



Com-Tech Construction, Inc. Wind Energy Services, Inc. 17827 Commerce Drive, Westfield, IN

NEW PHASE 2
11,700 sq.ft. BUILD-
ING LOCATION

PROPOSED
COMPENSATED
STORAGE



EXISTING PHASE 1
14,500 sq.ft.
OFFICE/
WAREHOUSE
BUILDING

AERIAL PHOTO FROM HAMILTON CO. GIS, DATED 2008
NOT TO SCALE
NORTH IS UP

KEELER-WEBB ASSOCIATES



Consulting Engineers • Planners • Surveyors

TELEPHONE (317) 574-0140 • FAX (317) 574-1269

486 GRADLE DRIVE

CARMEL, INDIANA 46032

December 23, 2008

Plan Commission Member
City of Westfield
2728 East 171st Street
Westfield, Indiana 46074

Re.: Revised Master Plan for Com-Tech (3.00 Ac. +/-)
17827 Commerce Drive
Alpha Tau Industrial Park
Westfield, Indiana
KWA Project No. 0811-010

PROJECT NARRATIVE

Keeler-Webb Associates is acting as agent surveyor/engineer for Mr. Randy Candler who is the owner/operator for Com-Tech Construction Inc. and Wind Energy Services Inc. for the above project. Com-Tech Construction Inc. provides complete turn-key construction services for the telecommunication companies for installing, maintaining and servicing cellular communications towers in Indiana and the surrounding states. Wind Energy Services, Inc. was just started in 2007 and provides construction services for windmill contractors and/or owners for installing and serving windmill towers and components in Northwestern Indiana.

We are proposing to revise the previously approved master plan for the 3.00 Acre site to include an additional 1,700 sq.ft. of building and 24 new parking spaces. The site is located at the Northeast corner of Commerce Drive and Alpha Drive in Westfield, Indiana. The existing site currently is developed with a 14,500 sq.ft. building and parking. All utilities are available on the site or in the adjacent right-of-way of Commerce Drive.

The Phase 2 proposed site improvements will include a new 11,700 sq.ft. building for Com-Tech Construction Inc. and Wind Energy Services Inc. The Phase 2 proposed site improvements include 24 new parking spaces, underground stormwater storage, and other site improvements. All exterior lighting will be low wattage wall-pack lights with full cut off shields on the building.

The proposed facility is expanding from the existing facility and both businesses will have approximately 3 new on-site employees and several new construction crews operating in the field. This will bring the number of on-site employees to 13 with over 50 employees in the field. The 3.00 Acre site is zoned Enclosed Industrial.

The original master plan for the 3.00 Ac. site reflected a 10,000 sq.ft. future building which was approved in 2005. In 2006, the owner obtained a variance from the Hamilton County Drainage Board to provide for more than adequate compensated cut/fill in the Flood fringe of the Anna Kendall legal drain. Storm water will be collected and conveyed thru storm sewers to the new underground stormwater detention pond. See the attached drainage calculations for the pre-developed and post-developed conditions along with pipe sizing and BMP calculations.

The site and the building size will be well below the minimums required for a traffic study requirements. The proposed use will not change the level of service on Commerce Drive or Alpha Drive. Employee, delivery trucks, and privately owned vehicles will enter the site from the existing entrance on Commerce Drive.

Emergency vehicles will be able to access the site and circulate around the buildings. We would expect this site to have police service provided by the Westfield Police Department. Likewise, this site will have fire and EMS services provided by Westfield Fire Department.

The owner plans on commencing construction once all construction documents have been reviewed and approved by local and state agencies. The owner intends to complete the Phase two construction of the facility by the winter of 2009. The design of the facility will meet requirements set in local and state building codes and will not be a fire hazard to the public.

The installation of this building and parking lot on this site will not negatively impact the local school system, since there are no dwelling units involved in this project. This facility will provide a positive impact on the community by providing jobs and necessary telecommunications infrastructure and "green" energy systems for Indiana and the surrounding states. There is sufficient capacity of all of the utilities available to this site.

This project is being submitted for your review and approval of Development Plan Review for the Master Development Plan revision. If there are any questions or concerns, please do not hesitate to contact us at any time.

Respectfully,

KEELER-WEBB ASSOCIATES



Adam DeHart, LS
Project Manager

AD:ad

NEW OFFICE / STORAGE BUILDING 2

for

COM-TECH CONSTRUCTION, INC.

COMMERCE DRIVE / ALPHA DRIVE
Westfield, Indiana

CONTACTS

HAMILTON CO. SURVEYORS OFFICE

ONE HAMILTON SQUARE
NOBLESVILLE, INDIANA 46060
(317) 776-8499

HAMILTON COUNTY SOIL / WATER

1108 SOUTH 9TH STREET
NOBLESVILLE, IN 46060
(317) 773-2181

WESTFIELD PUBLIC WORKS

UTILITY OFFICE
2706 EAST 171st STREET
WESTFIELD, INDIANA 46074
(317) 896-5452

VERIZON

20905 HAGUE ROAD
NOBLESVILLE, INDIANA 46060
(317) 984-2334

CENERGY

100 SOUTH MILL CREEK ROAD
NOBLESVILLE, INDIANA 46060
(317) 776-5331

SBC

STEVE KREBS
8858 NORTH COLLEGE AVENUE
INDIANAPOLIS, INDIANA 46220
(317) 252-4240

TOWN OF WESTFIELD DEPT. OF COMMUNITY DEVELOPMENT

PERMIT COMPLIANCE / INSPECTION SERVICES
CITY HALL
WESTFIELD, INDIANA 46074
(317) 896-5577

INSIGHT CABLEVISION

PERMIT COMPLIANCE / INSPECTION SERVICES
15229 STONEY CREEK WAY
NOBLESVILLE, INDIANA 46060
(317) 776-0680

CITIZENS GAS OF WESTFIELD

2020 N. MERIDIAN
INDIANAPOLIS, INDIANA 46204
(317) 927-4430

IN DEPT. OF ENVIRONMENTAL MAN.

OFFICE OF WATER MANAGEMENT, STORMWATER GROUP
100 NORTH SENATE AVENUE P.O. BOX 6015
INDIANAPOLIS, INDIANA 46208-6015
(317) 233-1864

TOWN OF WESTFIELD FIRE DEPARTMENT

JM SPELLBRING
17535 DARTOWN ROAD
WESTFIELD, INDIANA 46074
(317) 896-2704

LEGAL DESCRIPTION

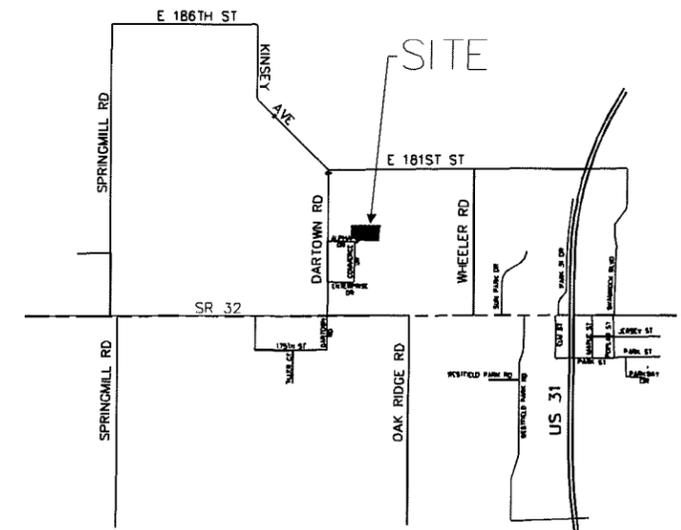
Instrument No. 9809815720
Part of the East Half of the Southeast Quarter of Section 35, Township 19 North, Range 3 East located in Washington Township, Hamilton County, Indiana, being described as follows:

Beginning of the Southwest corner of the East Half of the Southeast Quarter of Section 35, Township 19 North, Range 3 East; thence North 00 degrees 47 minutes 42 seconds East (assumed bearing) 1346.99 feet on and along the West line of said East Half to the centerline of Alpha Drive as said roadway was dedicated by a Street Dedication Agreement recorded as Instrument No. 9809801964; thence South 89 degrees 12 minutes 18 seconds East 424.08 feet on and along said centerline of Alpha Drive to the point of beginning of this description; thence North 00 degrees 59 minutes 28 seconds East 308.93 feet, more or less, to a 5/8" iron rod with yellow cap stamped S0083 that is 990.00 feet South of the North line of said East Half; thence South 89 degrees 50 minutes 34 seconds East 511.22 feet parallel with the north line of said East Half to a point on the centerline of Evan Kendall Regulated Ditch (the following 3 courses are provided for mathematical closure, the actual boundary follows the meanderings of the centerline of the Evan Kendall Regulated Ditch); (1) thence South 02 degrees 52 minutes 22 seconds West 55.62 feet; (2) thence South 13 degrees 41 minutes 29 seconds West 124.97; (3) thence South 00 degrees 59 minutes 00 seconds East 79.33 feet; thence North 89 degrees 12 minutes 18 seconds West 341.71 feet to a 5/8" iron rod with yellow cap stamped S0083; thence South 55 degrees 44 minutes 42 seconds West 97.35 feet to a brass plug at the point of intersection of the center line of Alpha Drive and Commerce Drive; thence North 89 degrees 12 minutes 18 seconds West 58.52 feet to the point of beginning. Containing 3.00 acres, more or less.

SHEET INDEX

- C1 PROPOSED SITE PLAN
- C2 EXISTING TOPOGRAPHY PLAN
- C3 GRADING / DRAINAGE PLAN
- C4 EROSION CONTROL PLAN
- C5 WESTFIELD DETAILS
- C6 SITE and DRAINAGE DETAILS
- C7 STORMWATER POLLUTION PREVENTION PLAN

- L1 LANDSCAPING / EXTERIOR LIGHTING PLAN



VICINITY MAP



PLANS PREPARED FOR:



PLANS PREPARED BY:

KEELER-WEBB ASSOCIATES
Consulting Engineers-Planners-Surveyors

486 GRADLE DRIVE
CARMEL, INDIANA 46032 E-mail: info@keelerwebb.com
PHONE (317) 574-0140 FAX (317) 574-1269
KWA PROJECT No. 0811-010



HOLEY MOLEY SAYS

"DIG SAFELY"



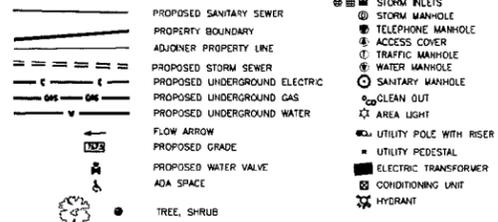
"IT'S THE LAW"

CALL BEFORE YOU DIG

811

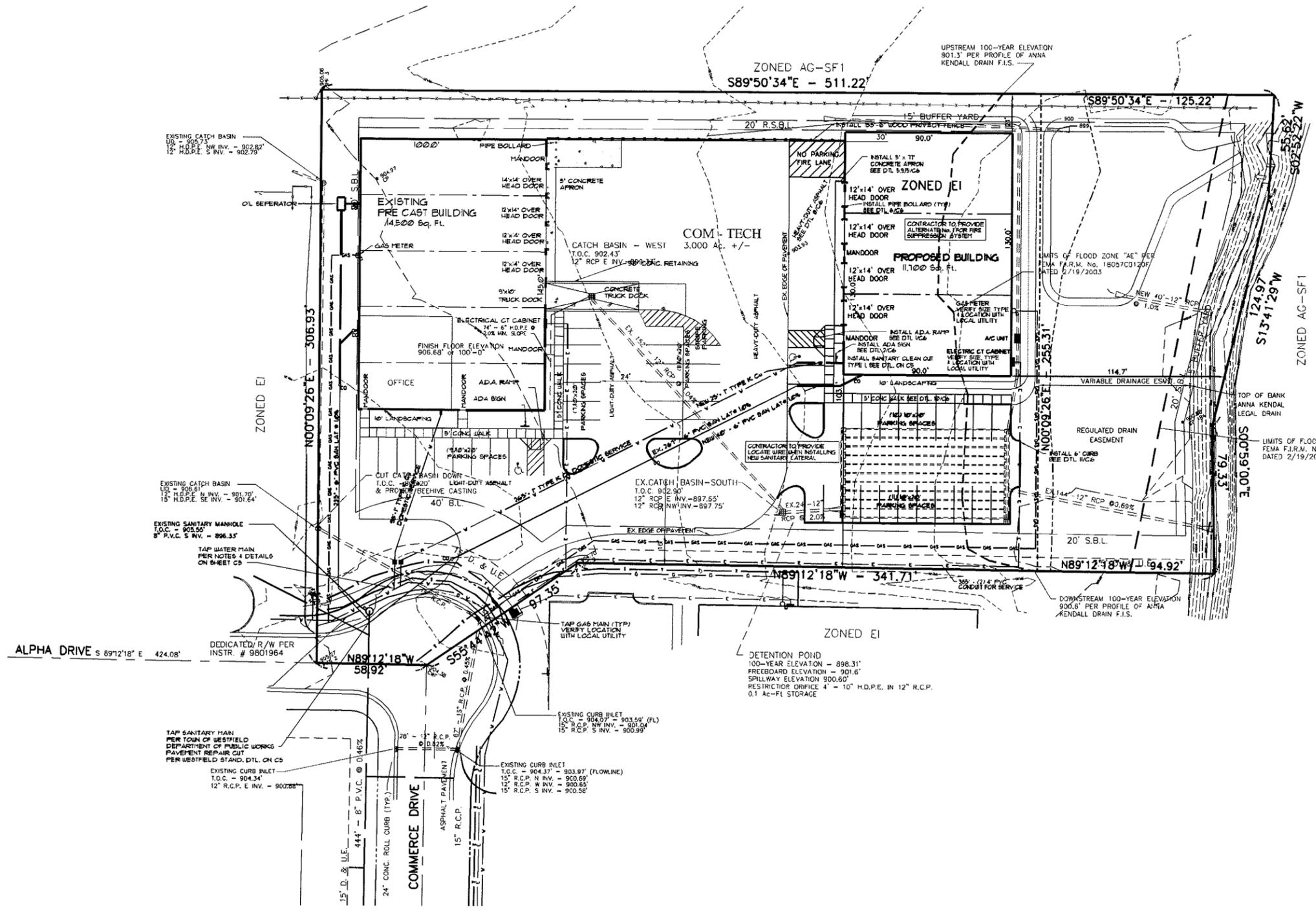
KNOW WHAT'S BELOW
PER INDIANA STATE LAW 32-1-26,
IT IS AGAINST THE LAW TO EXCAVATE
WITHOUT NOTIFYING THE UNDERGROUND
LOCATION SERVICE TWO (2) WORKING
DAYS BEFORE COMMENCING WORK.
CALL 1-800-325-5544 to schedule
a locate request.

PROPOSED LEGEND



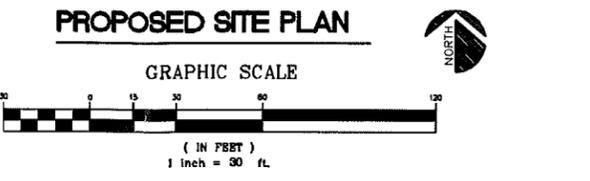
- ASPHALT PAVEMENT SPECIFICATIONS
- The paving contractor shall be responsible for the following:
- The area to be paved shall be cleared of all rock, debris, roots and vegetation. An approved soil sterilant shall be utilized to prevent the growth of weeds.
 - All soft, yielding or other unsuitable materials encountered during any phase of subgrade construction shall be removed and replaced with suitable material. The replacement material shall fill the unstable area for the entire depth of the compacted subgrade and meet the subgrade compaction requirements. The subgrade shall be shaped to the true lines and grade as shown on the plans.
 - The subgrade shall be compacted to 95% laboratory density as determined by ASHTO Method T-99.
 - The subgrade and finish paving shall be tested by an approved testing company for uniform smoothness, density and grade.
 - Slope pavement 0.75% (MIN.) to insure proper surface drainage.
 - The hot mix asphalt based may be placed directly on the prepared subgrade in one lift for the base course to the required compacted thickness as specified in local street standards.
 - The hot mix asphalt base and surface shall be placed in one lift to the true line and grades as shown on the plans. The paving mixture shall be placed and compacted at a temperature between 250 F. (121 C) and 300 F. (149 C).
 - The paving mixture shall be transported to the job site in clean well-covered trucks with smooth dump beds. The base and surface mixtures are to be placed with self contained, power propelled pavers capable of placing the mix to the required dimensions as shown on the plans.
 - Asphalt grade shall be determined by its ability to satisfactory coat the aggregate, resist rutting and remain stiff during high temperatures and sustain freeze/thaw cycles in addition to the considerations of anticipated weather, mixing process and curing rate.
 - See details on Sheet C5 for pavement cross-sections.
 - All proposed asphalt pavement as shown shall be constructed in compliance with INDOT standard specifications, latest edition.
 - All parking striping and ADA areas shall be marked with a durable nonshrink, white paint to be approved by the engineer.

- SITE NOTES
- Site information was taken from Keeler-Webb Ass., dated 02/03/05. It is the contractor's responsibility to verify existing site conditions prior to starting work.
 - The contractor shall be responsible for obtaining or verifying that all permits and approvals are obtained from the respective city, county, and /or state agencies prior to starting construction.
 - The Plumbing contractor shall consult with the Local Water Company, provide all materials and labor, and pay all costs not borne by the Local Water Company to provide any new water service.
 - The Plumbing contractor shall consult with the Local Gas Company, provide all materials and labor, and pay all costs not borne by the Local Gas Company to provide any new gas service.
 - The Electrical Contractor shall consult with the Local Power Company, provide all materials and labor, and pay all costs and fees not borne by the Local Power Company to provide any new underground electrical service.
 - The Electrical Contractor shall consult with the Local Telephone Company, and shall provide all labor and materials required which are not borne by the Telephone Company to provide any new telephone service.
 - Domestic water lateral service shall be Type 'K' Copper. (or approved equal per local water company).
 - The incoming water service shall be installed with a minimum of 54" of cover.
 - All utility service lines shall be constructed in accordance with all the latest applicable codes and to each utility's and/or city's standards.
 - Use compacted granular fill when utility lines are placed under walks and driveways.
 - Soil borings have not been performed at this time. Pavement design is based on an assumed soil bearing pressure of 1500 p.s.i.
 - Provide sleeves for mechanical work as required.
 - Notify Engineer at least 1 day (24 hours) prior to placing any concrete.
 - Areas between curbing, sidewalks, paving and building shall be filled with 4" of topsoil suitable for landscaping.
 - See sheet C2 for exterior concrete specifications.
 - See this sheet for sanitary sewer lateral specifications and requirements.
 - This structure shall comply with A.D.A. 1991.
 - All edge of pavement radii are 5 feet unless otherwise noted.
 - If active utilities are encountered but not shown on the drawings, the engineer shall be advised before work is continued.
 - Inactive and abandoned utilities encountered in excavating and grading operations shall be reported to the engineer. They shall be removed, plugged or capped as directed by the utility company and the engineer.
 - Contractor to install "Knex-Box" at a location adjacent to front door. Coordinate location, type and style with Westfield Fire Department.



SITE DATA

Zoned	EI
Lot area	3,000 Ac. +/-
New Employee parking (10' x 20' spaces)	23
Handicapped parking	1
Proposed parking	24
Building 2 area	11,700 sq. ft.
Minimum Front Yard Setback	40'
Minimum Rear Yard Setback	20'
Minimum Side Yard Setback	20'
Minimum North & East Side buffer Setback	15'



DATE	ISSUE FOR
2-09-05	PRE FILING CONF.
2-16-05	TAC REVIEW
3-07-05	H.C.S.O. REVISIONS
1-04-06	BUILDING 2 REVISIONS
11-10-06	PARKING/DETENTION
2-23-08	TAC REVISIONS

KEELER-WEBB ASSOCIATES
Consulting Engineers-Planners-Surveyors

485 GRADLE DRIVE
CARMEL, INDIANA 46032
PHONE (317) 574-0140
E-mail: adhart@keelerwebb.com
FAX (317) 574-1269

COM-TECH
CONSTRUCTION INC.

PHOTO BY CONTRIBUTION FOR THE RELEASE INFORMATION FROM THE
P.O. BOX 609
WESTFIELD INDIANA 46074

PROPOSED SITE PLAN

NEW OFFICE / WAREHOUSE FACILITY
COM-TECH COMMUNICATION INC.
ALPHA TAU PARK
COMMERCE DRIVE / ALPHA DRIVE
WESTFIELD INDIANA

DRAWN BY: ALD
CHECKED BY: ALD

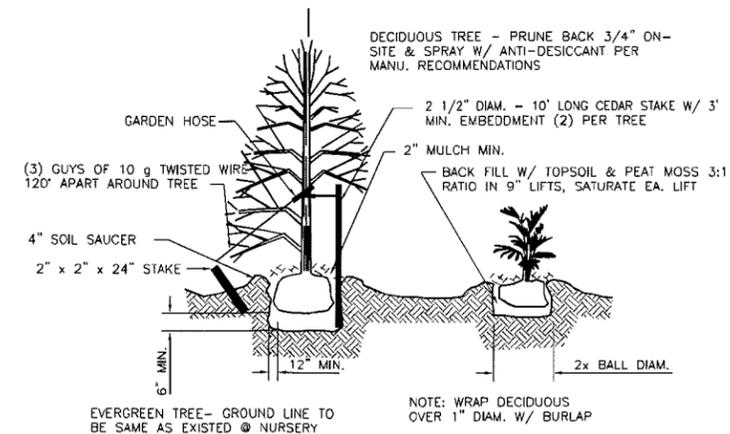
PROJECT No.
0811-010

SHEET No.
C1

EXTERIOR LIGHTING SCHEDULE				
KEY	MANUFACTURER	MODEL	FIXTURE	NOTES
A	LUMARK	LUMARK MHUL-250-MT-LL-FCAL	250 W METAL HALIDE (SINGLE)	MOUNT @ 15'-0" AFF. INCLUDES CUTOFF SHIELD
B	LITHONIA LIGHTING	LITHONIA LIGHTING TLAC-1001-FE-DF-DOB-LP	100 W METAL HALIDE (SINGLE)	MOUNT @ 12'-0" AFF. INCLUDES CUTOFF SHIELD

NOTES:

- CONTRACTOR TO INSTALL ALL EXTERIOR LIGHTING AS NOTED ABOVE PER MANUFACTURERS RECOMMENDATIONS. CONTRACTOR MAY SUBSTITUTE FIXTURES ONLY WITH ENGINEERS APPROVAL.
- SEE ELECTRICAL SHEETS FOR NOTES, RISER DIAGRAM, AND PANELBOARD SCHEDULE.
- PHOTOCELLS SHALL BE PROVIDED FOR ALL OUTDOOR LIGHTING AND SIGNAGE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL STATE AND LOCAL CODES.
- ELECTRICAL CONTRACTOR TO PROVIDE 1" PVC CONTINUOUS CONDUIT FROM ALL GROUND MOUNTED SITE LIGHTING AND COORDINATE CIRCUITING WITH OWNER / GENERAL CONTRACTOR.



NOTES:

- FOR POORLY DRAINED SOILS PLANT ROOT BALL 1/3 ABOVE EXISTING GRADE.
- SLOPE GRADE AWAY FROM ROOTS TO 2x DIAMETER OF ROOT BALL.
- ROOT FLARE TO BE PLANTED @ GROUND LEVEL ON ALL TREES.
- TRUNK WRAP SENSITIVE TREES ONLY.
- WATER TREES WITH 1" OF WATER @ TIME OF PLANTING.
- BACKFILL TO 2x THE DIAMETER OF THE ROOT BALL WITH SUITABLE TOPSOIL.
- REMOVE ALL STRING AND TWINE, ROLL BURLAP DOWN INTO HOLE.
- SLOPE SIDES OF HOLE TO 2x THE ROOT BALL DIAMETER.
- EXCAVATE NECESSARY SOILS TO STABILIZE PLANTING TO PREVENT TIPPING OVER.
- REMOVE ALL STAKES AND WIRES WITHIN ONE YEAR.

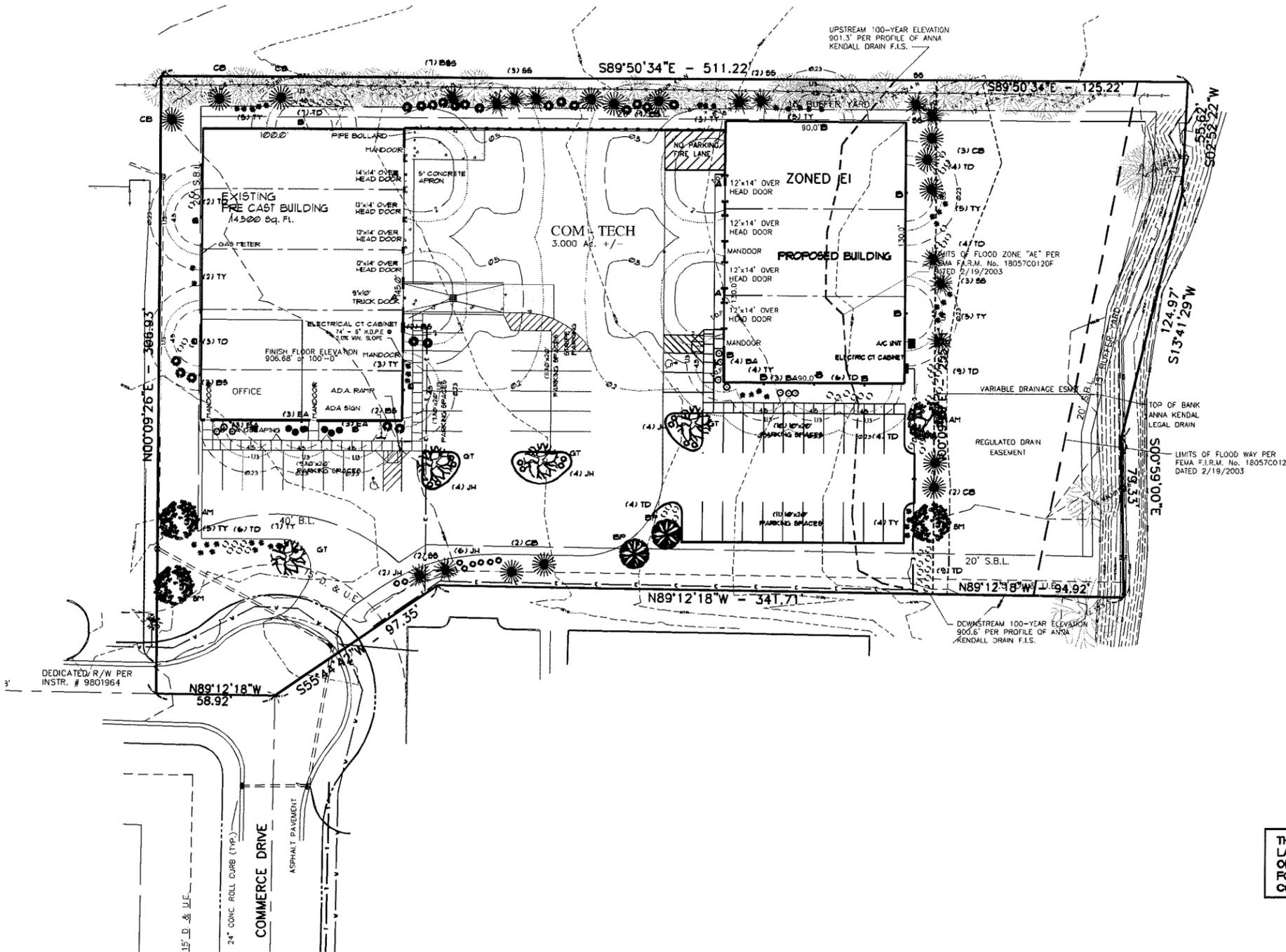
PLANTING DETAILS FOR TREES & SHRUBS

NOT TO SCALE

TREE AND SHRUB PLANTING SCHEDULE						
KEY	SCIENTIFIC NAME	COMMON NAME	SIZE	ROOTING	SPACING	QUANTITY
TD	TAXUS x m 'SPREADING'	DARK GREEN YEWE	18'	BALL + BURLAP	3'	62
TY	TAXUS x m 'DENSIFORMIS'	DENSE YEWE	18'	BALL + BURLAP	3'	46
SB	PICEA OMORICA	SERBIAN SPRUCE	6'	BALL + BURLAP	45 SHOWN	13
BJ	JUNIPERUS SC WICHTA BLUE	UPRIGHT JUNIPER	30" HIGH	BALL + BURLAP	5' oc.	21
CB	PIRUS PUNGENS GLAUCA	COLORADO BLUE SPRUCE	6'	BALL + BURLAP	45 SHOWN	13
GT	GLEDITSIA TRICANTHOS	IMPERIAL HONEYLOCUST	2' cal. 8' HIGH	WIREBALL	45 SHOWN	4
AM	ACER 'BOU HALL'	BOU HALL RED MAPLE	2' cal. 8' HIGH	WIREBALL	45 SHOWN	2
JH	JUNIPERUS HORIZONTALIS	HORIZONTAL YEWE	18'	3 gal.	3' oc.	20
EA	ELIANTHUS ALATUS 'COMPACTA'	DWARF BURNING BUSH	18'	3 gal.	3' oc.	6
BP	PYRUS 'CLEVELAND SELECT'	FLOWERING PEAR 'CLEVELAND SELECT'	2' cal. 8' HIGH	WIREBALL	45 SHOWN	2
BA	BERBERIS L 'AUREA'	GOLDEN BARBERRY	18'	BALL + BURLAP	4' oc.	10
BM	ACER SACCARUM	SUGAR MAPLE	2' cal. 8' HIGH	BALL + BURLAP	45 SHOWN	2

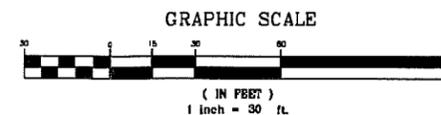
NOTES:

- ALL GREEN AREAS SHALL HAVE A MINIMUM OF 4" OF TOPSOIL. MULCH SEEDING SHALL BE INSTALLED IN SUCH A WAY AS TO NOT ERODE AWAY.
- PLANTING AREAS AND TREE LOCATIONS SHALL HAVE MULCH 3" DEEP (MINIMUM).
- ALL MULCH SEEDING AREAS SHALL BE LOOSENEED TO A MINIMUM DEPTH OF 3" BEFORE FERTILIZER AND SEED ARE INSTALLED.
- ALL TREES SHALL BE STAKED.
- ALL EXTERIOR MECHANICAL EQUIPMENT SHALL BE SCREENED WITH LANDSCAPING.



THIS PLAN TO BE USED FOR LANDSCAPING PURPOSES ONLY. REFER TO OTHER SHEETS FOR ALL DIMENSIONS AND/OR CONSTRUCTION SPECIFICATIONS

LANDSCAPING / EXTERIOR LIGHTING PLAN



DATE	ISSUE FOR
2-16-05	TAC REVIEW
3-07-05	H.C.S.O. REVISIONS
3-14-05	PLAN COMMISSION
1-04-06	REVISED BUILDING 2
1-10-06	PARKING/DEFINITION
2-23-06	TAC REVISIONS

KEELER-WEBB ASSOCIATES
 Consulting Engineers-Planners-Surveyors
 406 GRADE DRIVE
 COBURN, INDIANA 46032
 E-mail: keelerwebb@keelerwebb.com
 PHONE (317) 571-0140 FAX (317) 571-1269

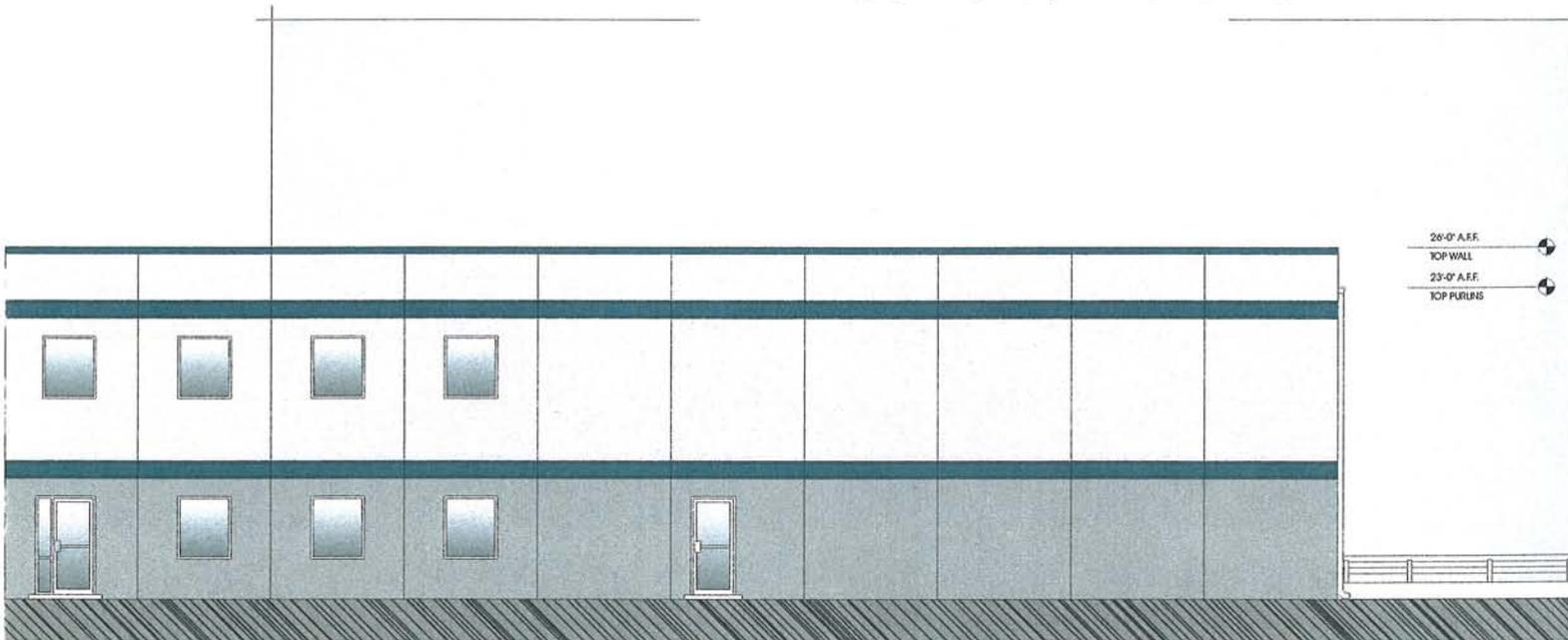
COM-TECH CONSTRUCTION INC.
 TURNKEY CONSTRUCTION FOR THE TREE AND LANDSCAPE INDUSTRY
 P.O. BOX 609
 WESTFIELD INDIANA 46074

LANDSCAPING / EXTERIOR LIGHTING PLAN
 NEW OFFICE / WAREHOUSE FACILITY
 COM-TECH COMMUNICATION INC.
 ALPHA TAU PARK
 COMMERCE DRIVE / ALPHA DRIVE
 WESTFIELD INDIANA

DRAWN BY: ALD
 CHECKED BY: ALD
 PROJECT No. 0508-0188
 SHEET No. L1

Com-Tech

Westfield, Indiana



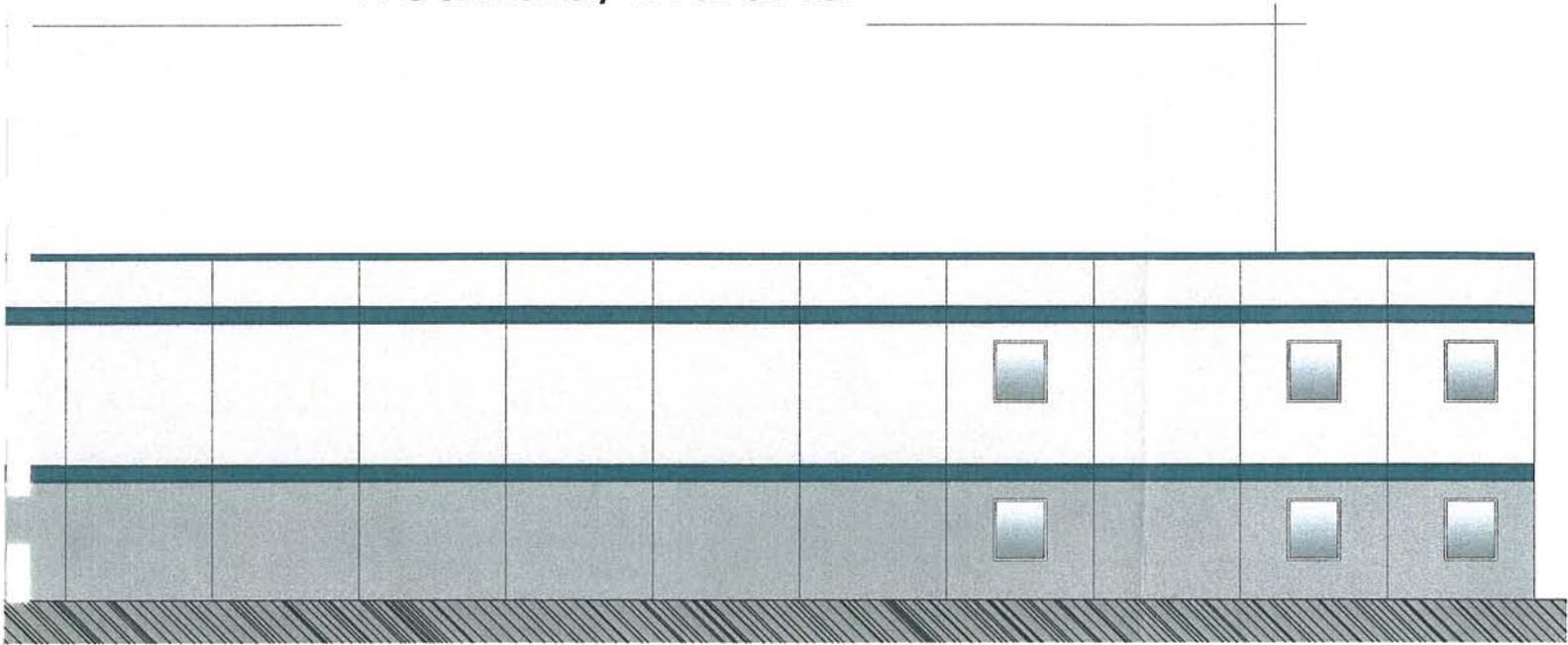
Front Elevation
Scheme A



Systems Builders, Inc.
9150 Harrison Park Court
Indianapolis, IN
317 5546 8000

Com-Tech

Westfield, Indiana

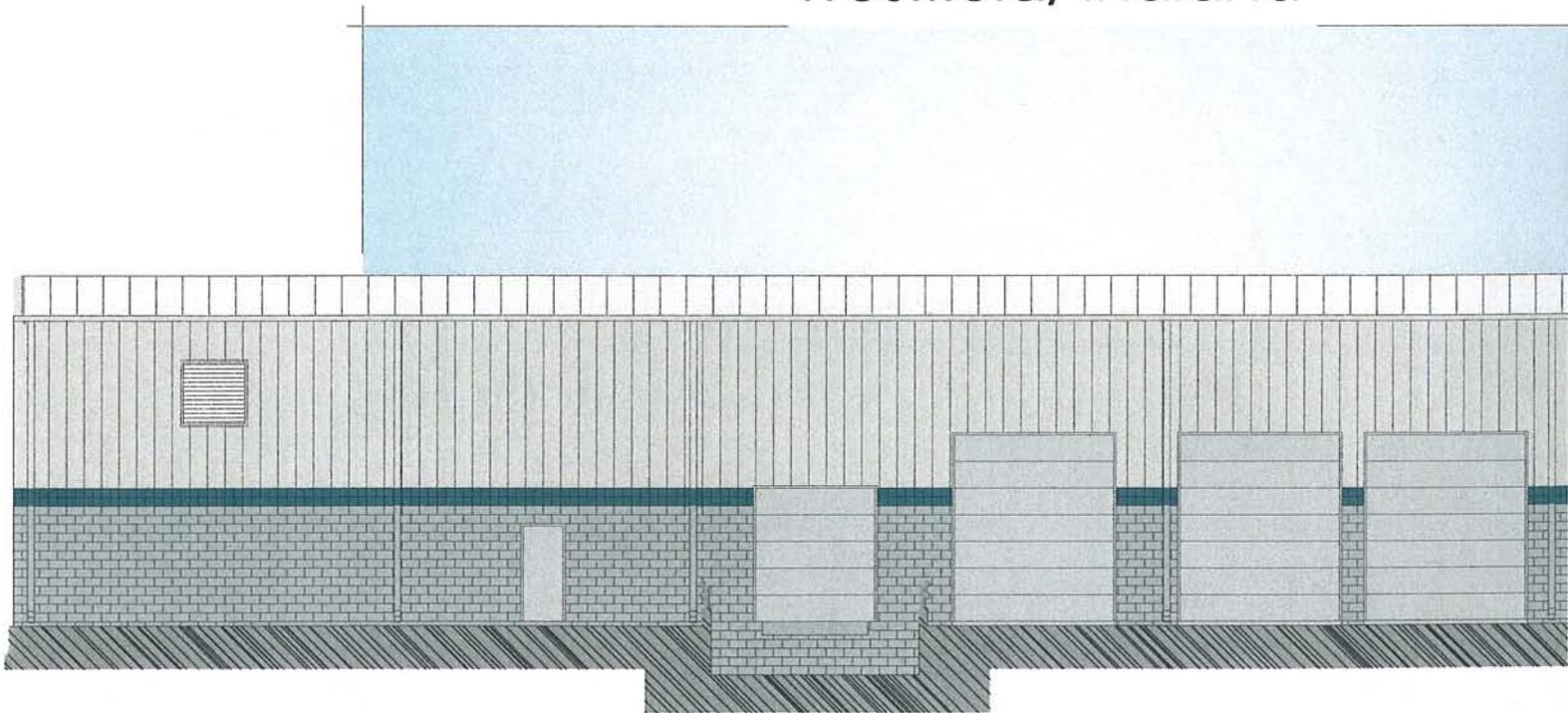


Left Side Elevation
Scheme A

BAB Associates
Architecture, Inc.
160 W. Carmel Dr.
Suite 236
Carmel, IN 46032
317.844.1264



Com-Tech
Westfield, Indiana



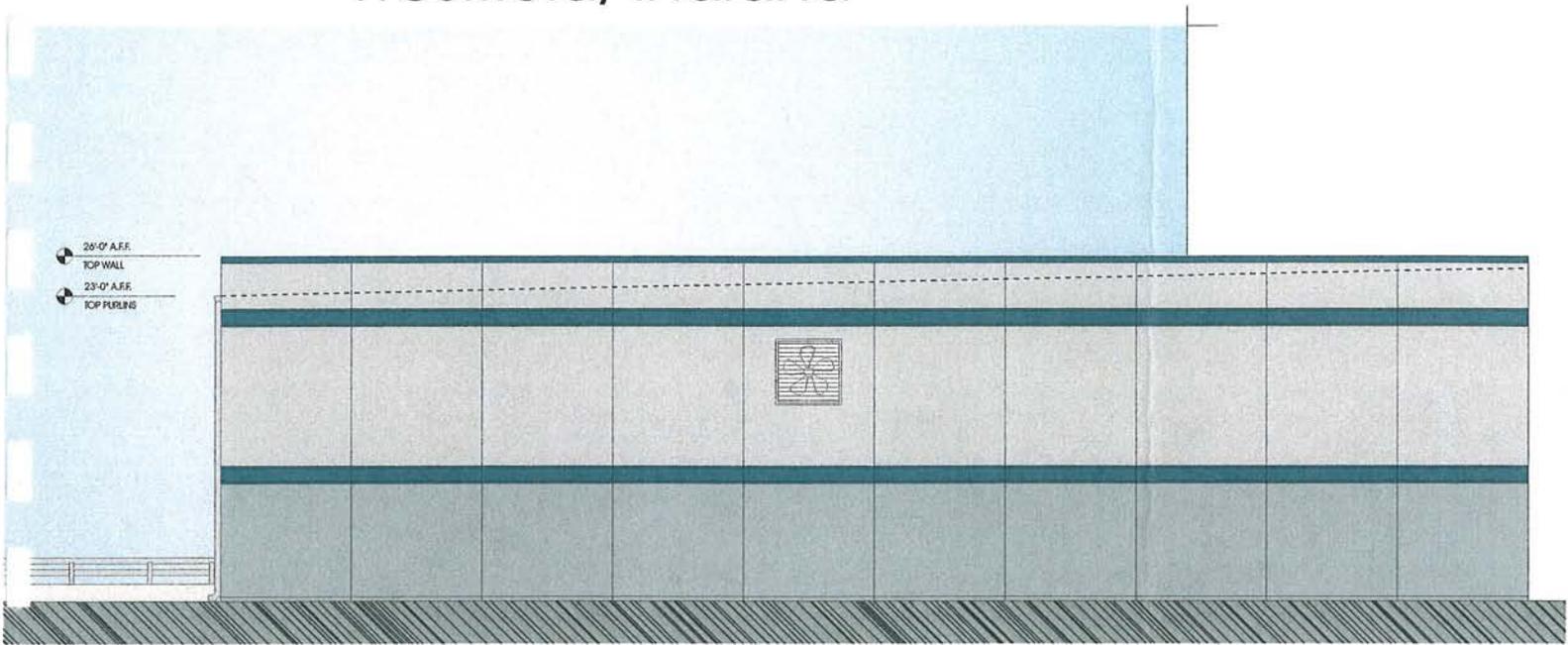
Right Side Elevation
Scheme A



Systems Builders, Inc.
9150 Harrison Park Court
Indianapolis, IN
317 5546 8000

Com-Tech

Westfield, Indiana



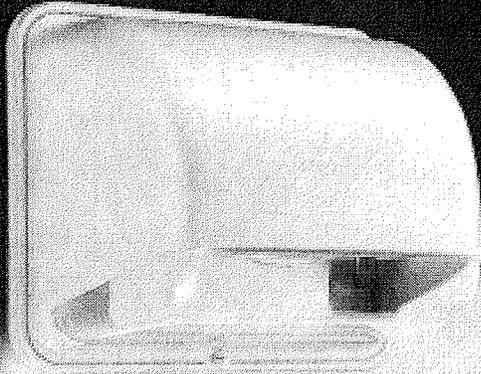
Rear Elevation Scheme A

BAB Associates
Architecture, Inc.
160 W. Carmel Dr.
Suite 236
Carmel, IN 46032
317.844.1264





CUTOFF PERFORMANCE MINI-WALLPAK



CONTOUR SERIES

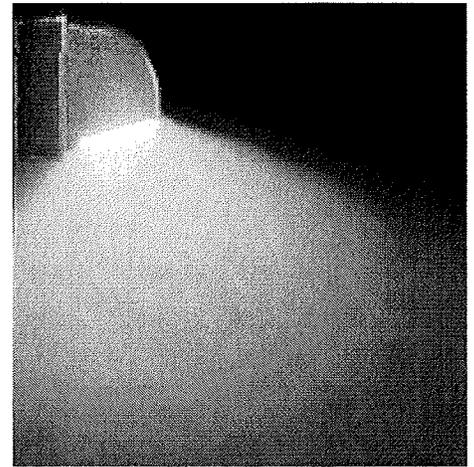
450-T005
500-T00M
22D11-26D11
32TR1-42TR1

KILL THE GLARE, NOT THE LIGHTING PERFORMANCE

Uncomfortable glare, sky glow and "light trespass" have become hot topics. Growing communities are finding that new construction often results (regrettably) in some pretty offensive nighttime lighting.

The need for adequate security lighting hasn't changed. It's a necessity. The challenge is to provide the required security without creating unwanted glare and uncontrolled light.

The solution is an economical lighting fixture that puts light just where it's supposed to: On the ground surrounding the building, and nowhere else.



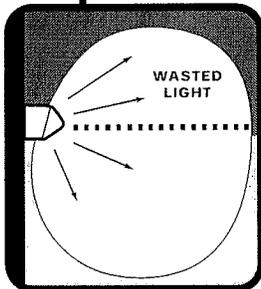
FULL CUTOFF OF ANY LIGHT ABOVE 90°

The TWAC provides this performance:

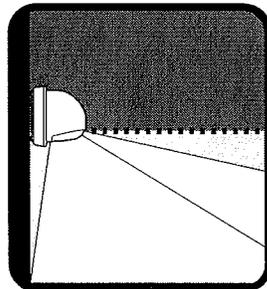
- True cutoff lighting;
- Pleasant, highly uniform lighting;
- Wattage capability up to 100 watts MH and HPS, or 42 watt instant-on fluorescent;
- Contour Series aesthetics and quality construction (IP65 listed).

Traditional security lighting fixtures can throw half their light either into the sky (wasteful and inefficient), or straight into the neighbors' windows

2



TRADITIONAL MINI-WALLPAK



TWAC CUTOFF MINI-WALLPAK

FOOTCANDLE CORRECTION FOR MOUNTING HEIGHT:

Actual mounting ht.	8'	10'	12'	15'
Correction factor	6.25	2.25	1.56	1.00

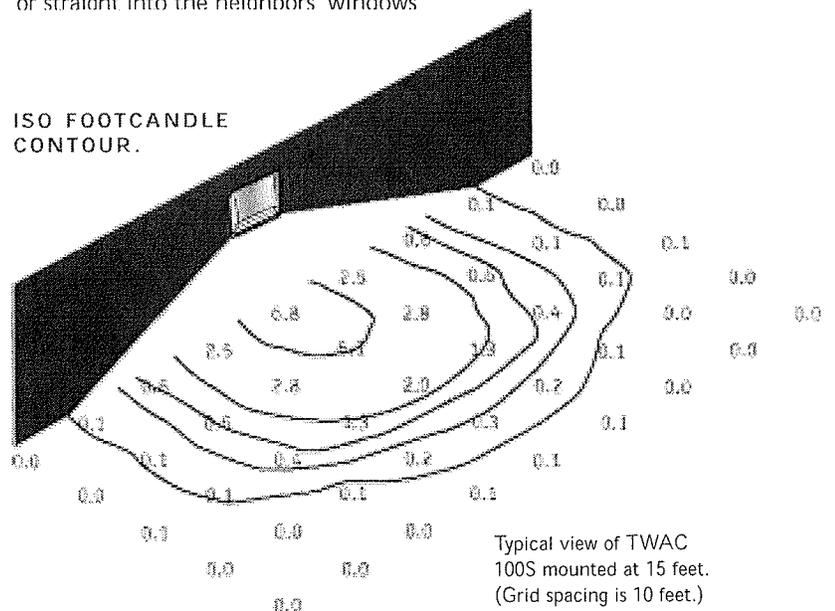
(Multiply the values on the photometric layout by these factors to calculate light levels for different mounting heights.)

FOOTCANDLE CORRECTION FOR WATTAGE:

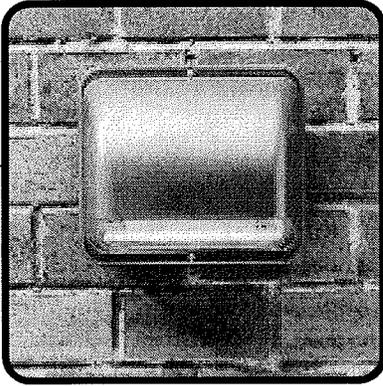
	HPS	MH	Fluor.
42	—	—	0.34
50	0.42	0.36	—
70	0.66	0.55	—
100	1.00	0.89	—

(Multiply the values on the photometric layout by these factors to calculate light levels for different lamps and wattages.)

ISO FOOTCANDLE CONTOUR.



Typical view of TWAC 100S mounted at 15 feet. (Grid spacing is 10 feet.)



Attractive daytime appearance.



Efficient nighttime performance.

The TWAC provides the sharp cutoff required to control glare while still providing efficient area lighting. It's perfect for entryways, walkways, or anywhere general security lighting is required with no wasted light thrown into the sky.



Rugged die-cast and polycarbonate construction.

It's built to last. Rugged die-cast aluminum and vandal-resistant polycarbonate construction means durability in the long haul even in the most demanding applications. Weathertight gasketing keeps out the bugs and dust (IP65 listed). Cool operation insures longer ballast life and prevents lens yellowing. Back housing is designed for quick and easy installation to standard 4" j-boxes.

The TWAC Cutoff Mini-Wallpak kills the glare, not the lighting performance.

3

EXAMPLE: TWAC 100M 120 PE DNA LPI

Series	Voltage	Options/Accessories		Lamp
High Pressure Sodium	120	PE Photocell (button type — Factory installed)	DDB Dark Bronze (standard)	LPI Lamp included as standard
TWAC 35S ¹	208 ³	SF Single fuse (120, 277, 347V) ⁵	Architectural colors (optional)	
TWAC 50S ²	277	DF Double fuse (208, 240) ⁵	DNA Natural aluminum	
TWAC 70S	347	XHP High power factor ballast ⁶	DBL Black	
TWAC 100S	TB ⁴	EC Emergency circuit ^{7,8}	DMB Medium bronze	
Metal Halide		QRS Quartz restrike system ^{7,8}		
TWAC 50M		L/LP Less lamp		
TWAC 70M		CSA Listed and labeled to comply with Canadian standards		
TWAC 100M		NOM Listed and labeled to comply with Mexican standards (Consult factory)		
Compact Fluorescent		TWAWG Wireguard (Shipped separately)		
TWAC 28DTT				
TWAC 32TRT				
TWAC 42TRT				

Notes:
 1. 120V only
 2. 120 or 277 V only
 3. Consult factory for availability in Canada
 4. Optional multi-tap ballast (120/208/240/277V; 120/277; 347V for Canada)
 5. Not available with multi-tap ballast
 6. Standard for 208, 240, 277, 347, TB
 7. Lamp not included
 8. Quartz lamp wattage not to exceed ballast wattage rating

TYPE:

CATALOG #:

COOPER LIGHTING—LUMARK®

DESCRIPTION

The Lumark Wal-Pak provides a durable and efficient exterior light source for any application requiring maximum performance and minimum maintenance. The rugged, die-cast aluminum housing, stainless steel hardware and sealed and gasketed optics compartment combine to make the Wal-Pak virtually impenetrable to contaminants. U.L. listed and labeled for wet locations. CSA certified.

APPLICATION

Easy to install, the Wal-Pak complements any environment and is ideal for loading docks, underpasses, tunnels, stairways, building entrances, vehicle ramps and schools.

SPECIFICATION FEATURES

A... Mounting Hardware

Captive corrosion resistant, single point mounting screw.

B...Housing

Die-cast aluminum housing is finished in dark bronze polyester powder coat.

C...Optical System

Impact resistant borosilicate prismatic glass or polycarbonate refractor with aluminum reflector that provides maximum photometric performance and beam efficiency.

D...Gasketing

High-temperature silicone gasketing seals out external contaminants.

E...Socket

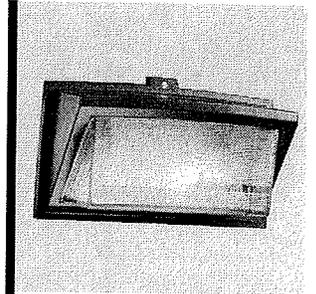
Mogul-base porcelain socket, except 150W Metal Halide and below has medium-base.

B...Ballast

Normal or High power factor ballast with class H insulation. Minimum starting temperature is -40°C (-40°F) for HPS and -30° C (-20°F) for MH, MP and ML.

F...Door Assembly

Door assembly is hinged at bottom for easy installation and relamping.

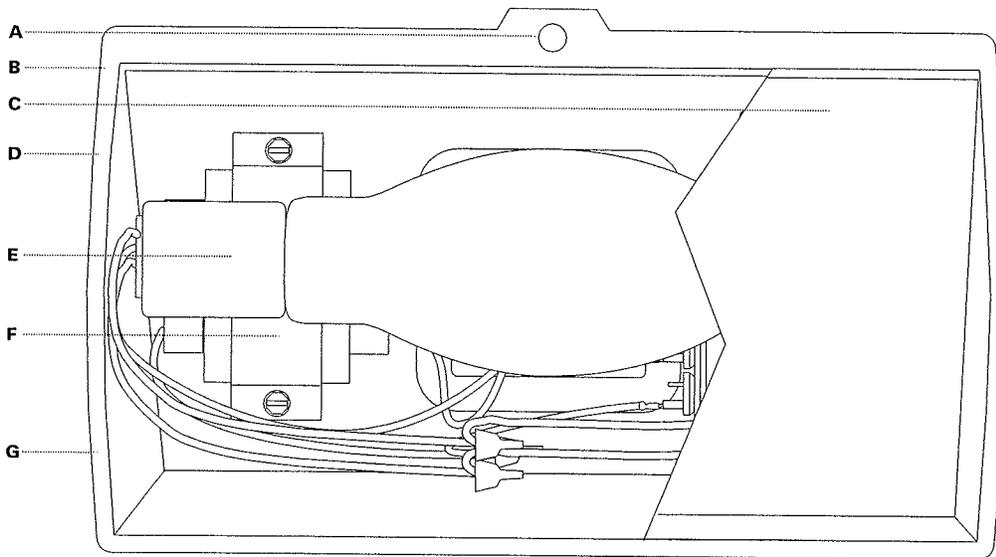


WLWAL-PAK

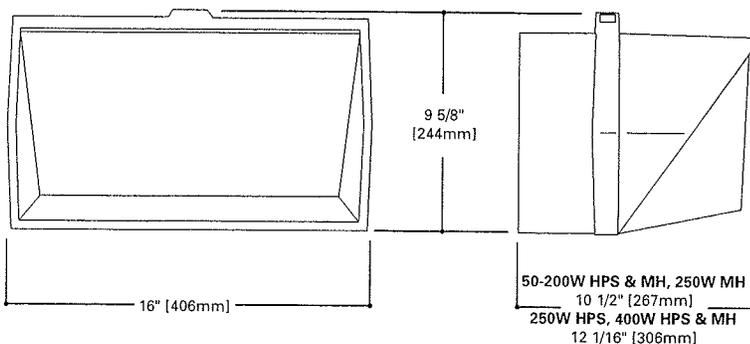
50 - 400 W

High Pressure Sodium
Pulse Start Metal Halide
Metal Halide

WALL MOUNT
LUMINAIRE



DIMENSIONS



COOPER LIGHTING

TECHNICAL DATA

IP65 Rated.
25°C Maximum Ambient Temperature.
External Supply Wiring 90°C Minimum.
Internal Supply Wiring 150°C Minimum.

ENERGY DATA

Reactor Ballast Input Watts	
50W HPS NPF/HPF	(58 Watts)
70W HPS NPF/HPF	(82 Watts)
100W HPS NPF/HPF	(118 Watts)
150W HPS NPF/HPF	(175 Watts)
High Reactance Ballast Input Watts	
50W MH HPF	(69 Watts)
70W MH HPF	(94 Watts)
100W MH HPF	(129 Watts)
150W HPS HPF	(190 Watts)
150W MH HPF	(210 Watts)
CWI Ballast Input Watts	
250W HPS HPF	(300 Watts)
CWA Ballast Input Watts	
175W MH HPF	(210 Watts)
200W HPS HPF	(250 Watts)
200W MP HPF	(232 Watts)
250W MH HPF	(295 Watts)
320W MP HPF	(365 Watts)
350W MP HPF	(395 Watts)
400W MH HPF	(455 Watts)
400W HPS HPF	(465 Watts)
400W MP HPF	(448 Watts)

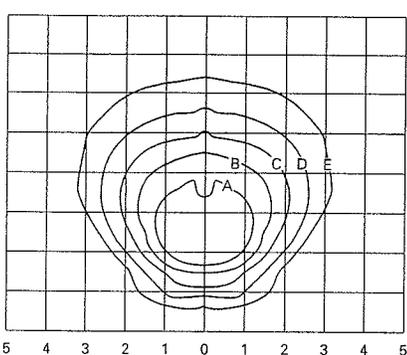
SHIPPING DATA

Approximate Net Weight:
32-42 lbs. (15-19 kgs.)

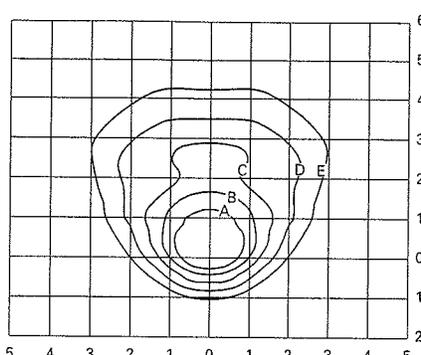
ADH040990



PHOTOMETRICS



HPWL-250-MT-LL
250-Watt HPS
30,000-Lumen Clear Lamp



MHWL-250-MT-LL
250-Watt MH
19,500-Lumen Clear 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
10'	8.00	4.00	2.00	1.00	0.50
15'	3.54	1.77	0.89	0.44	0.17
20'	2.00	1.00	0.50	0.20	0.10
25'	1.28	0.64	0.32	0.16	0.06

ORDERING INFORMATION

SAMPLE NUMBER: MHWL-250-MT-LL

<p>Lamp Type HP=High Pressure Sodium¹ MH=Metal Halide MP=Pulse Start MH (CWA)²</p>	<p>Series/Lens WL=Wal-Pak/Borosilicate Glass Lens/HFE PL=Wal-Pak/Polycarbonate Lens/HPF³ WE=Wal-Pak/Borosilicate Glass Lens/NPF</p>	<p>Lamp Wattage⁴ 50=50W 70=70W 100=100W 150=150W 175=175W 200=200W⁵ 250=250W⁶ 320=320W⁶ 350=350W⁶ 400=400W</p>	<p>Voltage⁴ 120V 208V 240V 277V 347V 480V MT=Multi-Tap⁷ TT=Triple-Tap⁸ 5T=5-Tap⁹</p>	<p>Options (add as suffix)¹⁰ Q=Quartz Restrike DC Bayonet Base (Hot strike only) EM=Quartz Restrike with Time Delay (Cold Start) EM/SC=Emergency Separate Circuit F1=Single Fuse (120, 277 or 347V) F2=Double Fused (208, 240 or 480V) LL=Lamp Included¹¹ TR=Tamper-resistant Screws PE=Internal Photocontrol</p>	<p>Accessories (order separately) WG/WL=Wire Guard (Not compatible with PCS)¹² PCS=Polycarbonate Vandal Shield (Not compatible with WG/WL)¹² TWC=Thru-way Conduit VS/WL=Visor Cut-off Shield¹² WLR=Replacement Glass Lens PLL=Replacement Polycarbonate Lens (150W maximum) PE/MT=Field-installed Photocontrol TRSD-1/4-20=Tamper-resistant Screwdriver PE-347=Field-installed Photocontrol, 347V PE-480V=Field-installed 480V Photocontrol FC/WL=Full Cut-off Shield¹³ FSC/WL=Semi Cut-off Shield¹³</p>
---	---	--	---	--	--

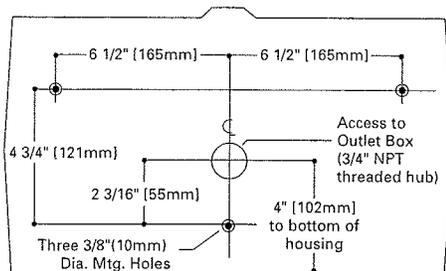
STOCK SAMPLE NUMBER (Lamp Included)

SAMPLE NUMBER: PS10

<p>Series P=Wal-Pak</p>	<p>Lamp Type S=High Pressure Sodium¹ M=Metal Halide</p>	<p>Lamp Wattage 100=100W 150=150W 175=175W 250=250W 400=400W</p>	<p>Option 5T=5-Tap (400W Metal Halide Only)</p>
------------------------------------	---	---	--

NOTES: Options not available with stock products. Order Accessories as separate items for field installation. Refer to standard ordering information to add options and accessories.

MOUNTING DETAIL



NOTES: 1 Not available in 175W. 2 200, 250, 320, 350 & 400W only (Limited lamp availability, consult manufacturer). 3 150W maximum in High Pressure Sodium, 175W maximum in Metal Halide. 4 Medium-base socket for Metal Halide 150W and below. 5 Pulse start Metal Halide only. 6 Products also available in non-us voltages & 50Hz for international markets. 7 Multi-tap ballast 120/208/240/277V. 8 Triple-tap ballast 120/277/347V. 9 5-Tap ballast 120/208/240/277/480V. 400W Metal Halide only. 10 Must be listed in the order shown and separated by a dash. 11 Lamp is shipped separate from luminaire. Lamp is Cooper designated product based on luminaire requirements. Specified lamps must be ordered as a separate line item. 12 Wire guard, visor, and shields can not be used together on same unit. 13 For complete product data, reference the Lumark Specification binder. 14 Specifications and dimensions subject to change without notice. 15 Products also available in non-US voltages and frequencies for international markets. 16 Consult your Cooper Lighting Representative for availability and ordering information.

NOTE: Specifications and dimensions subject to change without notice.