHALL BE 36" BOX OR LARGER
50% SHALL BE 24" BOX OR LARGER
NO TREES LESS THAN 15 GALLON

- SHRUBS: (TOTAL REQUIRED SHRUBS:)**
50% SHALL BE 5 GALLON OR LARGER.
NO SHRUBS LESS THAN 1 GALLON

8. 1 TREES AND 3 SHRUBS FOR EVERY 15' PARKING ISLAND
PARKING SHALL BE INSTALLED @ EACH END OF ROW OF STALLS AND
IN BETWEEN FOR MAXIMUM OF EIGHT CONTIGUOUS PARKING SPACES

9. FOUNDATION LANDSCAPING: LANDSCAPING TO A MINIMUM HEIGHT OF 18" IS
REQUIRED IMMEDIATELY ADJACENT TO, OR PROVIDED IN PLANTER AREAS
ADJACENT TO BUILDING, WHICH HAVE FRONTAGE ON A PUBLIC STREET.
PLANTING AREAS MUST BE A MIN. OF 5' WIDE AND A MIN. OF 50%
PLANT COVERAGE.

10. THE BACKFLOW PREVENTION ASSEMBLY SHALL BE
TESTED AND APPROVED BY A CERTIFIED TECHNICIAN
DESIGNATED IN THE CURRENT CITY OF MESA LIST THE
APPROVED INSPECTORS PRIOR TO THE REQUEST
FOR FINAL INSPECTION".

11. THE REQUIRED BACKFLOW PREVENTION ASSEMBLY
SHALL BE MANUFACTURER AND MODEL NUMBER DESIGNATED
IN THE CURRENT CITY OF MESA LIST OF APPROVED BACKFLOW
PREVENTION ASSEMBLIES".

12. ALL WORK WILL BE DONE UNDER SEPARATE PERMIT
FOR SIGNS".

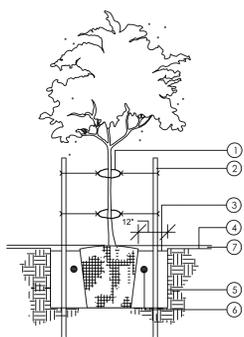
13. ALL LANDSCAPING INSTALLED WITH THIS PROJECT TO BE MAINTAINED
BY OWNERS ASSOC. OR OWNERS ASSOCIATION OF COMMERCIAL
SUBDIVISION OR MANAGEMENT COMPANY IF COMMERCIAL RENTALS

14. THAT ALL TREES AND SHRUBS LOCATED IN LINE-OF-SIGHT
WILL BE MAINTAINED TO A CLEAR AREA BETWEEN OF 3' TO 7'

15. RIP-RAP MUST BE ON NATURAL MATERIALS MATCHING D.G COLORS
CONCRETE OR GUNITITE MUST BE COLORED TO MATCH D.G. COLOR

16. TREES SHALL BE PLANTED @ LEAST 20' AWAY FROM ANY STREET
LIGHT POLE OR LOCATION. SHRUBS SHALL BE PLANTED @ LEAST 7' FEET
AWAY FROM ANY STREET LIGHT POLE OR LCC.

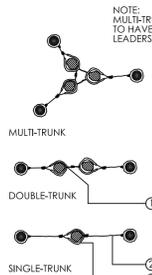
17. 10% OF TOTAL TREES IN PARKING SHALL BE 36" BOX OR LARGER.



1. 1/2" RUBBER HOSE WITH #10 WIRE
2. TWO 2" ROUND BY 8' LONG GREEN TREE STAKES BURY 3" BELOW GRADE
3. 4" BASIN
4. GRADE (PRIOR TO GRANITE)
5. ROUGHEN SIDES OF PLANT PIT TO PREVENT GLAZING
6. AGRIFORM TABLETS
7. 2" DEPTH OF DECOMPOSED GRANITE. (SEE LEGEND FOR TYPE)

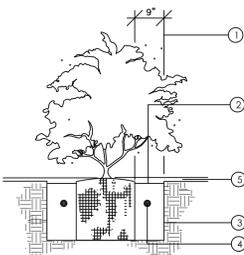
BACKFILL PLANT PIT WITH SOIL MIX NOTED IN SPECS.

T&M ASSOCIATES
DOUBLE STAKING DETAIL
NOT TO SCALE



1. NOTCH TUBING LOOP WIRE THROUGH EXPOSED WIRE
2. #10 WIRE RUBBER COATED
3. 1/2" RUBBER HOSE

T&M ASSOCIATES
TREE GUYING DETAIL
NOT TO SCALE



1. MINIMUM DIMENSION FOR 5 GAL PLANTS
2. 1" BASIN
3. ROUGHEN SIDES OF PLANT PIT TO PREVENT GLAZING
4. AGRIFORM TABLETS SEE SPECS. FOR RATIO
5. 2" DEPTH OF DECOMPOSED GRANITE. (SEE LEGEND FOR TYPE)

BACKFILL PLANT PIT WITH SOIL MIX NOTED IN SPECS.

T&M ASSOCIATES
SHRUB PLANTING DETAIL
NOT TO SCALE



STEWART + REINDERSMA
ARCHITECTURE, PLLC
5450 e high street, suite 200
phoenix, az 85054
p: 480.515.5123 f: 602.513.7193
www.sra360.com

architect:

applicant/contact:

hinkson company, llc
5050 n. 40th st. suite 350
phoenix, az 85018
contact: chris hinkson
t: (480) 794-1887
c: (480) 329-3887



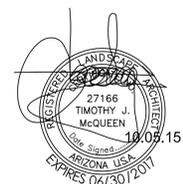
Fiesta Commons Shopping Center
1040 W. Southern Ave.
Mesa, AZ 85210

project:

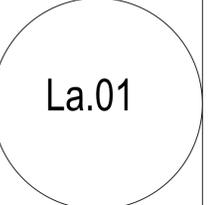
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date: 10.05.15
issued for: SITE PLAN REVIEW
job no: 15-062
sheet title:

sheet no.:



T.J. McQUEEN & ASSOCIATES, INC.
LANDSCAPE ARCHITECTURE
URBAN DESIGN
SITE PLANNING
8433 East Cholla St., Suite 101
Scottsdale, Arizona 85260
P. (602) 265-0320 F. (602) 266-6619
EMAIL: timmcqueen@tjma.net



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COOPER LIGHTING - METALUX®

DESCRIPTION

The WS Series is a specification wraparound luminaire featuring energy efficient performance. The luminaire's characteristic clean, low profile design is both appealing and practically functional. The WS Series utilizes a clear, low brightness, extruded acrylic refractor with injection molded end caps for high performance and good looks.

The efficient and stylish WS Series is the perfect wraparound for commercial spaces, schools, dormitories, offices and retail areas.

Catalog #		Type	
Project		A1	
Comments		Date	
Prepared by			

SPECIFICATION FEATURES

A ... Construction

Housing die formed code gauge prime cold rolled steel. Six full length ribs for strength. Ballast cover easily removed without tools. Steel end plates with 7/8" KO and light-seal embossment. Optional decorative end plate available.

B ... Electrical*

Ballasts are CBM/ETL Class "P" and are positively secured by mounting bolts. Pressure lock lampholders. UL/CUL listed. Suitable for damp locations.

C ... Finish

Multistage, iron phosphate pretreatment ensures maximum bonding and rust inhibitor. Lighting grade, baked white enamel finish.

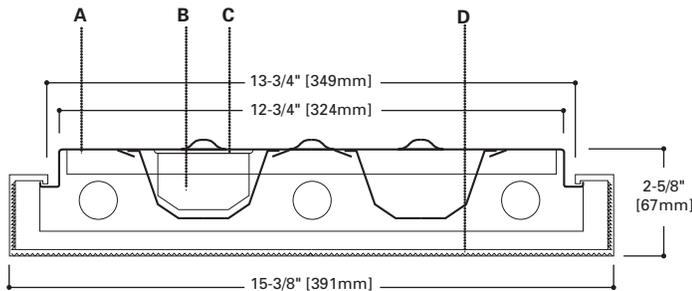
D ... Frame/Shielding

100% clear full thickness virgin acrylic prismatic refractor/lens. Permanent luminous injection molded end caps. Sides have inside linear prisms and bottom has pyramidal prisms for low brightness control. Lens can be hinged from either side in a lift and shift manner.

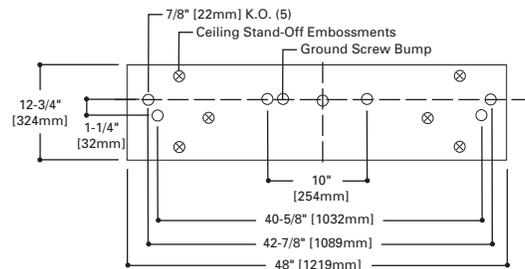
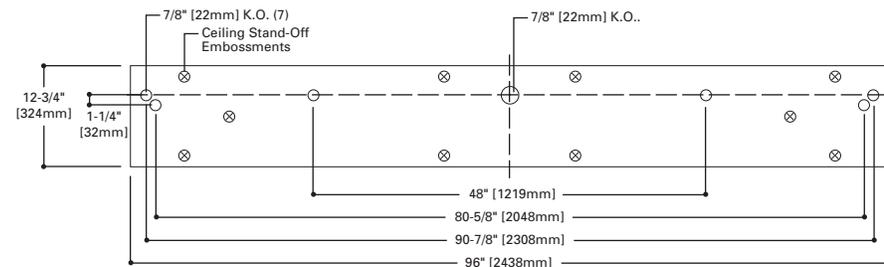


WS
340
332

4' OR 8' SURFACE
3 LAMPS
Specification Wrap



MOUNTING DATA



ENERGY DATA

Input Watts:
EB Ballast & STD Lamps
340 (110)
332 (91)

ES Ballast & STD Lamps
340 (136)
332 (108)

Luminaire Efficacy Rating
LER = FW-71
Catalog Number: WS-332A

Yearly Cost of 1000 lumens,
3000 hrs at .08 KWH \$3.38

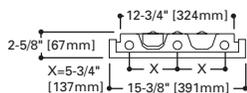
*Reference the lamp/ballast data in the Technical Section for specific lamp/ballast requirements.

LAMPS CONTAIN MERCURY. DISPOSE ACCORDING TO LOCAL, STATE OR FEDERAL LAWS

LINEAR DISCONNECT
Safe and convenient means of disconnecting power

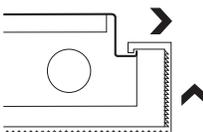


LAMP CONFIGURATIONS

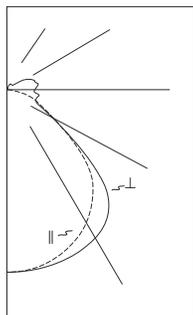


LIFT & SHIFT REFRACTOR

Easily Removed. Hinges Either Side (Not Recommended For Sloped Ceiling Applications.)



Specifications and Dimensions subject to change without notice.
Consult your representative for additional options and finishes.



WS-332A
Energy Saving Ballast

F32T8/35K Lamps
2850 Lumens

Spacing criterion:
(II) 1.3 x mounting height, (⊥) 1.4 x mounting height
Efficiency 84.2%

Test Report:
WS332A.IES

LER = FW-71

Yearly Cost of 1000 lumens, 3000 hrs at .08 KWH = \$3.38

Coefficients of Utilization

rc	Effective floor cavity reflectance																		
	80%				70%				20%										
rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0	
RCR	0	98	98	98	98	94	94	94	94	88	88	88	82	82	82	76	76	76	73
1	90	86	83	80	86	83	80	77	77	75	73	72	70	69	68	66	65	62	
2	82	76	71	67	79	74	69	65	69	65	62	65	62	59	61	58	56	54	
3	76	68	62	57	73	66	60	56	62	57	53	58	54	51	55	52	49	47	
4	70	61	54	49	67	59	53	48	55	50	46	52	48	44	49	46	43	41	
5	64	54	47	42	62	53	46	41	50	44	40	47	42	38	44	40	37	35	
6	59	49	42	37	57	47	41	36	45	39	35	42	37	34	40	36	33	31	
7	55	44	37	32	53	43	36	31	40	35	30	38	33	30	36	32	29	27	
8	50	39	32	28	48	38	32	27	36	31	26	34	29	26	33	28	25	23	
9	46	35	29	24	45	34	28	24	33	27	23	31	26	22	29	25	22	20	
10	43	32	25	21	41	31	25	21	30	24	20	28	23	20	27	22	19	18	

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0-30	1849	21.6	25.7
0-40	3092	36.2	42.9
0-60	5178	60.6	71.9
0-90	6273	73.4	87.1
90-180	928	10.8	12.9
0-180	7201	84.2	100.0

Typical VCP Percentages

Room Size (Ft.)	Height Along		Height Across	
	8.5'	10.0'	8.5'	10.0'
20 x 20	65	69	64	70
30 x 30	58	62	55	61
30 x 60	49	53	41	47
60 x 30	60	63	58	63
60 x 60	50	52	42	48

Candela

Angle	Along II	45°	Across ⊥
0	2293	2293	2293
10	2259	2274	2290
20	2149	2213	2265
30	1962	2093	2183
40	1688	1880	1987
50	1167	1311	1269
60	606	686	655
70	337	407	386
80	186	249	417
90	21	140	341
100	23	231	405
110	29	261	376
120	34	176	266
130	36	104	124
140	38	91	99
150	37	71	91
160	33	48	66
170	29	32	36
180	26	26	26

ORDERING INFORMATION

Sample Number: WS-332A-120V-EB81-U

WS 3 32 A UNV - OS QHE3X32T8ISNSC					
<p>Tandem Blank: 4' Length 8T: 8' Length</p>	<p>Series 1 WS: Specification Surface Wrap</p>	<p>Width (blank): Standard A: Wide Body for 2 Lamps</p>	<p>Number of Lamps 2, 3 3 Lamps (Not Included)</p>	<p>Wattage 32: 32W T8 (48") 40: 40W T12 (48")</p>	<p>Lens A: Acrylic Refractor Lens</p> <p>Voltage 4 120V: 120 Volt 277V: 277 Volt 347V: 347 Volt UNV: Universal Voltage⁵ 120-277</p> <p>Options GL: Single Element Fuse GM: Double Element Fuse Emergency: EM Installed⁶</p>
<p>Ballast Type 4 LE3: T12 Magnetic Energy Saving EB: Electronic Instant Start ER: T8 Electronic Program Rapid Start. Total Harmonic Distortion < 10% DLS: Digital Lighting System Dimming</p>	<p>Lamp Size 2: T12 8: T8</p>	<p>Number of Ballasts 1: 1 Ballast 2: 2 Ballast</p>	<p>Options PLUS: Higher Ballast Factor > 1.13. Total Harmonic Distortion < 20% RLS: Rotor Lock Socket (T8 Lamp only) RIF1: Radio Interference Suppressor</p>	<p>Packaging U: Unit Pack</p>	

- Notes: 1 Steel endplates with 7/8" KO standard for continuous row mounting.
 2 Stem Mounting not available on 3-lamp fixtures.
 3 2 point suspension recommended for 2 and 4-lamp fixtures.
 4 Products also available in non-US voltage and frequencies for international markets
 5 Not Available when specifying emergencies, voltage must be specific
 6 Non available for 2' version.

SHIPPING INFORMATION

Catalog No.	Wt.
WS-332A	16 lbs.
8TWS-332A	31 lbs.

COOPER LIGHTING - METALUX®

DESCRIPTION

The WS Series is a specification wraparound luminaire featuring energy efficient performance. The luminaire's characteristic clean, low profile design is both appealing and practically functional. The WS Series utilizes a clear, low brightness, extruded acrylic refractor with injection molded end caps for high performance and good looks.

The efficient and stylish WS Series is the perfect wraparound for commercial spaces, schools, dormitories, offices and retail areas.

Catalog #		Type
Project		A2
Comments		Date
Prepared by		

SPECIFICATION FEATURES

A ... Construction

Housing die formed code gauge prime cold rolled steel. Six full length ribs for strength. Ballast cover easily removed without tools. Steel end plates with 7/8" KO and light-seal embossment. Optional decorative end plate available.

B ... Electrical*

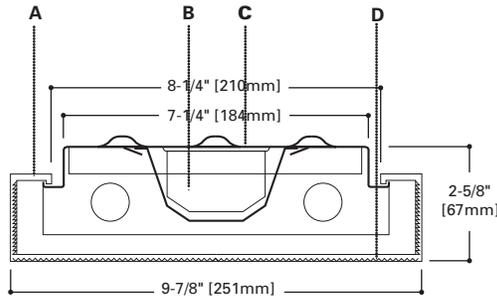
Ballasts are CBM/ETL Class "P" and are positively secured by mounting bolts. Pressure lock lampholders. UL/CUL listed. Suitable for damp locations.

C ... Finish

Multistage, iron phosphate pretreatment ensures maximum bonding and rust inhibitor. Lighting grade, baked white enamel finish.

D ... Frame/Shielding

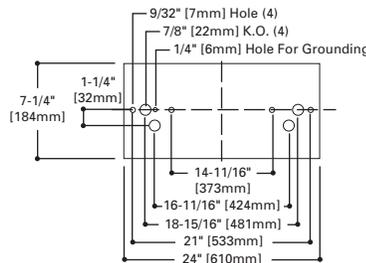
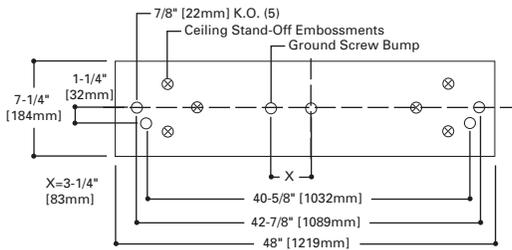
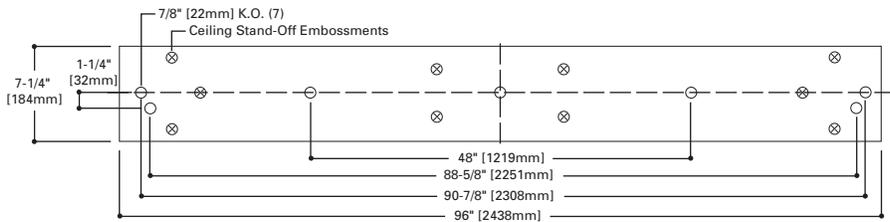
100% clear full thickness virgin acrylic prismatic refractor/lens. Permanent luminous injection molded end caps. Sides have inside linear prisms and bottom has pyramidal prisms for low brightness control. Lens can be hinged from either side in a lift and shift manner.



WS
220
217
240
232

2' SURFACE
2 LAMP LTS OR HTS
4' OR 8' SURFACE
2 LAMPS
Specification Wrap

MOUNTING DATA



ENERGY DATA

Input Watts:
EB Ballast & STD Lamps
217 (36)
417 (72)

ES Ballast & STD Lamps
220 (58)
217 (45)
420 (116)
417 (90)

Luminaire Efficacy Rating
LER = FW-72
Catalog Number: WS-232A

Yearly Cost of 1000 lumens,
3000 hrs at .08 KWH = \$3.33

*Reference the lamp/ballast data in the Technical Section for specific lamp/ballast requirements.

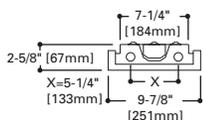
LAMPS CONTAIN MERCURY. DISPOSE ACCORDING TO LOCAL, STATE OR FEDERAL LAWS

LINEAR DISCONNECT
Safe and convenient means of disconnecting power



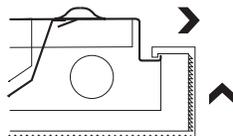
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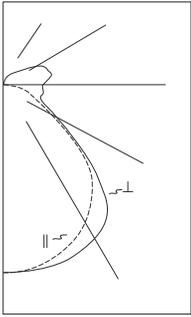
LAMP CONFIGURATIONS



LIFT & SHIFT REFRACTOR

Easily Removed. Hinges Either Side (Not Recommended For Sloped Ceiling Applications.)





WS-232A
Energy Saving
Ballast

F32T8/35L Lamps
2850 Lumens

Spacing criterion:
(H) 1.3 x mounting
height, (L) 1.4 x
mounting height

Efficiency 80.5%

Test Report:
WS232A.IES

LER = FW-72

Yearly Cost of 1000
lumens, 3000 hrs at
.08 KWH = \$3.33

Coefficients of Utilization

rc	Effective floor cavity reflectance																	
	80%				70%				50%		30%		10%		0%			
rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	92	92	92	92	88	88	88	88	81	81	81	75	75	75	69	69	69	66
1	84	81	78	75	81	78	75	72	71	69	67	66	64	62	61	59	58	55
2	77	71	66	62	74	69	64	60	63	60	57	59	56	53	54	52	50	47
3	71	63	57	53	68	61	56	51	57	52	49	53	49	46	49	46	43	41
4	66	57	50	45	63	55	49	44	51	46	42	47	43	40	44	41	38	36
5	60	50	44	39	57	49	43	38	45	40	36	42	38	34	39	36	33	31
6	55	45	39	34	53	44	38	33	41	36	32	38	34	30	36	32	29	27
7	51	41	34	29	49	39	33	29	37	32	28	35	30	26	32	28	25	24
8	47	37	30	26	45	35	29	25	33	28	24	31	26	23	29	25	22	20
9	43	33	26	22	42	32	26	22	30	25	21	28	23	20	26	22	19	18
10	40	30	24	19	39	29	23	19	27	22	18	25	21	18	24	20	17	15

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0-30	1080	18.9	23.5
0-40	1810	31.8	39.4
0-60	3031	53.2	66.0
0-90	3748	65.7	81.7
90-180	842	14.8	18.3
0-180	4589	80.5	100.0

Typical VCP Percentages

Room Size (Ft.)	Height Along		Height Across	
	8.5'	10.0'	8.5'	10.0'
20 x 20	68	73	67	73
30 x 30	62	66	58	64
30 x 60	53	56	44	50
60 x 30	63	66	61	66
60 x 60	53	56	46	51

Candela

Angle	Along H	45°	Across L
0	1337	1337	1337
10	1317	1326	1333
20	1250	1292	1324
30	1140	1230	1281
40	983	1107	1149
50	717	769	725
60	339	423	414
70	207	264	281
80	113	174	285
90	14	108	278
100	18	185	346
110	26	229	331
120	32	176	260
130	36	110	151
140	35	91	101
150	30	60	90
160	26	48	59
170	24	30	33
180	22	22	22

ORDERING INFORMATION

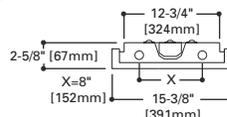
Sample Number: WS-232A-120V-EB81-U

Tandem Blank: 4' Length 8T: 8' Length	Series 1 WS- Specification Surface Wrap	Width - Standard A: Wide Body for 2 Lamps	Number of Lamps 2, 3 2 Lamps (Not Included)	Wattage 20: 20W T12 (24") 17: 17W T8 (24") 32: 32W T8 (48") 40: 40W T12 (48")	Lens A: Acrylic Refractor Lens	Ballast Start Type LTS: Low Trigger Start (20W only) (120V only) HTS: High Trigger Start (20W only)	Voltage 4 120V: 120 Volt 277V: 277 Volt 347V: 347 Volt UNV: Universal Voltage ⁵ 120-277	Options GL: Single Element Fuse GM: Double Element Fuse Emergency: EM Installed ⁶	Ballast Type 4 - Standard Magnetic T12 Ballast LE3: T12 Magnetic Energy Saving EB: Electronic Instant Start ER: T8 Electronic Program Rapid Start. Total Harmonic Distortion < 10% DLS: Digital Lighting System Dimming	Lamp Size 2: T12 8: T8	Number of Ballasts 1: 1 Ballast 2: 2 Ballast	Options /PLUS: Higher Ballast Factor > 1.13. Total Harmonic Distortion < 20% RLS: Rotor Lock Socket (T8 Lamp only) RIF1: Radio Interference Suppressor	Packaging U: Unit Pack
--	--	--	---	--	--	---	--	--	---	-------------------------------------	---	--	----------------------------------

- Notes: 1 Steel endplates with 7/8" KO standard for continuous row mounting.
2 Stem Mounting not available on 3-lamp fixtures.
3 2 point suspension recommended for 2 and 4-lamp fixtures.
4 Products also available in non-US voltage and frequencies for international markets
5 Not Available when specifying emergencies, voltage must be specific
6 Non available for 2' version.

LAMP SPACING (8")

(2 Lamp Housing with 8" lamp spac-
ing also available.)



Catalog Number
WS-A-232A (120V or 277V)

ACCESSORIES

(Order Separately)
SCF=Fixed Stem Set (Specify Length)
SCS=Swivel Stem Set (Specify Length)
SCA=Adjustable 48" Stem Set
A1B/Spacer-U=Spacer 1-1/2" to 2-1/2"
from ceiling (Use 2 per fixture)
Lengths Available: 6, 8, 12, 18, 24, 36, 48
(Additional Accessories Available. See Options
and Accessories Section.)

SHIPPING INFORMATION

Catalog No.	Wt.
WS-217A	8 lbs.
WS-232A	17 lbs.
8TWS-232A	33 lbs.

COOPER LIGHTING - METALUX®

DESCRIPTION

The DI Series is an energy efficient family of industrials that feature premium performance and durability. The industrial series incorporates heavy duty, embossed, reflectors that precisely direct and effectively control light. The versatile DI Series can be installed using various mounting methods and numerous options and accessories are available.

The DI Series can be utilized in simple task and area lighting to the most demanding industrial applications.

Catalog #		Type
Project		B
Comments		Date
Prepared by		

SPECIFICATION FEATURES

A ... Construction

Channel is code gauge prime cold rolled steel. Die formed with deep V-grooves for tong hanger. Die formed channel connector assures straight rows and continuity of ground through set screws. Numerous KOs for ease of installation. Lampholder mounting brackets are easily inserted with snap-in action.

B ... Electrical*

Ballast are CBM/ETL Class "P" and positively secured by mounting bolts. Spring loaded lampholders. UL/CUL listed. Suitable for damp locations.

C ... Finish

Multistage iron phosphate pretreatment ensures maximum bonding and rust inhibitor. Lighting grade, baked white enamel finish.

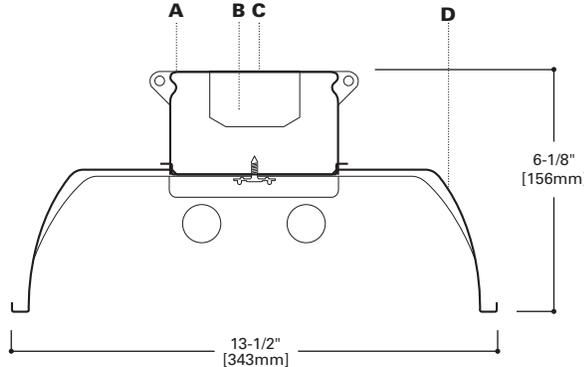
D ... Reflectors

Die formed prime steel, code gauge. Deep draw full width ribs formed with one press stroke. Side flanges lend strength with upward turn. Easily cleaned. Baked white enamel 13-1/2" width. Four foot sections. Reflectors secured by positive retaining screw. Reflector aligners provided. Standard with 6% uplight (DI). Closed top reflector (DCI). Optional industrial fixtures are available incorporating silver technology enhancements. (SilverLining)

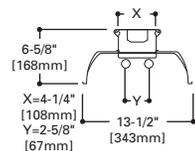


DI
240
232

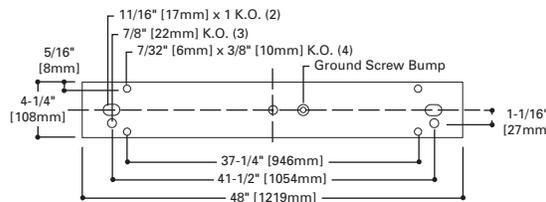
4' INDUSTRIAL
2 LAMP
Medium Duty Industrial



LAMP CONFIGURATIONS



MOUNTING DATA



ENERGY DATA

Input Watts:
EB Ballast & STD Lamps
240 (72)
232 (61)

ES Ballast & STD Lamps
240 (86)
232 (71)

Luminaire Efficacy Rating
LER = FI-78
Catalog Number: DI-232

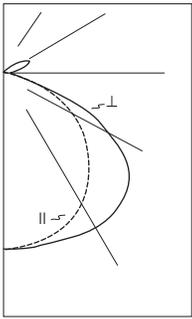
Yearly Cost of 1000 lumens,
3000 hrs at .08 KWH = \$3.08

*Reference the lamp/ballast data in the Technical Section for specific lamp/ballast requirements.

LAMPS CONTAIN MERCURY. DISPOSE ACCORDING TO LOCAL, STATE OR FEDERAL LAWS

LINEAR DISCONNECT
Safe and convenient means of disconnecting power





DI-232

Electronic Ballast
F32T8-SPX35 Lamps
2950 Lumens

Spacing criterion:
(II) 1.3 x mounting
height, (⊥) 1.6 x
mounting height
Efficiency 90.0%

Test Report:
DI232.IES

LER = FI-78

Yearly Cost of 1000
lumens, 3000 hrs at
.08 KWH = \$3.08

Coefficients of Utilization

rc	Effective floor cavity reflectance																	
	80%			70%			50%			30%			10%			0%		
	rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	0		
RCR																		
0	106	106	106	106	103	103	103	103	97	97	97	92	92	92	87	87	87	85
1	96	92	88	84	93	89	85	82	84	81	78	80	77	75	76	74	72	70
2	87	79	73	67	84	77	71	66	73	68	64	69	65	61	66	62	59	57
3	79	69	61	55	76	67	60	54	63	57	53	60	55	51	57	53	49	47
4	72	60	52	46	69	59	51	45	56	49	44	53	47	43	51	46	42	40
5	66	54	45	39	63	52	44	39	50	43	38	47	41	37	45	40	36	34
6	60	48	40	34	58	47	39	33	45	38	32	42	36	32	41	35	31	29
7	56	43	35	29	54	42	34	29	40	33	28	38	32	28	37	31	27	25
8	52	39	31	26	50	38	31	26	37	30	25	35	29	25	34	28	24	22
9	48	36	28	23	47	35	28	23	34	27	22	32	26	22	31	26	22	20
10	45	33	26	21	44	32	25	21	31	25	20	30	24	20	29	23	19	18

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0-30	1134	19.2	21.4
0-40	1937	32.8	36.5
0-60	3775	64.0	71.1
0-90	4985	84.5	93.9
90-180	325	5.5	6.1
0-180	5310	90.0	100.0

Candela

Angle	Along II	45°	Across ⊥
0	1384	1384	1384
5	1389	1383	1381
10	1374	1378	1385
15	1346	1367	1389
20	1304	1351	1398
25	1253	1332	1404
30	1196	1308	1417
35	1121	1285	1414
40	1046	1257	1391
45	956	1215	1359
50	858	1155	1292
55	750	1088	1169
60	635	985	991
65	515	833	748
70	393	624	442
75	271	387	170
80	155	154	120
85	64	97	66
90	0	33	3

ORDERING INFORMATION

SAMPLE NUMBER: DI-232-120V-EB81-U

8T DCI 2 32 UNV OS-QHE4X32T8ISNSC

Tandem
Blank=4' Length
8T=8' Length

Series
DI=Apertured Reflector
DCI=Closed Top Reflector

Silver Reflector
SS= Silver-Lining Reflector⁽³⁾

Number of Lamps
2 Lamps (Not included)

Wattage (Length)
40=34/40W T12 (48")
32=32W T8 (48")

Voltage⁽¹⁾
120V=120 Volt
277V=277 Volt
347V=347 Volt
UNV=Universal Voltage 120-277⁽²⁾

Options
GL=Single Element Fuse
GM=Double Element Fuse
Emergency=EM Installed

Ballast Type⁽¹⁾
EB8_=T8 Electronic Instant Start.
Total Harmonic Distortion < 10%

No. of Ballast
1, 2 or 3

EB8_/PLUS=T8 Electronic Instant Start.
High Ballast Factor >1.13. Total Harmonic Distortion < 20%

No. of Ballast
1, 2 or 3

ER8_=T8 Electronic Program Rapid Start.
Total Harmonic Distortion < 10%

No. of Ballast
1, 2 or 3

EB2_=T12 Electronic Rapid Start.

No. of Ballast
1 or 2

NOTES:

⁽¹⁾Products also available in non-US voltages and frequencies for international markets.

⁽²⁾Not available when specifying emergencies, voltage must be specific.

⁽³⁾Silver lining not available on fixtures with HO.

Specifications & dimensions subject to change without notice. Consult your Cooper Lighting Representative for availability and ordering information.

Packaging
U=Unit Pack
4B=4 Bulk

ACCESSORIES (Order Separately)

- A1B/Spacer-U=Spacer 1-1/2" to 2-1/2" from ceiling (Use 2 per fixture)
- ATG-4=Tong Hanger (Use 2 per fixture)
- SCF=Fixed Stem Set (Specify Length)
- SCS=Swivel Stem Set (Specify Length)
- SCA=Adjustable 48" Stem Set
- AYC-Chain/Set-U=Chain Hanger Set (Use 1 set per fixture)
- WG/DI-4FT-U²=Wire Guard
- WGG/DI-4FT-U²=Wire Gym Guard
- MECL-DI/SL-48-U=Metal Egg Crate Louver
- MECL-DI/SL-96-U=Metal Egg Crate Louver
- DI2=Long Connector
- CEP=Closed End Plate

(Additional Accessories Available. See Options and Accessories Section).

SHIPPING INFORMATION

Catalog No.	Wt.
DI-232	17 lbs.
8TDI-232	31 lbs.

DESCRIPTION

The H273ICAT1D is designed for insulated ceilings and can be in direct contact with ceiling insulation. This AIRTITE™ housing design prevents airflow between attic and living areas and saves on both heating and air conditioning costs. The electronic compact fluorescent dimming ballast meets Title 24 and Energy Star requirements including FCC Title 47 CFR part 18 for Consumer equipment. The H273ICAT1D offers compact fluorescent dimming capability with a residential rated electronic fluorescent dimming ballast. The H273ICAT1D is warranted for two years.

DESIGN FEATURES

A...Housing

Single wall aluminum housing. Sealed and gasketed for AIRTITE installation. Can be used in 2"x 8" joist construction. Housing adjusts for ceilings up to 1-3/8" thick. AIR-TITE ceiling-to-housing installation gasket included.

B...Plaster Frame

Includes regressed locking screw for hanger bars and cutouts for crimping hanger bars in position.

C...Junction Box

- Listed for through branch circuit wiring
- Positioned to accommodate straight conduit runs
- Seven 1/2" trade size conduit knockouts with true pry-out slots
- Slide-N-Side™ connectors allow non-metallic sheathed cable to be installed without tools and without removing knockouts. Accepts a wider range of non-metallic sheathed cable – the standard cable types used in lighting for both U.S. and Canada.

- Allows wiring connections to be made outside the junction box
 - Simply insert the cable directly into the trap after connections are made

- Accommodates the following standard non-metallic sheathed cable types:
 (US) #14/2, #14/3, #12/2, #12/3
 (Canada) #14/2, #14/3, #12/2

D...Bar Hangers

Bar Hanger Features include:

- Pre-installed nail easily installs in regular lumber, engineered

lumber and laminated beams

- Safety and guidance system prevents snagging, ensures smooth straight nail penetration and allows bar hangers to be easily removed if necessary.
- Automatic levelling flange aligns the housing and lets you hold the housing in place with one hand while driving nails
- Housing can be positioned at any point within 24" joist span
- Score lines allow "toolless" shortening for 12" joists
- Bar hangers may be repositioned 90°
- Bar hangers do not need to be removed from frame for shortening
- Integral T-bar clip snaps onto T-bars - no additional clips required

E...Socket

G24q-3/GX24-3 socket for one 26W DTT* - Double Twin Tube (Quad) or 26W TTT - Triple Twin Tube 4 pin lamp. May also be used with 32W TTT lamp.

* DTT lamp not listed for use with all trims. See trim listing on page 2

F...Lamp

Compact Fluorescent lamp (by others). 26 Watt and 32 Watt Generic Lamp Designations

DTT-Double Twin Tube* (Quad) (CFQ)
 • CFQ26W/G24q
 2700K, 3000K, 3500K, 4100K

* 26W DTT lamp not listed for use with all trims. See trim listing on page 2.

TTT-Triple Twin Tube (CFTR)
 • CFTR26W/GX24q
 2700K, 3000K, 3500K, 4100K
 • CFTR32W/GX24q
 2700K, 3000K, 3500K, 4100K

- Up to 12,000 hour rated average life
- 82 CRI rated lamps provide excellent color and high visual comfort.
- Color temperature (warm to cool) options offer 2700K warm, 3000K,

3500K medium-warm and 4100K cool incandescent-like light.

G...Electronic Ballast

Models are provided with an Energy Star qualified and Title 24 compliant electronic fluorescent dimming ballast. The dimming ballast is rated for use with 26W Double Twin Tube or Triple Twin Tube, and 32W Triple Twin Tube Compact Fluorescent lamps (Triple Twin Tube lamp is preferred for best visual comfort). The ballast offers 100% to 15% dimming range. Ballast is a high frequency electronic type that operates lamps above 40 kHz. In addition the ballast is thermally protected, and end of life feature shuts down the ballast upon lamp failure with auto restart to eliminate need to reset power after lamp replacement.

Labels

- UL/cUL Listed for Damp Location
- UL/cUL Listed wet location with select trims
- UL/cUL Listed for Direct Contact with Insulation and combustible material
- UL/cUL listed for Feed Through

Compliance

- State of California Title 24 High Efficacy Luminaire
- Washington State Energy Code
- New York State Energy Conservation Construction Code
- International Energy Conservation Code
- Energy Star Qualified
- Certified AIR-TITE under ASTM-E283

- State of California Title 24 High Efficacy Luminaire
- Washington State Energy Code
- New York State Energy Conservation Construction Code
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- Certified AIR-TITE under ASTM-E283

Ordering information and 2 year warranty information on reverse

COOPER LIGHTING

Catalog #		Type
Project		C
Comments		Date
Prepared by		



H273ICAT1D

6" Insulated Ceiling
 AIR-TITE™
 Recessed Housing
 26/32 Watt
 Compact Fluorescent
 with Dimming Ballast

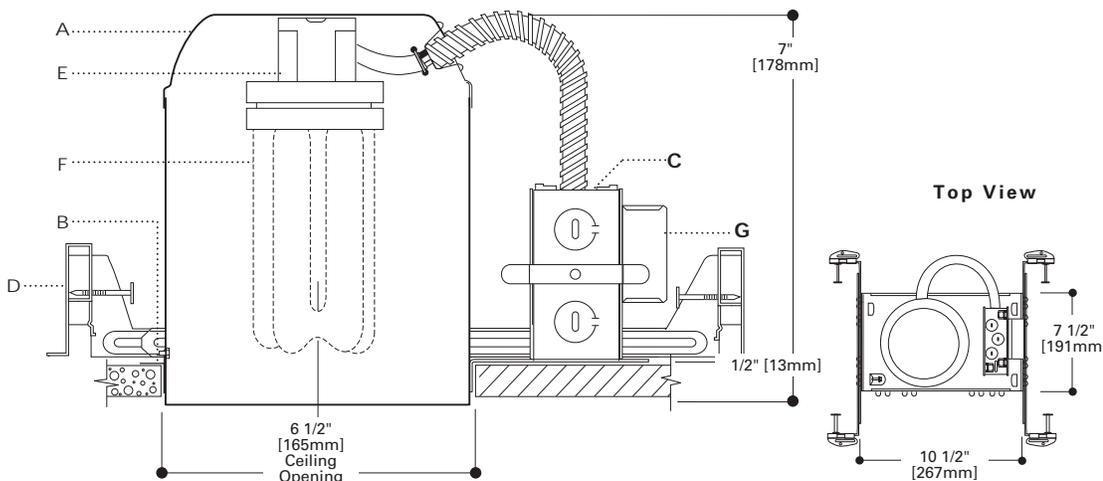
**6" TRIMS
 FOR USE IN
 INSULATED CEILINGS**

**FOR DIRECT CONTACT
 WITH INSULATION**

**Lamp/Ballast
 Energy Data**

Rated Lamp Watts: 26W or 32W
 Voltage: 120V, 60Hz
 Input Current, 26W: 0.24 Amps
 Input Current, 32W: 0.30 Amps
 Input (Full) Power (ANSI Watts),
 26W lamp: 28 Watts
 Input (Full) Power (ANSI Watts),
 32W lamp: 35 Watts

Ballast qualifications:
 Power: 120V, 60Hz
 Dimming Range: 100% - 15%
 EMI: FCC Title 47 CFR Part 18
 Consumer compliant for EMI
 (conducted & radiated)
 Sound rating: A
 Power Factor: 98%
 Ballast Factor: 0.80 / 0.15
 THD: 20%
 Min. Starting Temp: 50F / 10C



Ordering information and 2 year warranty information on reverse

COOPER LIGHTING

TRIMS

ORDERING INFORMATION

SAMPLE NUMBER: H273ICAT1D-470SC Order housing, trim and accessories separately.

Housing

H273ICAT1D = Insulated ceiling, 26/32W dimming compact fluorescent Air-Tite™ housing

Trims



470

Reflector, White Self Flange Trim Ring
26W DTT or 26/32W TTT compact fluorescent
 470SC=Specular Clear
 470H=Haze
 470CG=Champagne Gold
 470RG=Residential Gold
 OD: 7 1/4" (184mm)



ERT770

Reflector, Gloss White Trim Ring, Torsion Springs
26W DTT or 26/32W TTT compact fluorescent
 ERT770TS=Clear Specular Reflector
 ERT770MTS=Matte Reflector
 OD: 7 1/4" (184mm)



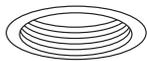
ERT771

Gloss White Reflector with Torsion Springs
26W DTT or 26/32W TTT compact fluorescent
 ERT771TS=Gloss White Reflector
 OD: 7 1/4" (184mm)



406

Baffle with Torsion Springs
26W DTT or 26/32W TTT compact fluorescent
 406BA=Black Baffle, Clear Reflector, White Trim Ring
 406WB=White Baffle, Clear Reflector, White Trim Ring
 406WWB=White Baffle, White Reflector, White Trim Ring
 OD: 7 1/4" (184mm)



ERT772

Metal Baffle with Torsion Springs
26W DTT or 26/32W TTT compact fluorescent
 ERT772TS=Black Baffle, Gloss White Upper Reflector, Gloss White Trim Ring
 ERT772WHHTS=Gloss White Baffle, Gloss White Upper Reflector, Gloss White Trim Ring
 OD: 7 1/4" (184mm)



271



Drop Opal Lens
26W DTT or 26/32W TTT compact fluorescent
 271PS=Drop Opal Lens Wet Location Listed Shower Light with Full Reflector and White Trim Ring
 OD: 8" (203mm)

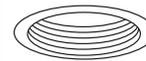


270



Albalite Lens with Reflector
26/32W TTT compact fluorescent only
 270PS=Albalite Lens Wet Location Listed Shower Light with Full Reflector and White Trim Ring
 OD: 8" (203mm)

Trims



370

Regressed Albalite Lens with Reflector
26/32W TTT compact fluorescent only
 370W=Albalite Lens with Reflector, White Baffle and White Trim Ring
 OD: 8" (203mm)



272



Dome Shower Light
26W DTT or 26/32W TTT compact fluorescent
 272PS= Dome Shower Light with Full Reflector, White Trim Ring and Frosted Glass Dome - Wet Location Listed
 OD: 8" (203mm)



424

Wall Wash
26W TTT compact fluorescent only
 424P=Wall Wash
 OD: 7 1/4" (184mm)

Accessories

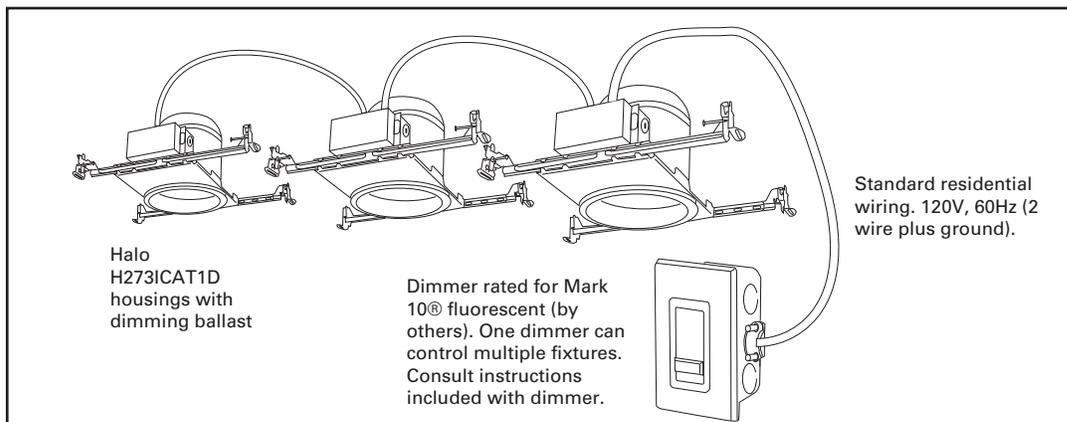
Accessories

Gasket Kit

GA-ATH7-6PK=AIR-TITE Finished Ceiling Gasket Kit
 For air tight seal around the aperture after ceiling is installed.
 6 pieces

Oversize Trim Rings (fits behind existing ring)

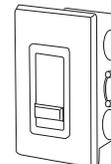
for use when ceiling opening is cut too large.
OT400P=9 1/4" White Metal
OT403P= 8" White Plastic (not for 75 diffuser)



Standard residential wiring. 120V, 60Hz (2 wire plus ground).

Halo H273ICAT1D housings with dimming ballast

Dimmer rated for Mark 10® fluorescent (by others). One dimmer can control multiple fixtures. Consult instructions included with dimmer.



Recommended Dimmer

The H273ICAT1D is rated for use with standard dimmers, however for best performance these quality lighting products are recommended for use with fluorescent dimmers rated for "Mark 10®" (also referred to as "Mark X"), by Advance.

- For compatible Lutron fluorescent wall dimmers go to www.lutron.com/advance and refer to the listing for "Mark X" dimmers
- For compatible Leviton fluorescent wall dimmers go to <http://www.leviton.com> >Lighting Controls >Residential >Dimmers and browse for "Mark 10®" dimmers, or Call Leviton Tech Line at 1-800-824-3005 and ask for "Mark 10®" wall dimmers
- For a list of other manufacturers of "Mark 10®" compatible fluorescent dimmers go to the Advance Mark 10® website at <http://www.advancetransformer.com/products/fluorescent-electronic.jsp?pbid=37> and select "Mark 10® Powerline Dimming Ballasts".

2 YEAR LIMITED WARRANTY

Energy Star Labeled Recessed Lighting

Cooper Lighting (The Company) warrants this product ("the product") against defects in material or workmanship for a period of two years from date of original purchase, and agrees to repair or, at the company's option, replace a defective product without charge for either replacement parts or labor during such time. This does not include labor to remove or install fixtures.

This warranty is extended only to the original purchaser of the product. A purchaser's receipt or other proof of date of original purchase acceptable to the Company is required before warranty performance shall be rendered.

This warranty only covers product failure due to defects in materials or workmanship which occurs in normal use. It does not cover the bulb or failure of product caused by accident, misuse, abuse, lack of reasonable care, alteration, or faulty installation, subjecting the product to any but the specified electrical service or any other failure not resulting from defects in materials or workmanship. Damage to the product caused by separately purchased, non-Company supplied components or bulbs, and corrosion or discoloration of components are not covered by this warranty.

There are no express warranties except as described above. THE COMPANY SHALL NOT BE LIABLE FOR INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THE PRODUCT OR ARISING OUT OF ANY BREACH OF THIS WARRANTY. ALL IMPLIED WARRANTIES, IF ANY, INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO THE DURATION OF THIS EXPRESS WARRANTY. Some states do not allow the exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the above exclusions or limitations may not apply to you.

No other warranty, written or verbal, is authorized by the Company. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

To obtain warranty service, please write to Cooper Lighting, 1121 Highway 74 South, Peachtree City Georgia 30269. Enclose product model number and problems you are experiencing, along with address and telephone number. You will then be contacted with a solution or a Return Goods Authorization number and full instructions for returning the product. All returned products must be accompanied by a Return Goods Authorization Number issued by the Company and must be returned freight prepaid. Any product received without a Return Goods Authorization Number from the Company will be refused.

Cooper Lighting is not responsible for merchandise damaged in transit. Repaired or replaced products shall be subject to the terms of this warranty and are inspected when packed. Evident or concealed damage that is made in transit should be reported at once to the carrier making the delivery and a claim filed with them.

Halo, AIR-TITE, GOT NAIL!, Slide-N-Side, Pass-N-Thru are valuable trademarks of Cooper Industries in the United States and other countries.
You are not permitted to use the Cooper Trademarks without the proper written consent of Cooper Industries.

COOPER LIGHTING - METALUX®

DESCRIPTION

The BA Series features a brushed aluminum finish that is a quiet complement to any interior environment. The injection molded end plates have been designed to match the brushed housing finish. The wall bracket offers effective down and up lighting functions that have been incorporated with contemporary styling and architectural appeal. The BA Series also features the latest in energy efficient technology for outstanding performance. The BA Series architectural wall bracket styling contributes aesthetic appeal to contemporary decor, providing ideal lighting conditions for all areas in which comfortable, concentrated illumination is specified.

Catalog #		Type
Project		D1
Comments		Date
Prepared by		

SPECIFICATION FEATURES

A ... Lens Housing Construction

Lens housing is constructed of premium grade extruded anodized aluminum with a brushed finish. It's easily removed for installation and maintenance. High impact, injection molded end plates have matching brushed aluminum finish.

B ... Internal Channel Construction

Internal steel channel is die formed of code gauge prime cold rolled steel. Channel cover is secured by quarter-turn fasteners for easy wireway access. Internal channel back has numerous KO's for easy installation.

C ... Electrical

Ballast are CBM/ETL Class "P" and positively secured by mounting bolts. Pressure lock lampholders. UL/CUL listed. Suitable for damp locations.

D ... Lens Housing Finish

Extruded brushed aluminum lens housing has a clear anodic coating. Sturdy, high impact injection molded end plates have matching brushed aluminum-type finish. Decorative recessed walnut trim-stripe, front and ends.

E ... Internal Channel Finish

Internal channel and all steel reflective surfaces are finished with electrostatically applied baked white polyester powder enamel. Multi-stage cleaning cycle, iron phosphate coating with rust inhibitor. Conveyorized application and baking time are accurately controlled at an elevated temperature.

F ... Internal Light Baffle

Optional internal light baffle is available for up, down or combination lighting. (BAUB)

G ... Latching

Lens housing secured to internal channel by spring-loaded latches.

H ... Shielding

Downlight diffuser is 100% virgin prismatic acrylic, #12 pattern. Low brightness even illumination is provided. Uplight diffuser is smooth matte opal acrylic.

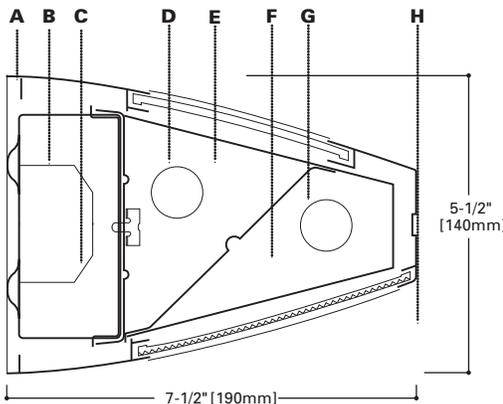


BA, BAU

- 220
- 217
- 230
- 225
- 240
- 232

SPECIFICATION WALL BRACKET

- 2' Wall Bracket
- 2 Lamp LTS or HTS
- 3' or 4' Wall Bracket
- 2 Lamp



ENERGY DATA

Input Watts:

EB Ballast & STD Lamps

- 217 (36)
- 230 (60)
- 225 (47)
- 240 (72)
- 232 (61)

ES Ballast & STD Lamps

- 220 (58)
- 217 (45)
- 230 (74)
- 225 (65)
- 240 (86)
- 232 (71)

Luminaire Efficacy Rating

LER = FL-44

Catalog Number: BA-232A

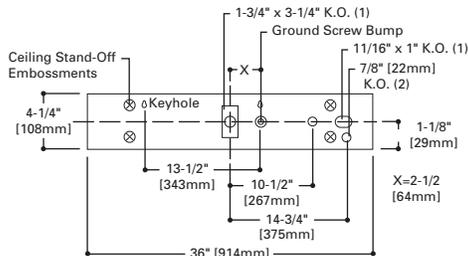
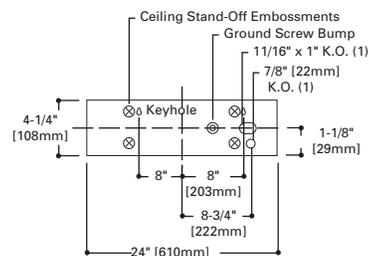
Yearly Cost of 1000 lumens,
3000 hrs at .08 KWH = \$5.45

LAMPS CONTAIN MERCURY. DISPOSE ACCORDING
TO LOCAL, STATE OR FEDERAL LAWS

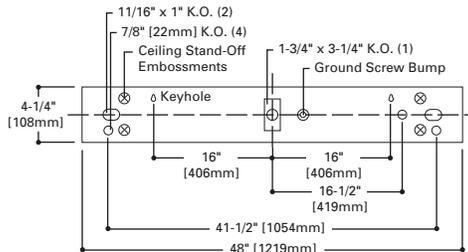
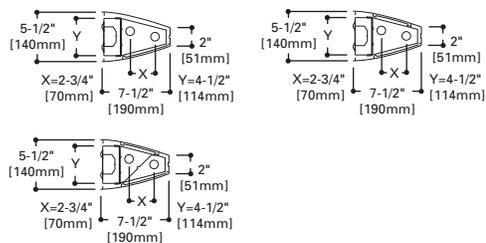
LINEAR DISCONNECT
Safe and convenient means of
disconnecting power



MOUNTING DATA



LAMP CONFIGURATIONS



Energy Saving Ballast, F32T8 lamps rated at 2850 lumens. Spacing Criterion: (II)1.6 x mounting height, (L)1.2 x mounting height.

Light Loss Factor .74. For complete photometric report request report BA232.IES

BA-232A

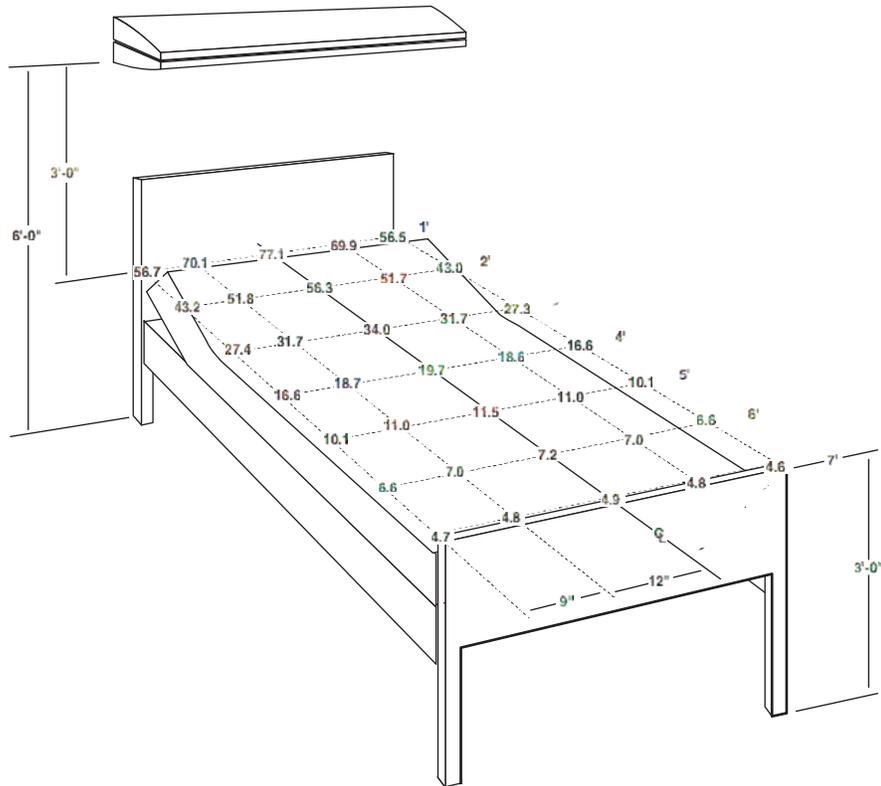
Lamps (2) F32T8/35K
Lumens 2850

Conditions

Room Size 12' Width x 14' Length
Ceiling Height 9'-0"

Reflectance

Ceiling 80%
Walls 50%
Floor 20%



Scale is Exaggerated on Fixture Application and Mounting

ORDERING INFORMATION

Sample Number: BA-232-120V-EB81-U

BAU 2 32 UNV OS-QHE2X32T8ISNSC

Series
BA =Wall Bracket Downlight only
BAU =Wall Bracket (Up and Down Light)
BAUB =Wall Bracket (Up, Down, or Combination Light)

Number of Lamps
1 Lamp (Not Included)
2 Lamps (Not Included)

Wattage
20 =20W T12 (24")
17 =17W T8 (24")
25 =25W T8 (36")
30 =30W T12 (36")
32 =32W T8 (48")
40 =40W T12 (48")

Ballast Start Type
LTS =Low Trigger Start (20W only) (120V only)
HTS =High Trigger Start (20W only)

Voltage 1
120V =120 Volt
277V =277 Volt
347V =347 Volt
UNV =Universal Voltage 2
120-277

Options
GL =Single Element Fuse
GM =Double Element Fuse
Emergency =EM Installed 3

Ballast Type 1
=Standard Magnetic T12 Ballast
LE3 =T12 Magnetic Energy Saving
EB =Electronic Instant Start
ER =T8 Electronic Program Rapid Start. Total Harmonic Distortion < 10%

Lamp Size
2 =T12
8 =T8

Number of Ballasts
1 =1 Ballast
2 =2 Ballast

Options
/PLUS =Higher Ballast Factor > 1.13. Total Harmonic Distortion < 20%
RLS =Rotor Lock Socket (T8 Lamp only)
2/1LB =(2) One-Lamp Ballasts (When RS4 or PS4 option is used)
PL5 or PL7 =Fluorescent Night Light (5 or 7 Watt) only available in fixtures without a baffle
BH =Matte Black Finish (Lens Housing)
WH =White Finish (Lens Housing)
IH =Almond Finish (Lens Housing)
CO =Convenience Outlet (120V only)
RS1 =Rotary Switch (1 Circuit, 120V only)
PS1 =Pull Switch (1 Circuit)
RS1D =Rotary Switch wired to Downlight Circuit on a two circuit fixture (120V only)
PS1D =Pull Switch, wired to Downlight Circuit on a two circuit fixture (120V only)
RS4 =Four-way rotary switch, for two circuit, two lamp fixture (120V only)
PS4 =Four-way pull switch, for two circuit 2 lamp fixture (120V only)
BT =Black Accent Trim
OT =Oak Accent Trim

Packaging
U =Unit Pack

SHIPPING INFORMATION

Catalog No.	Wt.
BA-217	18 lbs.
BA-225	25 lbs.
BA-232	32 lbs.
BAU-217	18 lbs.
BAU-225	25 lbs.
BAU-232	32 lbs.
BAUB-217	18 lbs.
BAUB-225	25 lbs.
BAUB-232	32 lbs.

Notes:
1 Products also available in non-US voltage and frequencies for international markets.
2 Not available when specifying emergencies, voltage must be specific.
3 Not available for 2' version.



Job Name: Christian Brothers

Job Type: D2

Comments:

Quantity:

44652-962: Three Light Wall/Bath Fixture

Dimensions:

Width: 25" Extends: 10"
Height: 8" Wire: 6 1/2"
Mounting Proc.: Cap Nuts
Connection: Mounted To Box

Bulbs:

3 - medium A - 8 Watt LED lamps

Features:

- Fixture may be mounted in the up or down position

Material List:

1 Body - Steel - Brushed Nickel

Safety Listing:

UL Listed for Damp Locations
cUL Listed for Damp Locations

Instruction Sheets:

French (F-010)
English (HC-1197)



Collection: Canterbury

Three Light Bath Bar in Brushed Nickel Finish with Satin Etched Glass Shades

UPC #:785652044656

Finish: Brushed Nickel (962)

Shade / Glass / Diffuser Details:

Part	Material	Finish	Quantity	Item Number	Length	Width	Height	Diameter	Fitter Diameter	Shade Top Length	Shade Top Width	Shade Top Diameter
Shade	Glass	Satin Etched	3				4 1/2	6 15/16	1 11/16			

Backplate / Canopy Details:

Type	Height / Length	Width	Depth	Diameter	Outlet Box Up	Outlet Box Down
Back Plate	5 1/4	10	1 11/16		3 1/4	4 3/4

Shipping Information:

Package Type	Product #	Quantity	UPC	Length	Width	Height	Cube	Weight	UPS Ship
Individual	44652-962	1	785652044656	22.25	11	9.75	1.381	7.9	Yes
NJ Pallet		42		48	40	76	84.444	331.8	No
NV Pallet		36		48	40	76	84.444	320.4	No

COOPER LIGHTING - SURE-LITES®

DESCRIPTION

The CC Series Contractor's Choice Emergency Lighting Unit is the ideal choice when a simple installation and a reasonable cost are required. Its contemporary round corner styling, designer white finish, and consistent family appearance enables it to blend with any decor. The components are injection molded from tough polycarbonate materials which resist discoloration due to age and ultraviolet radiation.

Catalog #	CC3WH2146	Type	EM
Project		Date	
Comments			
Prepared by			

SPECIFICATION FEATURES

Electronic

- Dual Voltage Input 120/277 VAC, 60Hz
- Line-latching
- Solid-state Voltage Limited Charger
- Solid-state Switching
- Brownout Circuit
- Low-Voltage Disconnect
- Overload/Short Circuit Protection
- Test Switch/Power Indicator Light
- Push-in AC power connectors facilitate installation

Housing Construction

- All components are injection molded, color stable, high impact UL 94-5VA rated polycarbonate material
- Designer white textured finish standard; black finish optional
- Components are of snap-fit construction to facilitate under 2-minute installation
- Reinforcing ribs throughout to provide maximum strength

- Tether straps between housing and mounting plate facilitate installation
- Cutouts provided in housing for surface conduit attachment
- Suitable for wall or ceiling mount applications
- Universal J-box mounting pattern
- Keyhole mounting slots

Battery

- Sealed Lead Calcium, recombination
- Nickel Cadmium Battery (CC3NC)
- Maintenance-free, long-life
- Full recharge time: 24 hrs. (max.)
- Polarized battery terminals

Code Compliance

- UL 924 Listed
- UL Damp Location Listed (CC5.SD only)

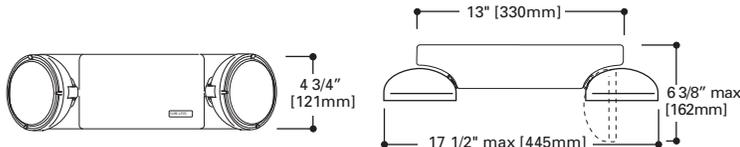
- Life Safety NFPA 101
- CSA Certified
- NEC/OSHA
- Most State and Local Codes

Warranty

- Exit: 1-year
- Lead Acid Battery: 5-year pro-rata
- Nickel Cadmium Battery: 15-year pro-rata

Head/Lamp Data

- Two heads standard
- PAR 36 type heads
- Glare-free lens
- Fully adjustable lamp housing
- High impact polycarbonate
- Matches housing finish
- Optional square and MR16 heads available

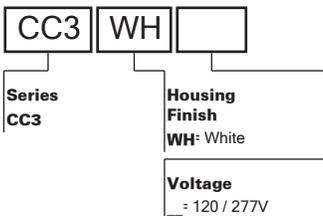


ELECTRICAL RATINGS

Model	Rated Wattage to 87 1/2% of Rated D.C. Voltage					Lamp Information			
	DC Voltage	1 1/2 Hours	2 Hours	3 Hours	4 Hours	Type	Wattage	Number	Spacing ³⁾
CC3	6	10.8	7.2	-	-	Incandescent	5.4	29-121	18.5'
CC3NC ¹⁾	6	16	-	-	-	Incandescent	5.4	29-121	18.5'
CC3	6	10.8	-	-	-	MR16	5	29-139	18.0'
CC4	6	18	15	10	8	Incandescent	9	29-84	22.0'
CC4	6	18	15	10	8	MR16	9	29-145	35.0'
CC4NC ¹⁾	6	18	-	-	-	Incandescent	9	029-84	22.0'
CC5	6	27	24	18	14	Incandescent	9	29-84	22.0'
CC5	6	27	24	18	14	MR16	9	29-145	35.0'
CC5NC ¹⁾	6	24	-	-	-	Incandescent	9	029-84	22.0'
CC6	6	32	-	-	-	Incandescent	9	29-84	22.0'
CC6	6	32	-	-	-	MR16	9	29-145	35.0'

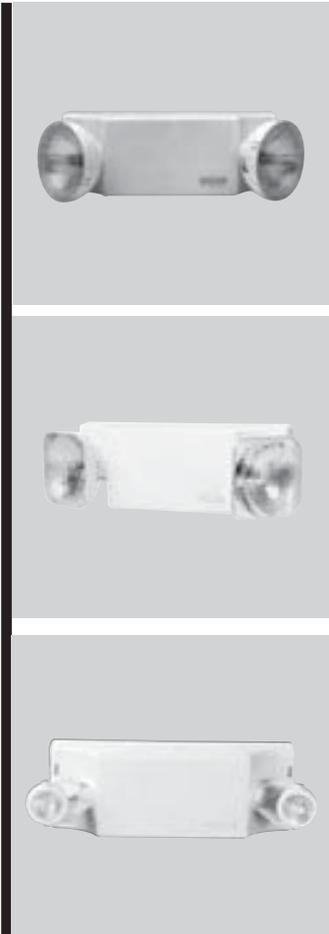
ORDERING INFORMATION

CC3WH2146



2-5.4w KRYPTON WEDGE
BASE 6 VOLT LAMPS

Notes: 1 Add as a suffix. 2 Consult your Cooper Lighting Representative for alternate lamps and additional options. 3 Order separately.



**CC
SERIES**

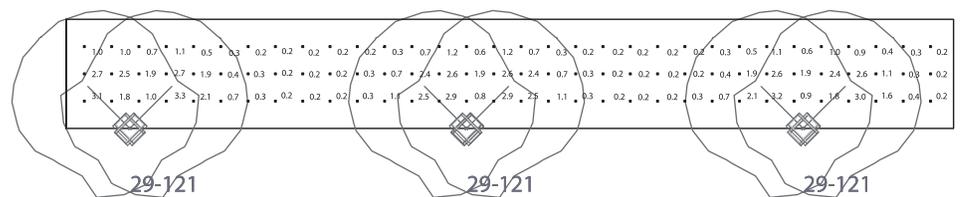
**SEALED LEAD
CALCIUM BATTERY,
NICKEL CADMIUM BATTERY
Emergency Lighting**

TOTALLY PREDICTABLE
RELIABILITY

ENERGY DATA

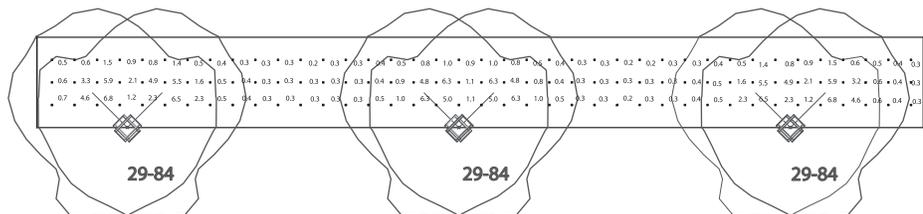
Model CC3	Model CC5
Input Current (Max.): 120V = .12A	Input Current (Max.): 120V = .13A
277V = .05A	277V = .06A
347V = .01A	347V = .06A
Model CC4	Model CC6
Input Current (Max.): 120V = .12A	Input Current (Max.): 120V = .13A
277V = .05A	277V = .06A
347V = .01A	347V = .06A

PHOTOMETRICS



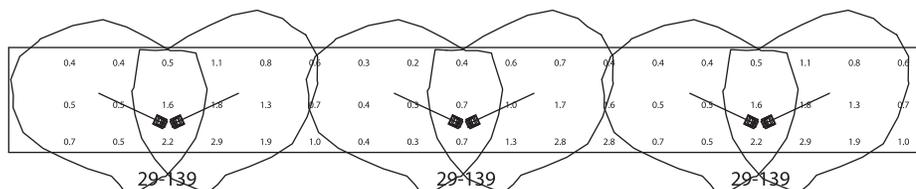
29-121 18.5' Spacing Illuminance Values (Fc) Average=1.01 Maximum=3.3 Minimum=0.2 Avg/Min Ratio=5.05 Max/Min Ratio=16.50

For Standard Fixture: CC3, CC3NC



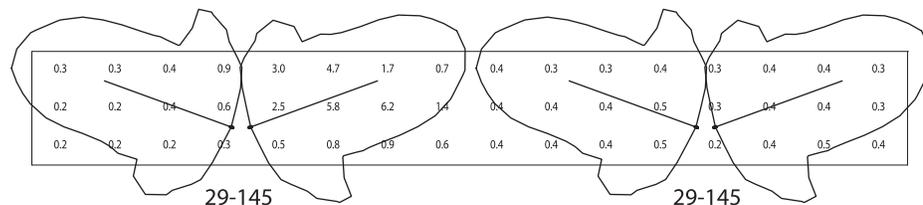
29-84 22' Spacing Illuminance Values (Fc) Average=1.55 Maximum=6.8 Minimum=0.2 Avg/Min Ratio=7.75 Max/Min Ratio=34.00

For Standard Fixture: CC4, CC5, CC6



29-139 18.0' Spacing Illuminance Values (Fc) Average=1.00 Maximum=2.9 Minimum=0.2 Avg/Min Ratio=4.95 Max/Min Ratio=14.50

For Standard Fixture: CC3MRT



29-145 35' Spacing Illuminance Values (Fc) Average=1.11 Maximum=7.8 Minimum=0.2 Avg/Min Ratio=5.55 Max/Min Ratio=39.00

For Standard Fixture: CC4MRT, CC5MRT, CC6MRT

NOTE

The "Rule of Thumb" spacing guidelines are designed to achieve 1 foot-candle average and 0.1 foot-candle minimum with a 40:1 maximum/minimum ratio. The corridor used is 100 feet long, 9 foot ceiling with a 6 foot wide walkway and 3 foot path of egress. The reflectances are 80% ceiling, 50% walls and 20% floors. The fixture mounting height is 7.5 feet with a lamp head angle of 45 degrees. Cooper Lighting assumes no responsibility for local requirements or specific project variables. This is a guideline to be used as a design aid, not as guarantee of any code compliance.

TECHNICAL DATA

Lamps

Designed specifically for emergency lighting applications, the PAR 36 type design insures optimum glare-free trapezoidal light distribution along with horizontal and vertical adjustment by rotating the lens within the housing.

Housing Construction

Rugged, durable, injection molded polycarbonate materials are used throughout the CC Series Emergency Lighting Units. All structural components are designed with reinforcing ribs to add additional rigidity and to maximize structural integrity. These materials are impact and scratch resistant,

and they have been UV stabilized to resist discoloration due to age and ultraviolet radiation. All components are designed to be of snap-fit construction - no mechanical fasteners - to facilitate installation in under 2-minutes. The housing contains hidden tearouts for surface conduit attachment. The housing is tethered to the mounting plate freeing both hands to make electrical connections. The mounting plate has keyhole mounting slots and a universal mounting pattern for quick, efficient installation.

Any components required for installation (wirenuts, wire leads, etc.) are all included with each unit. All CC Series Units are suitable for wall or ceiling mount applications.

TECHNICAL DATA

Line-Latched

Sure-Lites' line-latched electronic circuitry makes installation easy and economical. A labor efficient AC-activated load switch prevents the lamps from turning on during installation to a non-energized AC circuit. Line-latching eliminates the need for a contractor's return to a job site to connect the batteries when the building's main power is permanently turned on.

Solid-State Charger

Supplied with a 120/277 VAC, voltage regulated solid-state charger. Immediately upon restoration of AC current after a power failure, the charger provides a high charge rate. The charge circuit reacts to the condition of the battery and alters the rate of charge in order to maintain peak battery capacity and maximize battery life. Solid-state construction recharges the battery following a power failure in accordance with UL 924.

Overload and Short Circuit Protection

The solid-state overload monitoring device in the DC circuit disconnects the lamp load from the battery should excessive wattage demands be made and automatically resets when the overload or short circuit is removed. This overload current protective feature eliminates the need for fuses or circuit breakers for the DC load.

Brownout Circuit

The brownout circuit in Sure-Lites units monitors the flow of AC current to the unit and activates the emergency lighting system when a predetermined reduction of AC power occurs. This dip in voltage will cause most ballasted fixtures to extinguish causing loss of normal lighting even though a total power failure has not occurred.

Solid-State Transfer

The unit incorporates a solid-state switching transistor which eliminates corroded and pitted contacts or mechanical failures associated with relays. The switching circuit is designed to detect a loss of AC voltage and automatically energizes the lamps. Upon restoration of the AC power, the emergency lamps will switch off and the charger will automatically recharge the battery.

Low-Voltage Disconnect

When the battery's terminal voltage falls below 80% of the rated voltage, the low-voltage circuitry disconnects the lighting load. The disconnect remains in effect until normal utility power is restored, preventing deep battery discharge.

Test Switch/Power Indicator Light

A test switch permits the activation of the emergency circuit for a complete operational system check. The Power Indicator Light provides assurance that the AC power is on.

Sealed Lead Calcium Battery

The fully sealed, long-life, maintenance-free lead calcium battery is ideal for emergency lighting applications. These recombinant cycle batteries typically provide 8 to 10 years of life and may be operated in any position.

Warranty

All Sure-Lites units are backed by a firm one-year warranty against defect in material and workmanship (excluding lamps). Maintenance-free, long-life, sealed lead calcium batteries carry a five-year pro-rata warranty.

DESCRIPTION

The IMPACT Elite Wedge cutoff wall luminaire makes an ideal complement to site design. Rugged construction and full cutoff classified optics provide facade and security lighting for light restricted zones surrounding schools, office complexes, apartments, and recreational facilities. U.L. and cUL Listed for wet locations in down mount applications and damp locations in up mounted applications.

Catalog #	ISW-150-MP-MT-2S-BK-L	Type	F1
Project		Date	
Comments			
Prepared by			

SPECIFICATION FEATURES

Construction

Two-piece die-cast aluminum housing and removable hinged door frame nests securely for precise tolerance control and repeatability. Hinged door frame inset for clean mating with housing surface and secured via two [2] captive stainless steel fasteners. Optional tamper resistant torx head fasteners [TR] offer vandal resistant access to the electrical compartment. 1/8" clear, heat and impact resistant tempered flat glass lens combined with molded silicone gasket to seal the integrated optical assembly while ensuring peak optical performance.

Electrical

Integral hard mount electrical components are secured and grounded within the die-cast aluminum housing for optimal heat sinking and extended component life. Minimum starting

temperatures are -40°C (-40°F) for HPS and -30°C (-22°F) for MP. Compact fluorescent luminaires feature electronic universal 120-277V high efficiency 50/60Hz ballast with -18°C (-0°F) minimum starting. Available in 50-175W HID or 26-84W CF.

Optical

Premium anodized 95% reflective aluminum optical assemblies provide high efficiency Type II distribution. Optional silk screened house side flat glass shield provides decreased wall brightness. All Impact Elite Wall Series luminaires classify as IESNA full cutoff in downlight applications.

Mounting

Gasketed and zinc plated rigid steel mounting attachment fits directly to 4" j-box or wall with the Impact Elite "Hook-N-Lock" system for fast

installation and mounting in both traditional downlighting [wet location] or inverted uplighting [damp location] mounting positions. Secured via two [2] captive corrosion resistant allen head set screws concealed from view, but accessible from bottom of fixture.

Finish

Housing and door are protected with 5-stage premium TGIC polyester powder coat paint. Premium TGIC powder coat finishes withstand extreme climate changes while providing optimal color and gloss retention over the fixture's installed life. Standard colors include black, bronze, grey, white, dark platinum and graphite metallic. RAL and custom color matches available. Consult McGraw-Edison Architectural Colors Brochure for complete selection.



ISW IMPACT ELITE WEDGE

50 - 175W
Pulse Start Metal Halide
Metal Halide
High Pressure Sodium
26 - 84W
Compact Fluorescent

**FULL CUTOFF
WALL MOUNT LUMINAIRE**



NOTE: In downlight applications only.

TECHNICAL DATA

UL1598 Listed, cUL Listed
25°C Maximum Ambient Temperature
External Supply Wiring 90°C Minimum
Down Mounted—Wet Location
Up Mounted—Damp Location

ENERGY DATA

High Reactance Ballast Input Watts

50W HPS HPF (66 Watts)
50W MP HPF (72 Watts)
70W HPS HPF (91 Watts)
70W MP HPF (90 Watts)
100W HPS HPF (130 Watts)
100W MP HPF (129 Watts)
150W HPS HPF (190 Watts)
150W MP HPF (185 Watts)

CWA Ballast Input Watts

175W MH HPF (210 Watts)

Electronic Ballast Input Watts

26W CF HPF (29 Watts)
32W CF HPF (36 Watts)
42W CF HPF (46 Watts)
52W CF HPF (55 Watts)

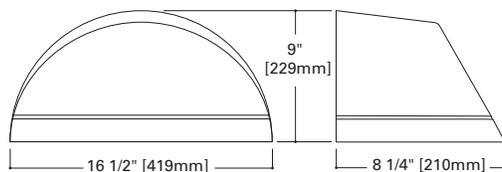
SHIPPING DATA

Approximate Net Weight:
18 lbs. (8 kgs.)



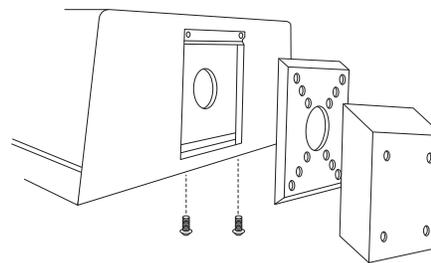
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DIMENSIONS



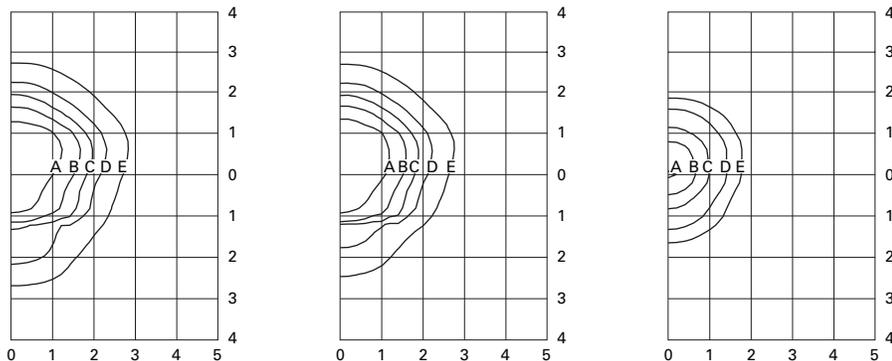
HOOK-N-LOCK MOUNTING

(Mounting attachment included. J-Box not included.)



IMPACT™

PHOTOMETRICS (Complete IES files available at www.cooperlighting.com)



ISW-150-MP-XX-2S
150—Watt MP
14,000—Lumen Clear Lamp

ISW-150-HPS-XX-2S
150—Watt HP
16,000—Lumen Clear Lamp

ISW-42-CF-XX-2S
42—Watt CF
3,200—Lumen Lamp

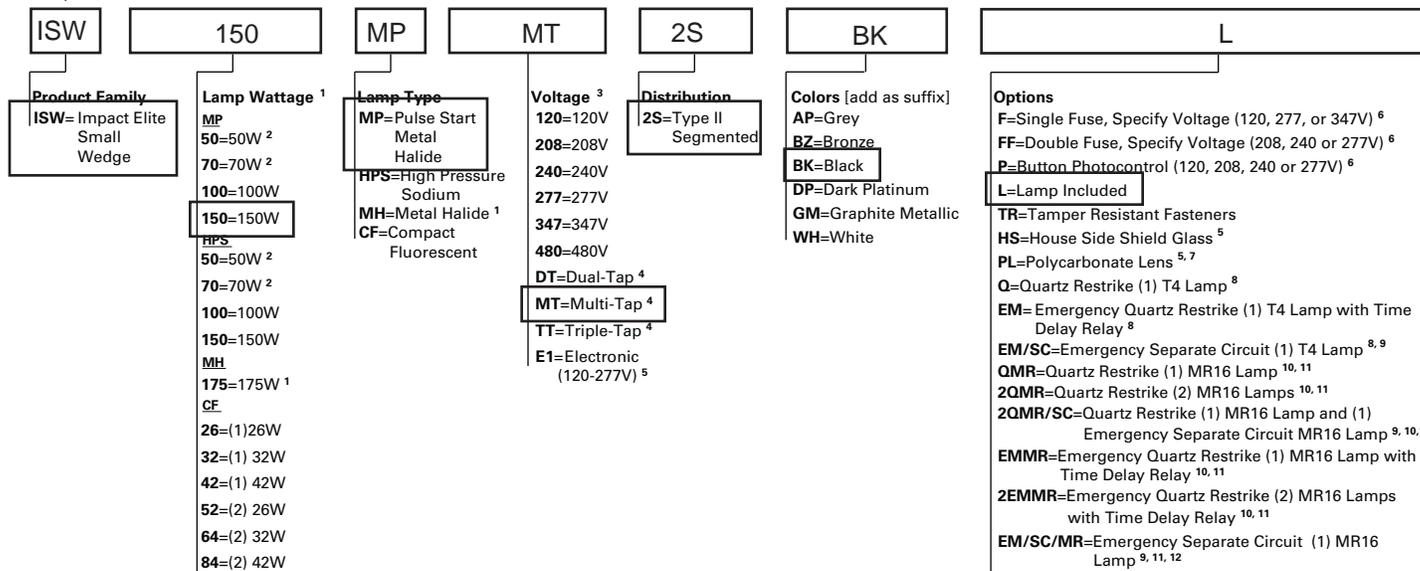
Footcandle Table

Select mounting height and read across for footcandle values of each isofootcandle line. Distance in units of mounting height.

Mounting Height	Footcandle Values for Isofootcandle Lines				
	A	B	C	D	E
150-MP / 150-HPS					
10'	7.20	2.88	1.44	0.72	0.29
12'	5.00	2.00	1.00	0.50	0.20
14'	3.65	1.46	0.73	0.37	0.07
42-CF					
18'	2.46	1.23	0.62	0.25	0.12
20'	2.00	1.00	0.50	0.20	0.10
25'	1.28	0.64	0.32	0.13	0.06

ORDERING INFORMATION

Sample Number: ISW-100-MP-MT-2S-BZ



- Notes: 1 HID lamps are medium base. 175W MH is available for non-U.S. markets only.
2 Not available with 480V.
3 Products also available in non-US voltages and 50HZ for international markets. Consult your Cooper Representative for availability and ordering information.
4 Dual-tap ballast is 120/277V wired 277V. Multi-tap is 120/208/240/277V wired 277V. Triple-tap ballast is 120/277/347V wired 347V.
5 Available with CF Option only. In cold temperatures, compact fluorescent lamps produce lower illumination levels.
6 Must specify voltage.
7 Down lighting position only.
8 (1) 120V Lamp, 100W maximum quartz lamp. Utility power may need to cycle to allow HID lamp to cool in warm climates. Not available with CF Option. Lamp supplied by others.
9 Leads out of the back of the unit to auxillary power.
10 Not available with CF lamps.
11 (1) or (2) 120V Lamps. GU10 base, 50W maximum each. Lamps supplied by others.
12 Not Available with 52, 64, 84 CF wattages.
13 (1) or (2) 12V bi-pin lamp, socket GU5.3 base, 35W maximum. Power supplied by low voltage DC source (supplied by others). Lamps supplied by others.
14 Specify 120 or 277V, (-18°C) minimum temperature.
15 Specify 120 or 277V, (0°C) minimum temperature.

DESCRIPTION

The IMPACT Elite Wedge cutoff wall luminaire makes an ideal complement to site design. Rugged construction and full cutoff classified optics provide facade and security lighting for light restricted zones surrounding schools, office complexes, apartments, and recreational facilities. U.L. and cUL Listed for wet locations in down mount applications and damp locations in up mounted applications.

Catalog #		Type
Project		F2
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Construction

Two-piece die-cast aluminum housing and removable hinged door frame nests securely for precise tolerance control and repeatability. Hinged door frame inset for clean mating with housing surface and secured via two [2] captive stainless steel fasteners. Optional tamper resistant torx head fasteners [TR] offer vandal resistant access to the electrical compartment. 1/8" clear, heat and impact resistant tempered flat glass lens combined with molded silicone gasket to seal the integrated optical assembly while ensuring peak optical performance.

Electrical

Integral hard mount electrical components are secured and grounded within the die-cast aluminum housing for optimal heat sinking and extended component life. Minimum starting

temperatures are -40°C (-40°F) for HPS and -30°C (-22°F) for MP. Compact fluorescent luminaires feature electronic universal 120-277V high efficiency 50/60Hz ballast with -18°C (-0°F) minimum starting. Available in 50-175W HID or 26-84W CF.

Optical

Premium anodized 95% reflective aluminum optical assemblies provide high efficiency Type II distribution. Optional silk screened house side flat glass shield provides decreased wall brightness. All Impact Elite Wall Series luminaires classify as IESNA full cutoff in downlight applications.

Mounting

Gasketed and zinc plated rigid steel mounting attachment fits directly to 4" j-box or wall with the Impact Elite "Hook-N-Lock" system for fast

installation and mounting in both traditional downlighting [wet location] or inverted uplighting [damp location] mounting positions. Secured via two [2] captive corrosion resistant allen head set screws concealed from view, but accessible from bottom of fixture.

Finish

Housing and door are protected with 5-stage premium TGIC polyester powder coat paint. Premium TGIC powder coat finishes withstand extreme climate changes while providing optimal color and gloss retention over the fixture's installed life. Standard colors include black, bronze, grey, white, dark platinum and graphite metallic. RAL and custom color matches available. Consult McGraw-Edison Architectural Colors Brochure for complete selection.



**ISW
IMPACT ELITE
WEDGE**

- 50 - 175W**
- Pulse Start Metal Halide**
- Metal Halide**
- High Pressure Sodium**
- 26 - 84W**
- Compact Fluorescent**

**FULL CUTOFF
WALL MOUNT LUMINAIRE**



NOTE: In downlight applications only.

TECHNICAL DATA

UL1598 Listed, cUL Listed
25°C Maximum Ambient Temperature
External Supply Wiring 90°C Minimum
Down Mounted—Wet Location
Up Mounted—Damp Location

ENERGY DATA

High Reactance Ballast Input Watts

- 50W HPS HPF (66 Watts)
- 50W MP HPF (72 Watts)
- 70W HPS HPF (91 Watts)
- 70W MP HPF (90 Watts)
- 100W HPS HPF (130 Watts)
- 100W MP HPF (129 Watts)
- 150W HPS HPF (190 Watts)
- 150W MP HPF (185 Watts)

CWA Ballast Input Watts

- 175W MH HPF (210 Watts)

Electronic Ballast Input Watts

- 26W CF HPF (29 Watts)
- 32W CF HPF (36 Watts)
- 42W CF HPF (46 Watts)
- 52W CF HPF (55 Watts)

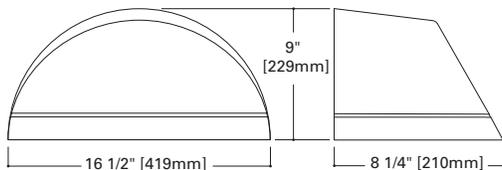
SHIPPING DATA

Approximate Net Weight:
18 lbs. (8 kgs.)



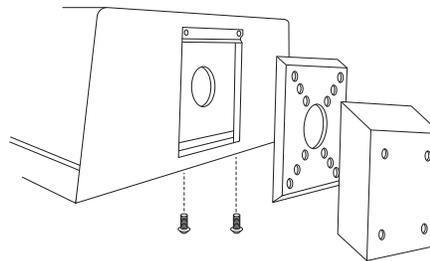
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DIMENSIONS

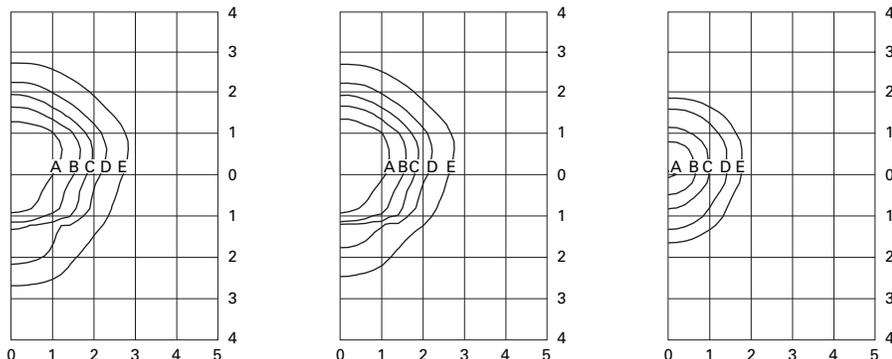


HOOK-N-LOCK MOUNTING

(Mounting attachment included. J-Box not included.)



PHOTOMETRICS (Complete IES files available at www.cooperlighting.com)



ISW-150-MP-XX-2S
150—Watt MP
14,000—Lumen Clear Lamp

ISW-150-HPS-XX-2S
150—Watt HP
16,000—Lumen Clear Lamp

ISW-42-CF-XX-2S
42—Watt CF
3,200—Lumen Lamp

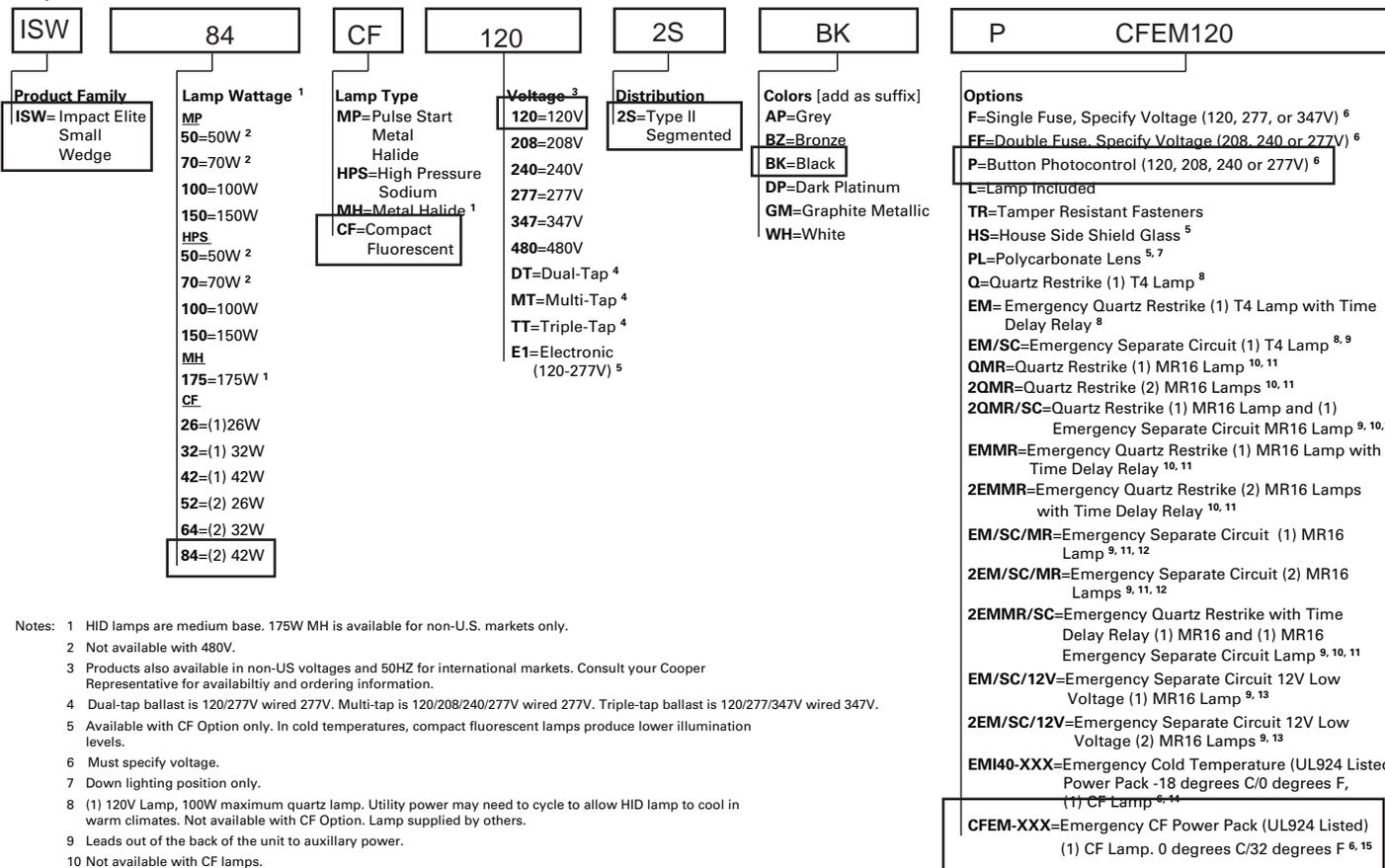
Footcandle Table

Select mounting height and read across for footcandle values of each isofootcandle line. Distance in units of mounting height.

Mounting Height	Footcandle Values for Isofootcandle Lines				
	A	B	C	D	E
150-MP / 150-HPS					
10'	7.20	2.88	1.44	0.72	0.29
12'	5.00	2.00	1.00	0.50	0.20
14'	3.65	1.46	0.73	0.37	0.07
42-CF					
18'	2.46	1.23	0.62	0.25	0.12
20'	2.00	1.00	0.50	0.20	0.10
25'	1.28	0.64	0.32	0.13	0.06

ORDERING INFORMATION

Sample Number: ISW-100-MP-MT-2S-BZ



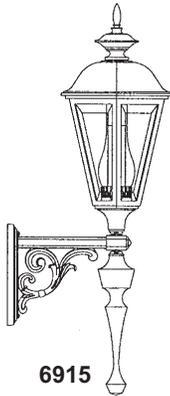
- Notes: 1 HID lamps are medium base. 175W MH is available for non-U.S. markets only.
2 Not available with 480V.
3 Products also available in non-US voltages and 50HZ for international markets. Consult your Cooper Representative for availability and ordering information.
4 Dual-tap ballast is 120/277V wired 277V. Multi-tap is 120/208/240/277V wired 277V. Triple-tap ballast is 120/277/347V wired 347V.
5 Available with CF Option only. In cold temperatures, compact fluorescent lamps produce lower illumination levels.
6 Must specify voltage.
7 Down lighting position only.
8 (1) 120V Lamp, 100W maximum quartz lamp. Utility power may need to cycle to allow HID lamp to cool in warm climates. Not available with CF Option. Lamp supplied by others.
9 Leads out of the back of the unit to auxillary power.
10 Not available with CF lamps.
11 (1) or (2) 120V Lamps. GU10 base, 50W maximum each. Lamps supplied by others.
12 Not Available with 52, 64, 84 CF wattages.
13 (1) or (2) 12V bi-pin lamp, socket GU5.3 base, 35W maximum. Power supplied by low voltage DC source (supplied by others). Lamps supplied by others.
14 Specify 120 or 277V, (-18°C) minimum temperature.
15 Specify 120 or 277V, (0°C) minimum temperature.

6900 / 6600 / 66 HERITAGE

SPECIFICATIONS



6930



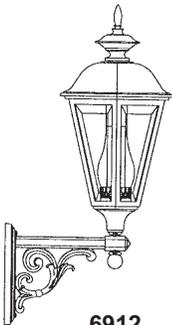
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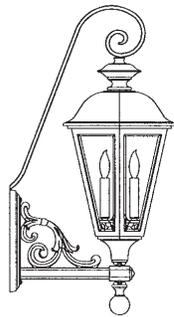
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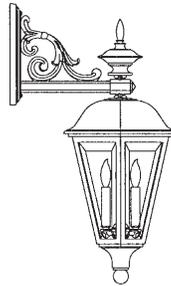
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6912



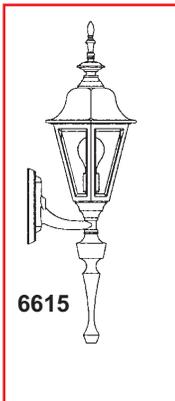
6913



6918



6630



6615



6627



6617



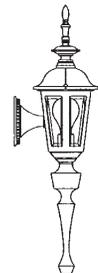
6616



6635



66BU



66LF

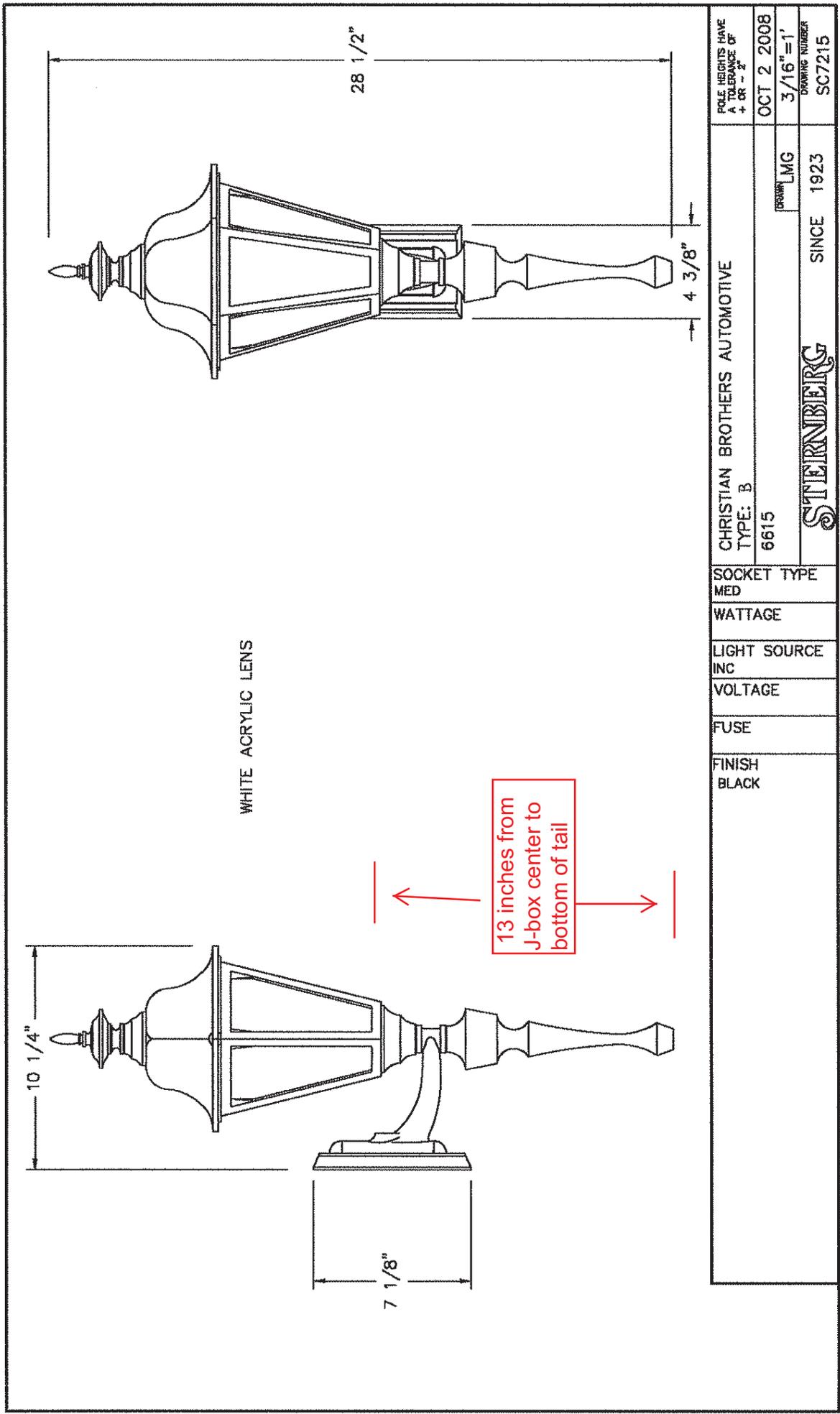
Cat. No.	W	H	Ext.*	Top to Outlet	Max.** INC	Max. HID	Max. CF
6930	13"	27"			200W	100W†	42W†
6915	13"	38"	16 1/2"	26 1/2"	200W	100W††	42W††
6913	13"	30 1/2"	16 1/2"	27"	200W	100W††	32W††
6912	13"	32 1/2"	16 1/2"	26 1/2"	200W	100W††	42W††
6918	13"	30"	16 1/2"	5"	200W	100W††	32W††
6927	13"	65" w/36" chain			200W	100W†	32W†
6935	13"	25 1/2"			200W	100W††	42W††
6630†	10"	19"			100W	50W†	26W†
6615	10"	30"	10 1/2"	15"	100W	50W††	32W††
6616	10"	19"	10 1/2"	15"	100W	50W††	32W††
6617	10"	19 1/2"	10 1/2"	7 1/2"	100W	50W††	32W††
6627	10"	57" w/36" chain			100W	50W††	26W
6635	10"	19"			100W	50W††	26W††
66BU	7"	14"	8"	9"	60W	—	—
66LF	7"	20"	8"	9"	60W	—	—

* Add 2" to 4" depending on Ballast Box requirement.

** 3 Light Cluster is 25 watt max lamp per socket. 66 Series not available with 3 Light Cluster.

† Remote Ballast required if HID or CF. †† Ballast Box required.

66 & 6600 Series not available with Frosted Chimney or Refractor.



CHRISTIAN BROTHERS AUTOMOTIVE TYPE: B 6615		SOCKET TYPE MED	FINISH BLACK
WATTAGE		LIGHT SOURCE INC	FUSE
VOLTAGE		DRAWN LMG	
SINCE 1923		DRAWING NUMBER SC7215	
STERNBERG		OCT 2 2008 3/16"=1"	
ROLE HEIGHTS HAVE A TOLERANCE OF + CR - 2"			



P3569-13

Category: Close-to-Ceiling

Description: Semi-flush ceiling fixture with satin-white glass.

SKU: P3569-13

Category: Close-to-Ceiling

Finish: Brushed Steel

Family: Eclipse

Width/Diameter: 19-3/8"

Height: 13-1/4"

Overall Length:

Wire Length:

Lamp Quantity: Three

Lamp Type: Medium Base

Lamp Wattage: 100w max

Energy Efficient: False

Energy Star Compliant: False

Notes:

DESCRIPTION

Lumark's Vaportight fixtures are designed for heavy-duty, non-corrosive environments. Applications include processing plants, cold storage, foundries, factories, loading docks and retail applications. U.L and CUL listed for non-classified wet locations. For use in 40°C ambient environments.

Catalog #		Type
Project		K
Comments		Date
Prepared by		

SPECIFICATION FEATURES

A ... Housing

Housings and threaded guard are die-cast aluminum. Small housing utilizes 1/2" NPS entry while large housing use 3/4" NPS entry. Standard construction includes thru-way wiring for ceiling and wall mount units. Guard is one piece and features stainless steel locking screw for vandal resistance.

B ... Gasket

Silicone gasket provides long-life vapor seal.

C ... Socket

Sockets are medium-base, porcelain exterior with 150°C wire.

D ... Globe

Globe is heat- and impact-resistant glass and accepts up to 200W incandescent in small housing and 300W incandescent in the large housing.

E ... Mounting

Optional pendant mount, wall or ceiling mounting. Wall mount fits 4" round or octagonal J-Box. Pendant mount utilizes 1/2" NPS for small and 3/4" NPS for large.

F ... Finish

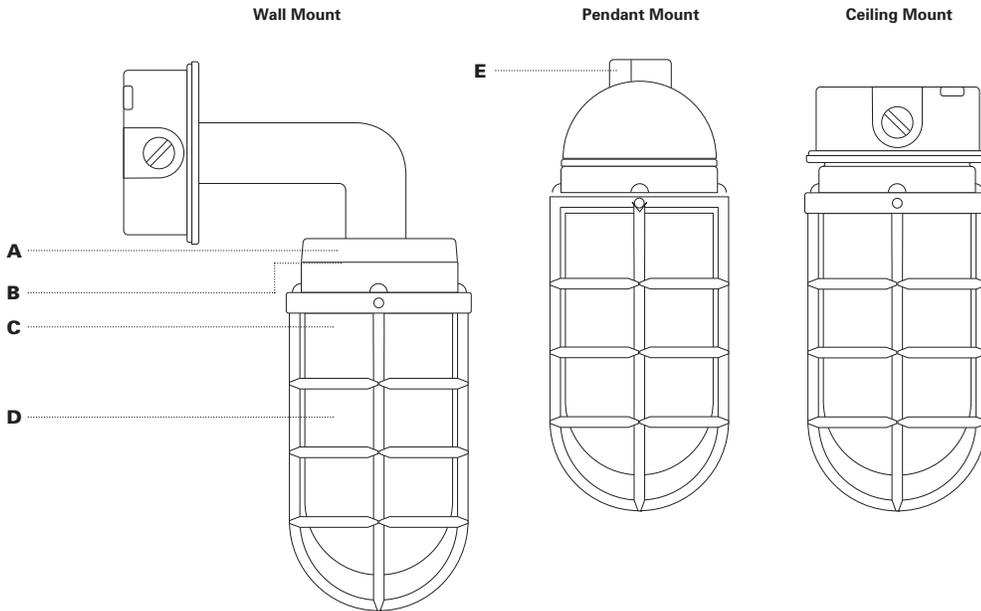
Standard finish is polyester powder coat grey.



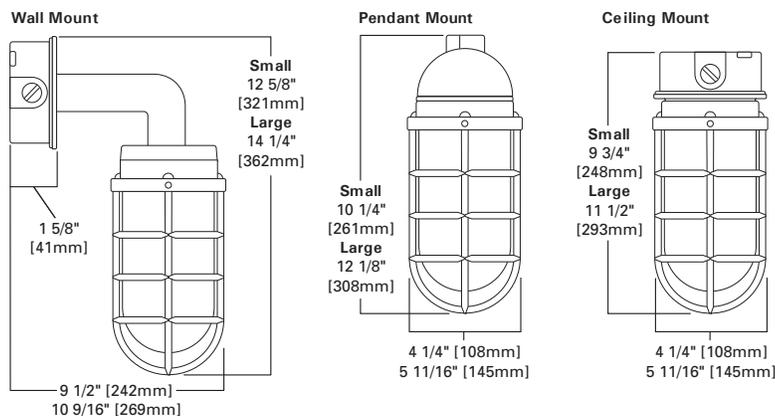
IC VAPORTIGHT

200 - 300W Incandescent

INDUSTRIAL SAFETY AND SECURITY LUMINAIRE



DIMENSIONS



TECHNICAL DATA
40°C Ambient Environment
IP65

SUPPLY WIRE RATINGS
75°C (ICVW1)
90°C (ICVW2)
90°C (ICVP1/ICVP2)
90°C (ICVC1/ICVC2)

SHIPPING DATA
Approximate Net Weight:
5 lbs. (2 kgs.)



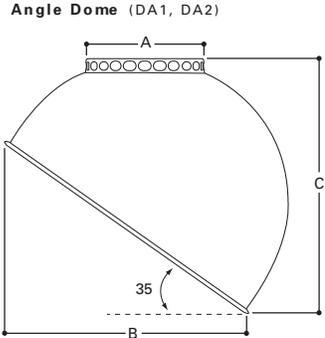
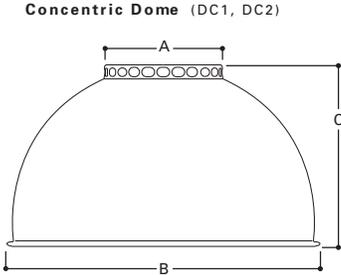
ORDERING INFORMATION

Sample Number: ICVC1G

IC	VC	1	G	
Lamp Type IC: Incandescent	Mounting VC: Ceiling VW: Wall VP: Pendant	Lamp Wattage ¹ 1: 200W ² 2: 300W ³	Guard G: Guard	Accessories ^{4, 5, 6} DC1: Concentric Dome 200 DC2: Concentric Dome 300 DA1: Angle Dome 200 DA2: Angle Dome 300

- Notes:**
- 1 Care must be taken in selecting lamps due to size variations by manufacturers.
 - 2 A21 lamp maximum. Lamp not included.
 - 3 PS30 lamp maximum. Lamp not included.
 - 4 Standard finish is polyester powder coat grey with inside painted white.
 - 5 Guard required to install.
 - 6 Order separately.

ACCESSORIES



Concentric Dome	A	B	C
DC1	4 3/8" [111mm]	11 3/4" [298mm]	6 7/8" [175mm]
Angle Dome	A	B	C
DA1	5 13/16" [148mm]	11 3/16" [285mm]	12 3/4" [324mm]

DESCRIPTION

Recessed 8 inch aperture lens downlight for two horizontal 26W double twin tube or 26/32/42W triple twin tube compact fluorescent lamps. Fixture is suitable for commercial construction and wet location listed. Insulation must be kept 3" from top and sides of housing. Universal input electronic ballast with dimming and emergency options.

Catalog #	PD8H242REM / 82H1GH	Type	L/EM
Project		Date	
Comments			
Prepared by			

SPECIFICATION FEATURES

MECHANICAL

Frame

Boat shaped galvanized steel frame with a pre-set 1/2" plaster lip collar that adjusts from 1/2" to 2" to accommodate ceilings up to 2" thick. May be used for new construction or remodeling installations. Provided with (2) remodel clips to secure frame when installed from below the ceiling.

Mounting Brackets

Bar hanger receivers adjust 2" vertically from above the ceiling or thru the aperture. Use with No Fuss™ bar hangers or with 1/2" EMT. Removable to facilitate installation from below the ceiling.

No Fuss™ Bar Hangers

Pre-installed and centered bar hanger locks to tee grid with a screwdriver or pliers. Centering marks on the bar hanger mechanism allows consistent positioning of fixtures.

OPTICAL

One piece aluminum reflector secures lens in place with integrated spring clips for a visually comfortable optic and allows for tool-less lens exchange from below the ceiling. Available

with clear, diffuse, prismatic, fresnel or drop opal glass lens. Optional cross blade louver provides sharper cutoff to lamp. Self flanged standard.

- **Specular Reflectors** - Polished flange standard with white painted flange option.
- **Baffles and White Reflector** - White painted flange standard.

Trim Retention

Reflector is retained with two torsion springs and held tightly to the finished ceiling surface.

ELECTRICAL

Junction Box

(4) 1/2" and (2) 3/4" trade size pry outs positioned to allow straight conduit runs. Listed for (12) #12 AWG (six in, six out) 90°C conductors and feed thru branch wiring.

Lamp Socket

4-pin G24q base accepts (2) 26W DTT or 26/32/42WTTT lamps.

Socket Housing

Galvanized steel socket housing attached securely to reflector with captive thumbscrew. Vents provide effective lamp thermal management.

Control Gear

Universal 120V - 277V UNV or 347V input electronic ballast for 26/32/42W compact fluorescent lamp.

Emergency Battery Pack

Optional integral 120V/277V, 60Hz battery pack provides 90 minutes of emergency illumination. Long life maintenance free sealed nickel cadmium batteries recharge fully in 24 hours. Prewired remote test switch and indicator light.

Code Compliance

- Thermally protected and cULus listed for wet locations.
- IP44 rated for lens trims.
- NFPA Life Safety (Emergency Battery Pack)
- EMI/RFI per FCC Title 47 CFR, Part 18, non consumer limits
- Peel down wattage label from 42W to 32W and 26W. Allows de-rating to set max. relamp wattage per project specifications.
- High efficacy luminaire may be used to meet IECC, ASHRAE, and Title 24 commercial standards.



PD8H242 82H

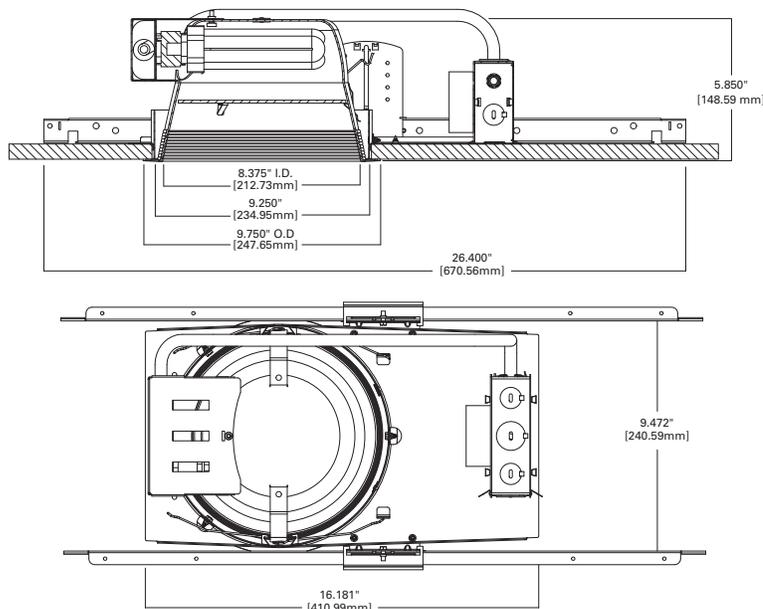
(2) 26W DTT
(2) 26/32/42WTTT

Compact Fluorescent

8-Inch Aperture
Lens Downlight

New Construction or
Remodel
Non-IC

DIMENSIONS



ENERGY DATA

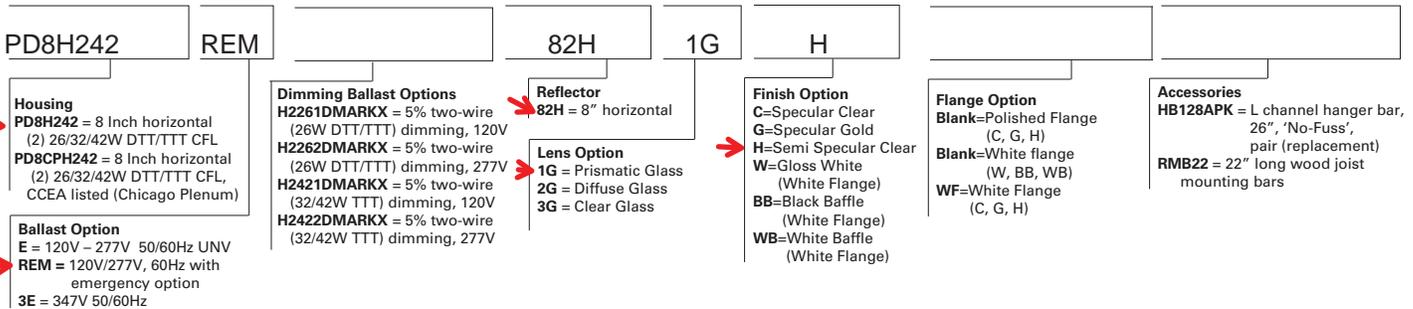
PD8H242E, PD8CPH242E	
MIN. STARTING TEMP -5°F / -20°C	SOUND RATING CLASS A
EMI/RFI EMISSIONS FCC 47CFR PART 18 NON-CONSUMER LIMITS	
INPUT FREQUENCY 50/60 Hz	POWER FACTOR > 0.98
THD < 10%	INPUT VOLTAGE 120V - 277V ±10%
CREST FACTOR < 1.7	
OPERATING FREQUENCY > 40kHz	UL LISTED CLASS P, TYPE 1 OUTDOOR, CSA OR C/UL CERTIFIED
(2) CFQ26W/G24Q	Input Power 54W
	Input Current 0.90A @ 120V
	Input Current 0.40A @ 277V
	Ballast factor 1.02
(2) CFTR26W/GX24Q	Input Power 54W
	Input Current 0.90A @ 120V
	Input Current 0.40A @ 277V
	Ballast factor 1.02
(2) CFTR32W/GX24Q	Input Power 69W
	Input Current 0.90A @ 120V
	Input Current 0.40A @ 277V
	Ballast factor 0.96
(2) CFTR42W/GX24Q	Input Power 94W
	Input Current 0.90A @ 120V
	Input Current 0.40A @ 277V
	Ballast factor 0.95

PD8H2423E	
MIN. STARTING TEMP 0°F / -18°C	SOUND RATING CLASS A
EMI/RFI EMISSIONS FCC 47CFR Part 18 Non-Consumer Limits	
Input Frequency 50-60Hz	Power Factor > 0.98
THD < 10%	Input Voltage 347VAC ±10%
Crest factor < 1.6	
Operating Frequency 50-60 kHz	cULus Certified
(2) CFQ26W/G24q	Input Power 44W
	Input Current 0.14A @ 347V
	Ballast factor 1.02
(2) CFTR26W/GX24Q	Input Power 44W
	Input Current 0.14A @ 347V
	Ballast factor 1.02
(2) CFTR32W/GX24q	Input Power 62W
	Input Current 0.19A @ 347V
	Ballast factor 1.00
(2) CFTR42W/GX24q	Input Power 80W
	Input Current 0.25A @ 347V
	Ballast factor 0.98

ORDERING INFORMATION

SAMPLE NUMBER: PD8H242E 82H1GC

Order housing, reflector and lamp separately for a complete luminaire.



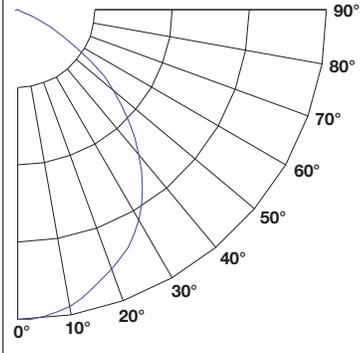
PHOTOMETRY

PD8H242E-82H1GC_32TTT

Spacing Criteria = 1.10
Lumens per Watt = 46 LpW
Test No. P31216

Test Model: PD8H242E-82H1GC_32TTT

Candlepower Distribution Curve



Candela Distribution	
Degrees Vertical	Candela
0*	1729
5	1711
15	1571
25	1351
35	1089
45	770
55	433
65	117
75	2
85	0
90	0

*CBCP

Luminance	
(Average Candela/M ²)	
Degree	Avg. 0° Luminance
45	25888
55	16835
65	5594
75	129
85	0

Cone of Light Footcandles			
Distance to Illuminated Plane	Initial Nadir Footcandles	Beam (ft.)	
		L Length	W Width
5.5'	57	5.9	6.5
7'	35	7.6	8.3
8'	27	8.6	9.4
9'	21	9.7	10.6
10'	17	10.8	11.8
12'	12	13	14.2
14'	9	15.1	16.5

Beam diameter is to 50% of maximum footcandles, rounded to the nearest half-foot.
Footcandle values are initial, apply appropriate light loss factors where necessary.

Zonal Lumen Summary			
Zone	Lumens	% Lamp	% Fixture
0-30	1261.03	26.30	39.70
0-40	1983.13	41.30	62.40
0-60	3035.89	63.20	95.50
0-90	3177.94	66.20	100.00

Note: Specifications and Dimensions subject to change without notice.

Visit our web site at www.cooperlighting.com

COOPER LIGHTING - METALUX®

DESCRIPTION

The 2HB series is an outstanding solution for high mounting height industrial or retail applications. The 2HB optic has been optimized to provide maximum performance from either the T5 or T8 lamps. Optional uplight component is provided to enable excellent ceiling uniformity. 2HB's high lumen package allows the benefits of fluorescent to be applied at high mounting heights that were traditionally exclusive to H.I.D. The primary benefits include exceptional color rendering, high system efficacy, 95% lumen maintenance, long lamp life, instant on/instant re-strike, economical dimming, and uniform brightness control. Primary applications include retail, shopping malls, light industrial, gymnasiums and recreational environments.

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

A...Construction

Full bodied steel housing utilizes captive fasteners to protect optical assembly and assure structural integrity. The housing features an integral ballast channel that adds strength and provides numerous KO's for easy installation. Center access plate location allows for easy access to ballast leads on all new and retrofit projects regardless of mounting type.

B...Electrical

Class "P" ballasts are positively secured by mounting bolts. Pressure-lock lampholders. Optional modular power receptacle meets UL2459 and NEC 410.73 and is UL/cUL rated for make and break under load from outside the luminaire to speed maintenance. UL/CUL listed. Suitable for damp locations. Thermally optimized for environments up to 149°F (65°C) when used with high temperature ballasts in an open uplight configuration.

C...Finish

White enamel finish preceded by a multistage cleaning cycle, iron phosphate coating with rust inhibitor to protect against contaminants and oxidation.

D...Downlight/Uplight Optics

Die formed reflectors are faceted with two optical distributions -medium and wide. Medium beam optical modules utilize 95% specular aluminum while the wide distribution utilizes a high performance 95% reflective polyester powder coated finish. Gasketed door frame & lens assembly is optional for more demanding environments. Uplight option provided to enable ceiling uniformity.

Mounting

The 2HB series is suited for surface, suspension mounting with optional wire hook and chain set, stem or cable mounting.

Options

Integral Occupancy Sensor available and provides from 600 sq. ft. (MS) up to 1250 sq. ft. (MSO) of coverage in a maximum mounting height of 40'.



F-BAY 2HB SERIES

2' x 4' High-Bay
6 Lamp

HIGH-BAY INDUSTRIAL
LUMINAIRE



ENERGY DATA

Input Watts:

EB Ballast
632 = 169W

EB/Plus Ballast
632 = 221W

ER Ballast
632 = 169W
654 = 346W

ER/Plus Ballast
632 = 218W

Luminaire Efficacy Rating

LER = 66 (White)

LER = 69 (Specular)

Catalog Number: 2HB-632-UPL

Yearly Cost of 1000 Lumens,
3000 hrs. at .08 KWH = \$3.47

* Reference the lamp/ballast data in the Technical Section for specific lamp/ballast requirements

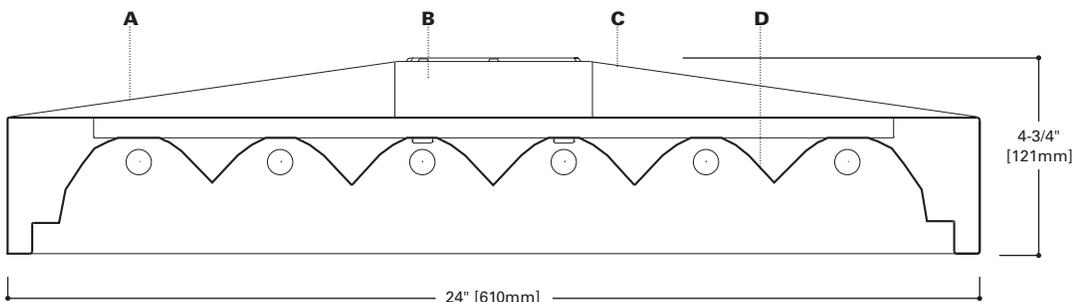
** Consult Pre Sales Technical Support.

LAMPS CONTAIN MERCURY. DISPOSE ACCORDING TO LOCAL, STATE OR FEDERAL LAWS

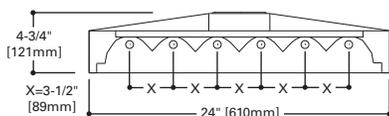
LINEAR DISCONNECT

Safe and convenient means of disconnecting power.

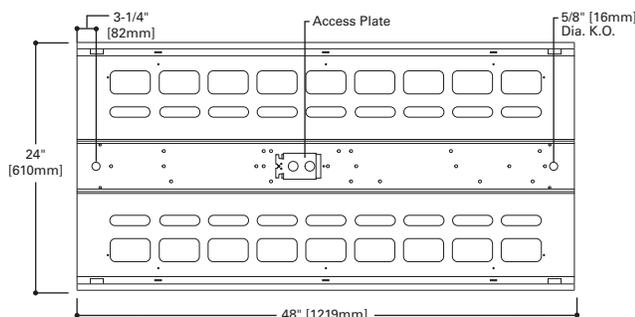
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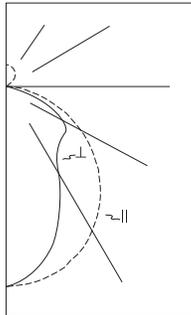
LAMP CONFIGURATIONS



DIMENSION TOP VIEW



PHOTOMETRICS



2HB-632-UNV-EB82-UPL
 Electronic Ballasts
 (6) 32W T8 Lamps
 2850 lumens
 Spacing criterion:
 (II) 1.3 x mounting
 height, (⊥) 1.0 x
 mounting height
 Efficiency 96%
 Test Report:
 2HB632UNVEB82UPL.IES
 LER =85
 Yearly Cost of 1000
 lumens, 3000 hrs at
 .08 KWH = \$2.82

Candela			
Angle	Along II	45°	Across ⊥
0	7471	7471	7471
5	7431	7377	7326
10	7335	7100	6834
15	7171	6590	5978
20	6937	5851	5097
25	6641	5104	4372
30	6286	4365	3919
35	5864	3816	3455
40	5389	3367	3079
45	4865	2897	2652
50	4303	2499	2408
55	3694	2070	2246
60	3070	1808	2131
65	2422	1628	1887
70	1767	1395	1544
75	1134	1068	1110
80	571	650	712
85	144	246	199
90	9	13	15

Coefficients of Utilization

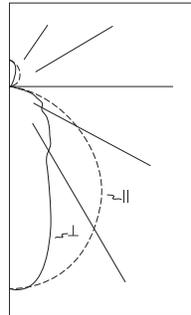
rc rw RCR	Effective floor cavity reflectance																																									
	80%							70%							50%							30%							10%							0%						
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0															
0	113	113	113	113	109	109	109	109	103	103	103	98	98	98	92	92	92	90																								
1	103	99	95	91	100	96	92	89	91	88	85	86	84	82	82	80	78	76																								
2	94	87	80	75	91	84	79	74	80	75	71	76	72	69	72	69	66	64																								
3	86	77	69	63	83	75	68	62	71	65	60	68	63	58	64	60	57	54																								
4	79	68	60	54	77	67	59	53	63	57	52	61	55	51	58	53	49	47																								
5	73	61	53	47	71	60	52	46	57	51	45	55	49	44	52	47	43	41																								
6	68	56	47	41	66	54	47	41	52	45	40	50	44	39	48	43	39	37																								
7	63	51	43	37	61	50	42	37	48	41	36	46	40	35	44	39	35	33																								
8	59	46	39	33	57	46	38	33	44	37	32	42	36	32	41	35	31	29																								
9	55	43	35	30	54	42	35	30	41	34	29	39	33	29	38	32	29	27																								
10	52	40	32	28	50	39	32	27	38	31	27	36	31	27	35	30	26	25																								

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0-30	4989	29.2	30.4
0-40	7631	44.6	46.5
0-60	12278	71.8	74.9
0-90	15392	90.0	93.8
0-180	16403	95.9	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	9147	5049	4647
55	8328	4207	4597
65	7088	4118	4920
75	4942	3725	3928
85	1306	1453	1206



2HB-654T5-UNV-EBT2-UPL
 (2) Electronic Ballasts
 (6) F54T5/HO 830
 54W Lamps
 4400 lumens
 Spacing criterion:
 (II) 1.2 x mounting
 height, (⊥) 1.0 x
 mounting height
 Efficiency 95.7%
 Test Report:
 2HB654T5UNVEBT2UPL.IES
 LER =73
 Yearly Cost of 1000
 lumens, 3000 hrs at
 .08 KWH = \$3.28

Candela			
Angle	Along II	45°	Across ⊥
0	10464	10464	10464
5	10404	10564	10640
10	10257	10682	10692
15	10016	10409	10055
20	9674	9747	9020
25	9245	8877	7674
30	8740	7708	6161
35	8131	6429	4792
40	7461	5079	4255
45	6705	3961	3966
50	5881	3449	3714
55	5009	3093	3414
60	4101	2773	3120
65	3174	2416	2936
70	2284	2105	2808
75	1439	1888	2227
80	711	1277	1370
85	156	409	286
90	9	4	10

Coefficients of Utilization

rc rw RCR	Effective floor cavity reflectance																																									
	80%							70%							50%							30%							10%							0%						
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0															
0	113	113	113	113	109	109	109	109	103	103	103	98	98	98	93	93	93	90																								
1	103	99	95	91	100	96	92	89	91	88	85	86	84	82	82	80	78	76																								
2	94	86	80	75	91	84	78	73	80	75	71	76	72	68	72	69	66	64																								
3	86	76	69	63	83	74	67	62	71	65	60	67	63	58	64	60	57	54																								
4	79	68	60	54	77	66	59	53	63	57	52	61	55	51	58	53	49	47																								
5	73	61	53	47	71	60	52	46	57	51	45	55	49	44	53	48	43	41																								
6	68	56	47	41	66	54	47	41	52	45	40	50	44	39	48	43	39	37																								
7	63	51	43	37	61	50	42	37	48	41	36	46	40	35	44	39	35	33																								
8	59	46	39	33	57	46	38	33	44	37	33	42	36	32	41	35	31	29																								
9	55	43	35	30	54	42	35	30	41	34	30	39	33	29	38	33	29	27																								
10	52	40	32	28	50	39	32	27	38	31	27	37	31	27	35	30	26	25																								

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0-30	7884	29.9	31.2
0-40	11985	45.4	47.5
0-60	18923	71.7	74.9
0-90	23788	90.1	94.2
0-180	25252	95.7	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	12576	6871	6917
55	11257	6246	6945
65	9246	6057	7435
75	6225	6501	7783
85	1392	2362	1695

Modular F-Bay Power Supply

Cooper Lighting's F-Bay Modular Power Supply option allows external fixture access for safe and easy servicing. There is no need to remove lamps or reflectors to disconnect fixture power with F-Bay Modular Power Supply. Access to the individual fixtures power supply allows servicing without turning off all the fixtures disrupting occupants. F-Bay Modular Power Supply is a time saver in installation – simply plug & power.



1. Modular Power Supply Receptacle supplied mounted into fixture Access Plate.
2. Modular Power Cord & Plugs in 120, 277, 347, & 480V configurations for easy plug & power into existing supply.

No internal fixture access required for installation or disconnecting power.

Modular Motion Sensor Option supplied with Mounting Box and Modular Power Supply Receptacle.

Code Compliance

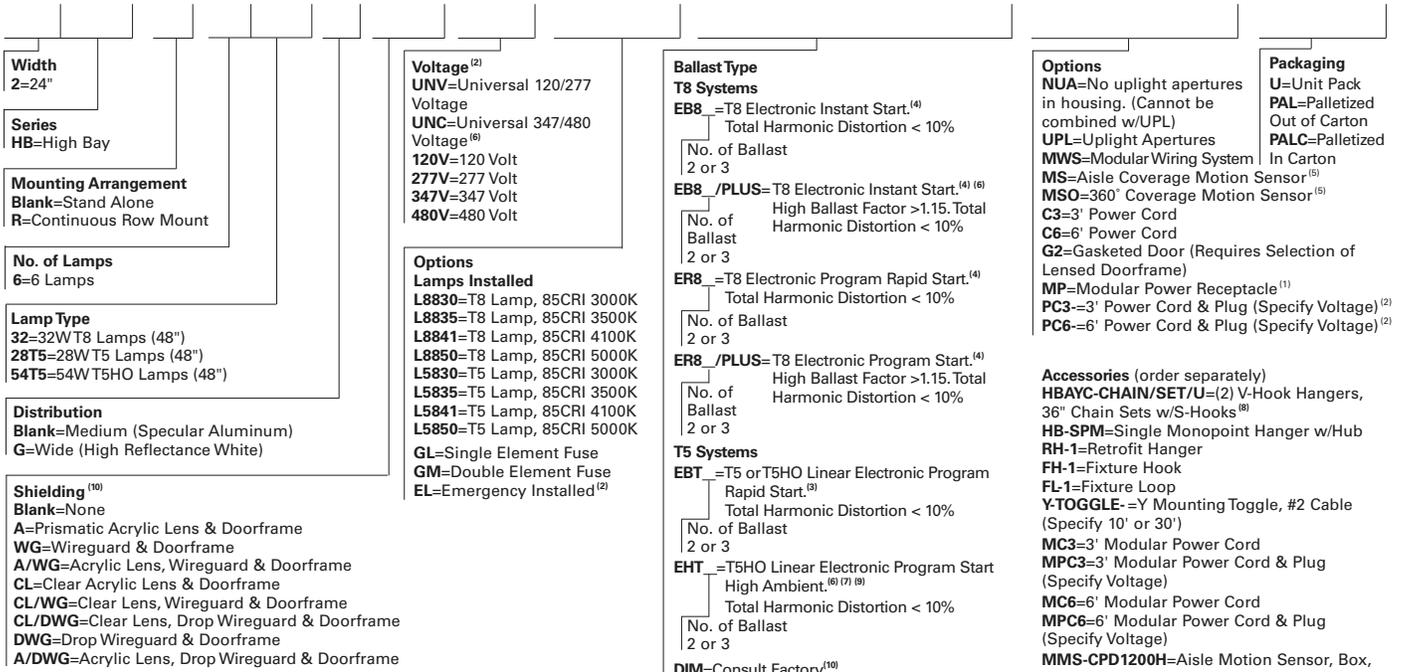
- UL/cUL Certified for Make/Break under load (UL2549)
- Meets NEC requirements for ballast disconnect (NEC 410.73G)
- Allows for addition of Occupancy Sensor without hard connections
- Receptacles complete with insulating dustcap

SHIPPING INFORMATION

Catalog No.	Wt.
2HB-632-G-120V-UPL	27 lbs.
2HB-654T5-120V-UPL	27 lbs.

ORDERING INFORMATION

SAMPLE NUMBER: 2HB-632-A-UNV-EB82/PLUS-UPL-U



NOTES: ⁽¹⁾Requires use of MC_ or MPC_cord accessories, specify voltage for plugs. ⁽²⁾Voltage must be specified when ordered with plugs, motion sensor or emergency ballasts. ⁽³⁾EBT ballast systems suitable for operation in ambient environments up to 104°F (40°C) in open upright configuration. ⁽⁴⁾ER8 and EB8 ballast systems suitable for operation in ambient environments up to 122°F (50°C) in open upright configuration. ⁽⁵⁾Specify voltage. ⁽⁶⁾2 lamp ballast configurations only for T5 UNC versions. 2/3 lamp ballast configurations in EB8/PLUS only for T8 UNC versions. ⁽⁷⁾EHT/HT5/HCT5 ballast systems suitable for ambient environments not to exceed 149°F (65°C) in open upright configurations and less lens option. ⁽⁸⁾Use in high abuse applications such as gymnasiums. ⁽⁹⁾Lensed 6-Lamp T5HO luminaire must use High Ambient ballast option (EHT). ⁽¹⁰⁾Dimming ballast must be specified at time of order.

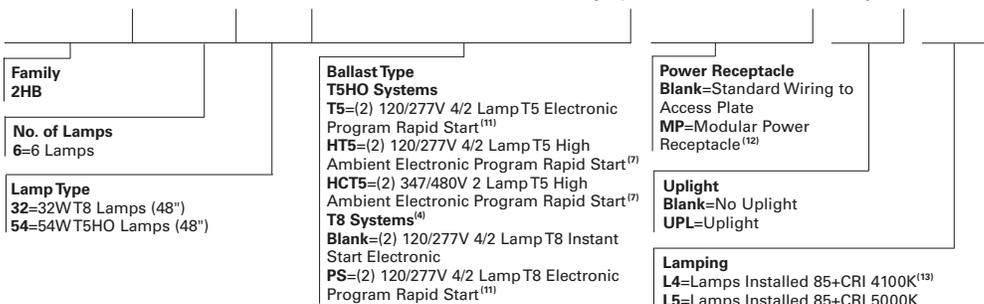


Quick Ship Ordering Information Sample Number: 2HB632PS-MP-UPL-L5

Quick Ship orders ship in 5 days in order quantities not to exceed 200 pieces.

NOTE: Orders received after noon are entered on the following day.

Includes V Hangers for rapid installation



NOTES: ⁽¹¹⁾Recommended when utilizing Motion Sensor option. ⁽¹²⁾Requires use of Modular cord and plug accessories. ⁽¹³⁾High lumen (3100 initial) T8 lamps supplied.

COOPER LIGHTING - METALUX®

DESCRIPTION

The SSF Series is a functional and multi-purpose standard strip family that incorporates premium performance and construction durability. Designed with our easy-to-use Flip-Up socket design, the SSF significantly reduces installation time. The performance and application versatility of this series can be increased by incorporating symmetrical or asymmetrical reflectors. The SSF Series can be installed using various mounting methods and numerous options and accessories are available. The SSF Series can be the illumination solution in commercial, industrial, retail and residential applications. Fixtures can be used in storage/utility areas, coves, display cases, shops, task and general area lighting.

Catalog #		Type
Project		R
Comments		Date
Prepared by		

SPECIFICATION FEATURES

A... Construction

Channel die cold rolled steel with numerous KOs for ease of installation. Groove for Tong Hanger. End plate quickly converts to snap-in channel connector for continuous row alignment. Lamp holder bracket flips in place. Channel/wireway cover secured with quarter-turn fasteners.

B... Electrical*

Ballasts are CBM/ETL Class "P" and are positively secured by mounting bolts. Rotor Lock lampholders. UL/CUL listed. Suitable for damp locations.

C... Finish

Multistage iron phosphate pretreatment ensures maximum bonding and rust inhibitor. Lighting upgrade and silver enamel finish. Prepainted material is standard, PAF optional.

D... Channel/Wireway Cover

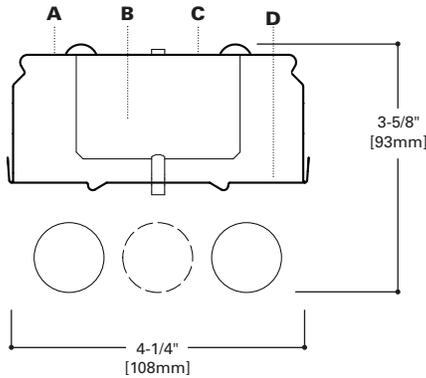
Die formed heavy gauge steel. Tight fit for ease of maintenance. Easily removed without use of tools. Optional reflector available incorporating silver technology enhancements (Silver Lining). Consult Pre Sales Technical Support.



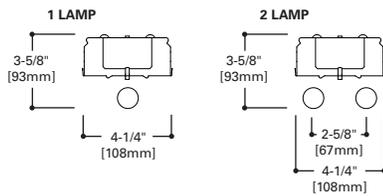
SSF
 117, 125
 128T8
 132, 217, 225
 228T8
 232
 328T8
 332

2', 3' OR 4' STRIP
 1, 2 OR 3 T8 LAMPS

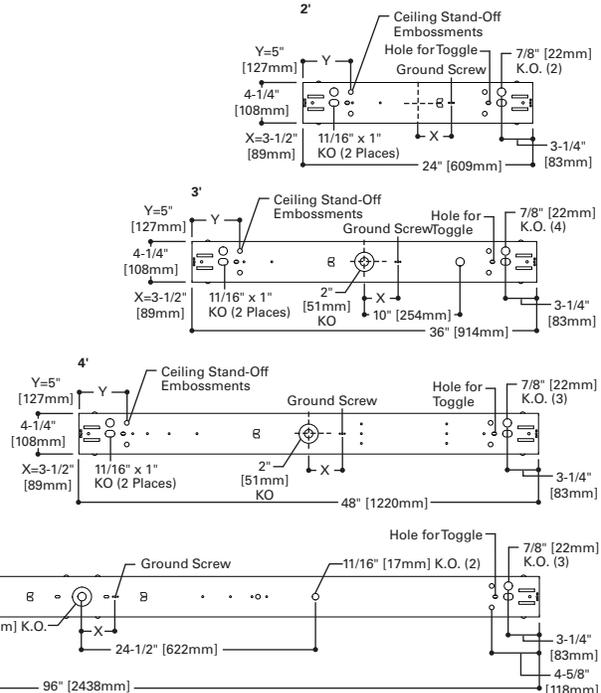
Standard Striplite



LAMP CONFIGURATIONS



MOUNTING DATA



ENERGY DATA

Input Watts:
EB Ballasts Normal Ballast Factor
 117 (20), 217 (34), 125 (23),
 128T8 (25), 132 (28), 225 (53),
 228T8 (49), 232 (58)
EB Ballasts Low Ballast Factor
 125 (21), 128T8 (22), 132 (25),
 225 (40), 228T8 (44), 232 (48)

Luminaire Efficacy Rating
LER = FS-88
Catalog Number: SSF-232

Yearly Cost of 1000 lumens,
3000 hrs at .08 KWH = \$2.73

(*Reference the lamp/ballast data in the Technical Section for specific lamp/ballast requirements.)

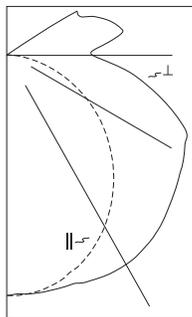
LAMPS CONTAIN MERCURY. DISPOSE ACCORDING TO LOCAL, STATE OR FEDERAL LAWS

LINEAR DISCONNECT
 Safe and convenient means of disconnecting power.



ADF081661

PHOTOMETRICS



SSF-228T8
Electronic Ballast
F28T8-SP35-UMX-ECO Lamps
2750 Lumens
Spacing criterion: (II) 1.3 x mounting height, (L) 1.5 x mounting height
Efficiency 86.2%
Test Report: SS232.IES
LER = FS95
Yearly Cost of 1000 lumens, 3000 hrs at .08 KWH = \$2.53

Candlepower

Angle	Along II	45°	Across L
0	929	929	929
5	927	928	927
10	916	925	928
15	896	914	927
20	869	899	936
25	834	888	945
30	792	876	949
35	742	860	946
40	687	837	934
45	627	808	915
50	561	771	889
55	492	727	866
60	418	675	845
65	340	632	818
70	261	598	775
75	181	554	674
80	106	443	568
85	41	340	453
90	5	234	349

Coefficients of Utilization

rc	Effective floor cavity reflectance																	
	80%			70%			50%			30%			10%			0%		
rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	99	99	99	99	95	95	95	95	88	88	88	81	81	81	75	75	75	73
1	88	83	78	74	84	79	75	71	73	69	66	67	64	62	62	60	58	55
2	79	70	63	57	75	67	61	56	62	57	52	57	53	49	52	49	46	43
3	71	61	53	46	67	58	51	45	53	47	42	49	44	40	45	41	37	35
4	64	53	45	38	61	51	43	37	47	40	35	43	38	33	40	35	31	29
5	59	47	38	32	56	45	37	31	42	35	30	38	33	28	35	31	27	24
6	54	42	34	28	51	40	33	27	37	31	26	34	29	24	32	27	23	21
7	50	38	30	24	48	36	29	23	34	27	22	31	26	21	29	24	20	18
8	46	34	26	21	44	33	26	21	31	24	20	28	23	19	26	22	18	16
9	43	31	24	19	41	30	23	18	28	22	18	26	21	17	24	20	16	14
10	40	29	22	17	39	28	21	17	26	20	16	24	19	15	23	18	14	13

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0-30	758	13.8	16.0
0-40	1291	23.5	27.2
0-60	2533	46.1	53.5
0-90	3988	72.5	84.2
90-180	751	13.6	15.8
0-180	4739	86.2	100.0

ORDERING INFORMATION

SAMPLE NUMBER: SSF-232-UNV-EB81-U

SSF 2 32 UNV OS-QHE2X32T8ISNSC

Tandem
Blank=2', 3' or 4' Length
8T=8' Length

Series
SSF=Commercial Standard Striplite

Number of Lamps
(Not Included)
1=1 Lamp
2=2 Lamps
3=3 Lamps⁽¹⁾

Wattage
17=17W T8 (24")
25=25W T8 (36")
28T8=28W T8 (48")⁽²⁾
32=32W T8 (48")

Voltage⁽²⁾
120V=120 Volt
277V=277 Volt
347V=347 Volt
UNV=Universal Voltage 120-277

Options⁽²⁾
GL=Single Element Fuse
GM=Double Element Fuse
EL4=Emergency Installed^{(4) (5)}

Ballast Type⁽²⁾
EB8 =T8 Electronic Instant Start.
Total Harmonic Distortion < 10%
No. of Ballast
1 or 2
EB8_/PLUS= T8 Electronic Instant Start.
High Ballast Factor >1.13.
Total Harmonic Distortion < 10%
No. of Ballast
1 or 2
ER8 =T8 Electronic Program Rapid Start.
Total Harmonic Distortion < 10%
No. of Ballast
1 or 2
ER8_/PLUS= T8 Electronic Program Start.
High Ballast Factor >1.13.
Total Harmonic Distortion < 10%
No. of Ballast
1 or 2

Options
RIF1=Radio Interference Suppressor
6-3/18 SJT-C&P-515P=Cord & Plug (120V) (15 AMP)⁽⁶⁾
6-3/18 SJT-C&P-L715P=Cord & Plug (277V) (15 AMP)⁽⁶⁾
PI/CPI=Plug-In Option⁽⁶⁾
TILW=Tandem In-Line Wiring Option (Consult TILW Option Catalog Page)⁽⁶⁾

Packaging
U=Unit Pack
4B=4 Bulk Packing (48" and 96")

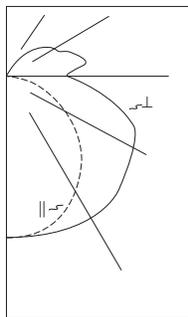
ACCESSORIES

(Order Separately)
A1B/Spacer-U=Spacer 1-1/2" to 2-1/2" from ceiling (Use 2 Per Fixture)
GRP-SSF=Gripper Hanger (Use 2 Per Fixture)
AYC-Chain/Set=36" Chain Hanger (Use 1 Set Per Fixture)
SCF=Fixed Stem Set (Specify Length)
SCS=Swivel Stem Set (Specify Length)
SCA=Adjustable 48" Stem Set
CLC-SSF=Long Channel Connector SSF
SSF-ASY-4⁽³⁾=3" Asymmetric Reflector (Specify 2', 3', or 4')
SSF-REV-4⁽³⁾=3" Asymmetric Reverse Reflector SSF (Specify 2', 3', or 4')
SSF-SYM-4⁽³⁾=6" Symmetric Reflector Specify (2', 3' or 4')
ICF-4FT-REFL=12" Symmetric Reflector
WG/SSF-2FT=2' Wire Guard
WG/SSF-3FT=3' Wire Guard
WG/SSF-4FT=4' Wire Guard
TOGGLE=Single Toggle NO. 2 (Specify Length)
Y-TOGGLE=Y Toggle NO. 2 (Specify Length)

SHIPPING INFORMATION

Catalog No.	Wt.
SSF-117	7 lbs.
SSF-217	7 lbs.
SSF-125	9 lbs.
SSF-225	9 lbs.
SSF-128T8	9 lbs.
SSF-228T8	9 lbs.
SSF-132	7 lbs.
8TSSF-132	16 lbs.
SSF-232	9 lbs.
8TSSF-232	20 lbs.

(Additional Accessories Available. See Options and Accessories Section.)



SSF-232
Electronic Ballast
FO32T8 Lamps
2900 Lumens
Spacing criterion: (II) 1.3 x mounting height, (L) 1.6 x mounting height
Efficiency 91.6%
Test Report: SS232.IES
LER = FS-88
Yearly Cost of 1000 lumens, 3000 hrs at .08 KWH = \$2.73

Candlepower

Angle	Along II	45°	Across L
0	1017	1017	1017
5	1007	1010	1021
10	949	985	1030
15	857	951	1042
20	738	906	1029
25	588	830	978
30	422	727	920
35	252	632	834
40	104	456	601
45	0	253	393
50	0	320	518
55	0	246	430
60	0	199	353
65	0	131	263
70	0	69	167
75	0	17	76
80	0	1	7
85	0	0	0
90	0	0	0

Coefficients of Utilization

rc	Effective floor cavity reflectance																	
	80%			70%			50%			30%			10%			0%		
rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	105	105	105	105	100	100	100	100	92	92	92	84	84	84	77	77	77	74
1	93	87	83	78	88	84	79	75	76	73	70	70	67	64	64	61	59	56
2	83	74	67	61	79	71	65	59	65	60	55	59	55	51	54	51	47	44
3	75	64	56	49	71	62	54	48	56	50	45	51	46	42	47	42	39	36
4	68	56	48	41	65	54	46	40	49	43	37	45	39	35	41	36	32	30
5	62	50	41	35	59	48	40	34	44	37	32	40	34	30	37	32	28	25
6	57	44	36	30	54	43	35	29	39	32	27	36	30	26	33	28	24	22
7	53	40	32	26	50	38	31	25	35	29	24	33	27	22	30	25	21	19
8	49	36	28	23	47	35	27	22	32	26	21	30	24	20	27	22	19	17
9	46	33	25	20	44	32	25	20	30	23	19	27	22	18	25	20	17	15
10	43	30	23	18	41	29	22	18	27	21	17	25	20	16	23	18	15	13

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0-30	830	14.3	15.6
0-40	1411	24.3	26.6
0-60	2753	47.5	51.8
0-90	4288	73.9	80.7
90-180	1023	17.6	19.3
0-180	5311	91.6	100.0

NOTES: ⁽¹⁾ Available in 28T8 and 32 watt. Requires two ballasts for Tandem option. ⁽²⁾ Products also available in non-US voltages and frequencies for international markets. ⁽³⁾ For SilverLining reflector add SS in Catalog Number, Example: SSF-ASY-SS-4. ⁽⁴⁾ Not available for 2' version. ⁽⁵⁾ For other emergency options specify manufacturer part number and consult the factory for availability (example: EL-FBP240H). ⁽⁶⁾ Socket brackets left uninstalled. ⁽⁷⁾ When utilizing 28W T8 lamps, HPT8 Ballast must be specified. Other ballast restrictions may apply. Consult your Cooper Lighting Representative for availability and ordering information.

Specifications & dimensions subject to change without notice. Consult your Cooper Lighting Representative for availability and ordering information.

COOPER LIGHTING - SURE-LITES®

DESCRIPTION

The LPX Series LED Exit with Heads is an economical, yet attractive, alternative to metal exits. Its contemporary round corner styling, designer white finish, and consistent family appearance enables it to blend with any decor. With an under 5-minute installation time, this is the fastest installed exit on the market today. All components resist discoloration due to age and ultraviolet radiation. Reinforcing ribs, internal molded wireways and snap-fit construction are other key features of the LPX Series Exit with Heads. The LPX Series Exit with Heads is available in universal configurations and have universal mounting capability.

Catalog #		Type
Project		X
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Electrical

- Dual Voltage Input 120/277 VAC, 60 Hz, Isolation Transformer
- Line-Latching
- Solid-state Voltage Limited Charger
- Solid-state Switching
- Brownout Circuit
- Low-Voltage Disconnect
- Overload/Short-Circuit Protection
- Test Switch/Power Indicator Light
- Push-in AC power connectors facilitate installation

Housing Construction

- All components are injection molded, color stable, high impact UL 94-5VA rated, polycarbonate material
- Designer white textured finish standard
- Components are of snap-fit construction to facilitate under 5-minute installation
- Reinforcing ribs throughout to provide maximum strength

- Molded-in wireways facilitate internal wire routing and connections
- All components including battery and electronics are located inside the exit housing
- Snap-out or snap-in chevron directional indicators have full 3/4" stroke
- Knockout provided on housing for surface conduit attachment
- Universal exits can be field configured as single or double face
- Snap-fit canopy with captive mounting screws included with all exits
- Exit can be ceiling, wall, or end mounted
- Universal J-box mounting pattern

Battery

- Sealed Lead Calcium
- Maintenance-Free, Long-Life
- Full recharge time, 24 hours (max.); 48 hours (max.) for LPXH units

Code Compliance

- UL 924 Listed
- Damp Location Listed
- Life Safety NFPA 101
- CSA Certified
- NEC/OSHA
- Most State and Local Codes
- Suitable for Floor Proximity Installation

Warranty

- Exit: 1-Year
- Battery: 5-year pro-rata (Lead Calcium)

Lamp Data

- AC LED: Long-Life LED lamps provide uniform diffused illumination
- DC: LED DC lamps (Brighter in emergency mode)
- Heads DC: 6V, 5.4W incandescent wedge base lamps



LPX SERIES EXITS WITH HEADS

POLYCARBONATE EXIT
SELF-POWERED
EMERGENCY WITH
DOUBLE HEADS
LED LAMPS
Exit Lighting



ENERGY DATA

Standby Mode (Fully charged Battery):
Sealed Lead Calcium Battery

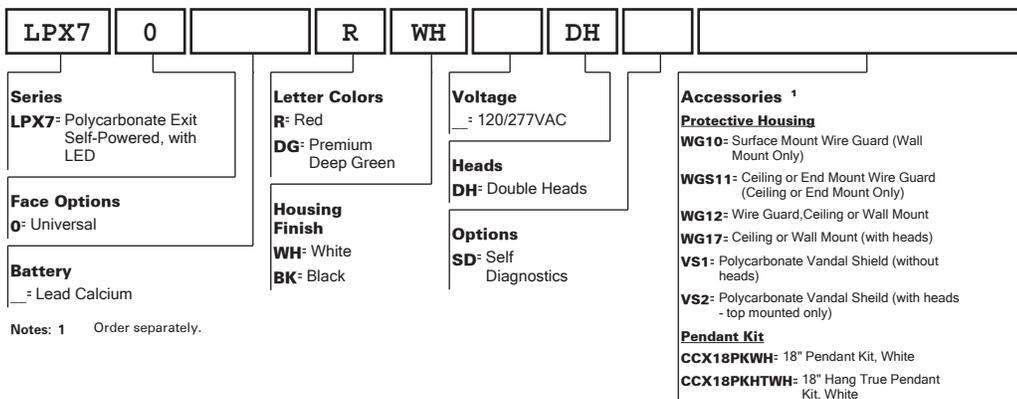
LED Exits - Red
Input Power:
120V = 4.9W
277V = 4.7W
Input Current (Max.):
120V = .07A
277V = .03A
Power Factor:
120V = >.59
277V = >.64
T.H.D.:
120V = <45%
277V = <44%

LED Exits - Premium Deep Green

Input Power:
120V = 3.1W
277V = 2.9W
Input Current (Max.):
120V = .06A
277V = .02A
Power Factor:
120V = >.41
277V = >.44
T.H.D.:
120V = <49%
277V = <53%

Charge Mode (Discharged Battery):
Sealed Lead Calcium Battery
Input Power consumption is increased by approximately 2.7 watts in the charge operating mode for red units and 3.4 watts for green units

ORDERING INFORMATION



Lamps

The LPX Series Exits with Heads use energy efficient, long-life LED's to provide uniform diffuse illumination of the exit face. The low operating costs and zero maintenance requirement makes LED lamps the wisest choice for exit signs today. Emergency exit illumination is provided by LED lamps and the heads employ 6V, 5.4W DC incandescent wedge base lamps.

Housing Construction

Rugged, durable, injection molded polycarbonate materials are used throughout the LPX Series Exits with Heads. All structural components are designed with reinforcing ribs to add additional rigidity and to maximize structural integrity. These materials are impact and scratch resistant, and they have been UV stabilized to resist discoloration due to age and ultraviolet radiation. All components are designed to be of snap-fit construction - no mechanical fasteners - to facilitate installation in under 5-minutes. Any components required for installation (wirenuts, wire leads, universal metal J-box bracket, etc.) are all included with each exit. The universal design of the LPX Series Exits with Heads enables universal exits to be configured as single or double face in the field. The LPX Series Exits with Heads can be wall, ceiling,

or end mounted; a rugged, snap-fit, low profile canopy with captive screws is included with every exit for ceiling and end mounting applications.

Lens

Lenses for the LPX Series Exits with Heads are made from durable impact resistant polycarbonate. All exit faces are designed with full 3/4" stroke snap-out or snap-in chevron directional indicators to insure maximum visibility and compliance with the latest codes.

Line-Latched

Sure Lites' line-latched electronic circuitry makes installation easy and economical. A labor efficient AC activated load switch prevents the lamps from turning on during installation to a non-energized AC circuit. Line-latching eliminates the need for a contractor's return to a job site to connect the batteries when the building's main power is turned on.

Solid-State Charger

Supplied with a 120/277 VAC, voltage regulated solid-state charger. Immediately upon restoration of AC current after a power failure, the charger provides a high charge rate. The charge circuit reacts to the condition of the battery and regulates the charging process in order to maintain peak battery capacity and maximize

battery life. Solid-state construction recharges the battery following a power failure in accordance with UL 924.

Brownout Circuit

The brownout circuit on Sure-Lites' exits monitors the flow of AC current to the exit and activates the emergency lighting system when a predetermined reduction of AC power occurs. This dip in voltage will cause most ballasted fixtures to extinguish causing loss of normal lighting even though a total power failure has not occurred.

Solid-State Transfer

The LPX Series Exits with Heads incorporates solid-state switching which eliminates corroded and pitted contacts or mechanical failures associated with relays. The switching circuit is designed to detect a loss of AC voltage and automatically energizes the lamps using DC power. Upon restoration of AC power, the DC power will be disconnected and the charger will automatically recharge the battery.

Low-Voltage Disconnect

When the battery's terminal voltage falls, the low-voltage circuitry disconnects the lighting load. The disconnect remains in effect until normal utility power is restored, preventing deep battery discharge.

Test Switch/Power Indicator Light

A test switch located on the side of the exit permits the activation of the emergency circuit for a complete operational systems check. The Power Indicator Light provides visual assurance that the AC power is on.

Overload and Short Circuit Protection

The solid-state overload monitoring device in the DC circuit disconnects the lamp load from the battery should excessive wattage demands be made and automatically resets when the overload or short circuit is removed. This overload current protective feature eliminates the need for fuses or circuit breakers for the DC load.

Sealed Lead Calcium Battery

The fully-sealed, long-life, maintenance-free lead calcium battery is ideal for emergency lighting applications. These recombinant cycle batteries typically provide 8 to 10 years of life and may be operated in any position.

Warranty

All Sure-Lites' products are backed by a firm one-year warranty against defects in material and workmanship. Maintenance-free, long-life, sealed lead calcium batteries carry a five-year pro-rata warranty.

