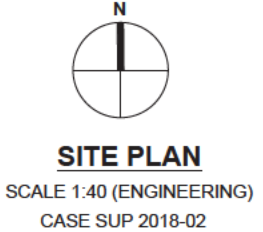


CODE ANALYSIS							
BUILDING	OCCUPANCY	CONSTRUCTION TYPE	AREA (SQF)	OCCUPANT LOAD	COLUMNS	TYPE OF HAIL NET	REFERENCE FOR COLUMN SUPPORT
A	S2	2-B	2268	N/A	5	SINGLE HERITAGE CANTILEVER	1001-1.0-3000
B	S2	2-B	2106	N/A	5	SINGLE HERITAGE CANTILEVER	1001-1.0-3000
D	S2	2-B	975	N/A	3	SINGLE HERITAGE CANTILEVER	1001-1.0-3000
E	S2	2-B	722	N/A	3	SINGLE HERITAGE CANTILEVER	1001-1.0-3000
F	S2	2-B	980	N/A	3	SINGLE HERITAGE CANTILEVER	1001-1.0-3000
G	S2	2-B	1542	N/A	3	SINGLE HERITAGE CANTILEVER	1001-1.0-3000
H	S2	2-B	4195	N/A	7	SINGLE HERITAGE CANTILEVER	1001-1.0-3000
P	S2	2-B	9600	N/A	9	CUSTOM PROTECTOR CANTILEVER	1001-2.0-3000
R	S2	2-B	9600	N/A	9	CUSTOM PROTECTOR CANTILEVER	1001-2.0-3000
TOTAL			31988		47		

NOTE: EXISTING LIGHT POLES TO BE REMOVED
THAT ARE IN CONFLICT WITH PROPOSED
HAIL NETS



THESE PLANS AND SPECIFICATIONS ARE THE PROPERTY OF USA SHADE AND FABRIC STRUCTURES AND SHALL NOT BE REPRODUCED WITHOUT THEIR WRITTEN PERMISSION.

CORPORATE HEADQUARTERS
8505-A CHANCELLOR ROW
DALLAS, TX, 75247
800-966-5005

CERTIFICATIONS
IAS CERTIFICATION No. FA-428
CLARK COUNTY MANUFACTURER
CERTIFICATION NUMBER (NEVADA) 355

CUSTOMER
AUTONATION INC.

PROJECT NAME
**CDJR
N.RICHLAND HILLS**

LOCATION
**NORTH RICHLAND H LLS
TX**

PROJECT NUMBER.
1001

STRUCTURE TYPE
**HERITAGE CANTILEVERS &
DIAMOND PROTECTORS**

SIZE
VARIOUS

SCALE
ENGINEERING

DRAWING IZE
D

RELEASE FOR FABRICATION	JO	ENG
	JO	CHK
	SA	DRW
	05/08/18	DATE
DESCRIPTION	NC	REV

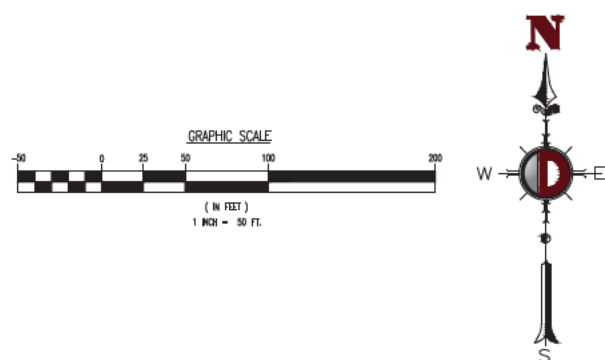
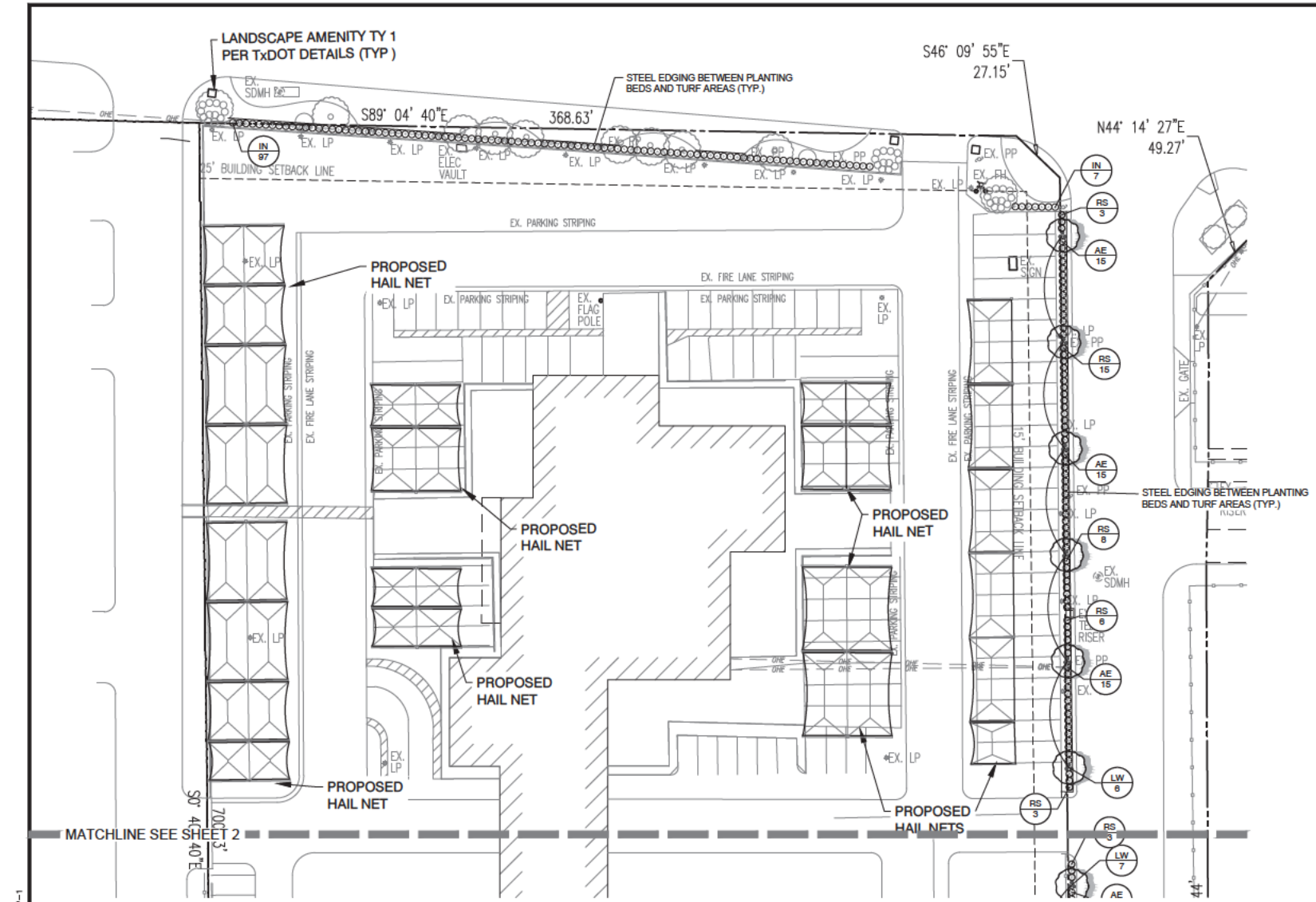
Eng. By	JO	05/08/18
Design By	SA	05/08/18
Approved By	JO	05/08/18

DRAWING DESCRIPTION
SITE PLAN





DWG. **62998-1.6**

PAGE **4000**

REV. **NC**



PLANT SCHEDULE

TREES	CODE	BOTANICAL NAME / COMMON NAME	CONT	CAL	HEIGHT	QTY
	LW	Lagerstroemia indica "Watermelon Red" / Watermelon Red Crape Myrtle Multi trunk - 3-5 canes, 2" caliper overall.	30 gal	2" Cal	8'-10'	13
SHRUBS	CODE	BOTANICAL NAME / COMMON NAME	SIZE		SPACING	QTY
	AE	Abelia x grandiflora "Edward Goucher" / Glossy Abelia	3 gal		36" o.c.	95
	IN	Ilex vomitoria "Nana" / Dwarf Yaupon	3 gal		36" o.c.	104
	RS	Rhaphiolepis ind ca "Snow White" / Snow White Indian Hawthorn	5 gal		36" o.c.	82

GENERAL LANDSCAPE NOTES

- THE GENERAL CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL EXISTING VEGETATION (EXCEPT WHERE NOTED TO REMAIN). BEFORE STARTING WORK, THE LANDSCAPE CONTRACTOR SHALL VERIFY THAT THE GRADE OF ALL LANDSCAPE AREAS ARE WITHIN $\pm 0.1'$ OF FINISH GRADE. THE LANDSCAPE CONTRACTOR SHALL NOTIFY THE OWNER IMMEDIATELY SHOULD ANY DISCREPANCIES EXIST. SEE SPECIFICATIONS FOR MORE DETAILED INSTRUCTION ON TURF AREA AND PLANTING BED PREPARATION.
- THE LANDSCAPE CONTRACTOR SHALL CONSTRUCT AND MAINTAIN FINISH GRADES AS SHOWN ON GRADING PLANS, AND CONSTRUCT AND MAINTAIN SLOPES AS RECOMMENDED BY THE GEOTECHNICAL REPORT. ALL LANDSCAPE AREAS SHALL HAVE POSITIVE DRAINAGE AWAY FROM STRUCTURES AT THE MINIMUM SLOPE SPECIFIED IN THE REPORT, AND AREAS OF POTENTIAL PONDING SHALL BE REGRADED TO BLEND IN WITH THE SURROUNDING GRADES AND ELIMINATE PONDING POTENTIAL. SHOULD ANY CONFLICTS AND/OR DISCREPANCIES ARISE BETWEEN THE GRADING PLANS, GEOTECHNICAL REPORT, THESE NOTES, AND ACTUAL CONDITIONS, THE CONTRACTOR SHALL IMMEDIATELY BRING SUCH ITEMS TO THE ATTENTION OF THE LANDSCAPE ARCHITECT AND OWNER.
- CONTRACTOR SHALL ENSURE THAT THE GRADE IN SOD AREAS SHALL BE 1" BELOW FINISH GRADE BEFORE INSTALLING SOIL AMENDMENTS, AND 2" BELOW FINISH GRADE IN SHRUB AREAS BEFORE INSTALLING SOIL AMENDMENTS. MULCH COVER WITHIN 6" OF CONCRETE WALKS AND CURBS SHALL NOT PROTRUDE ABOVE THE FINISH SURFACE OF THE WALKS AND CURBS. MULCH COVER WITHIN 12" OF WALLS SHALL BE AT LEAST 3" LOWER THAN THE TOP OF WALL.
- INSTALL 5 OUNCE, WOVEN, NEEDLE-PUNCHED POLYPROPYLENE FABRIC UNDER ALL MULCHED AREAS AND INDIVIDUAL TREE RINGS.
- INSTALL 3" THICK LAYER OF "RARE RED ROCK #1" GRAVEL MULCH TOPDRESSING, AS AVAILABLE FROM FULLER 5 LANDSCAPE SUPPLY, CUSSETA, ALABAMA, (888) 749-2880, IN ALL PLANTING BEDS.
- INSTALL 14G GREEN STEEL EDGING BETWEEN ALL PLANTING BEDS AND TURF AREAS, AND BETWEEN GROUNDCOVERS AND OTHER PLANTS (WHERE INDICATED ON THE PLAN).
- HYDROMULCH ALL DISTURBED AREAS OUTSIDE OF PROPERTY LIMITS (UNLESS SHOWN AS SOD).
- ALL PLANT LOCATIONS ARE DIAGRAMMATIC. ACTUAL LOCATIONS SHALL BE VERIFIED WITH THE LANDSCAPE ARCHITECT OR DESIGNER PRIOR TO PLANTING. THE LANDSCAPE CONTRACTOR SHALL ENSURE THAT ALL REQUIREMENTS OF THE PERMITTING AUTHORITY ARE MET (I.E. MINIMUM PLANT QUANTITIES, PLANTING METHODS, TREE PROTECTION METHODS, ETC.).
- THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR DETERMINING PLANT QUANTITIES. PLANT QUANTITIES SHOWN ON LEGENDS AND CALLOUTS ARE FOR GENERAL INFORMATION ONLY. IN THE EVENT OF A DISCREPANCY BETWEEN THE PLAN AND THE PLANT LEGEND, THE PLANT QUANTITY AS SHOWN ON THE PLAN (FOR INDIVIDUAL SYMBOLS) OR CALLOUT (FOR GROUNDCOVER PATTERNS) SHALL TAKE PRECEDENCE.
- NO SUBSTITUTIONS OF PLANT MATERIALS SHALL BE ALLOWED. IF SOME OF THE PLANTS ARE NOT AVAILABLE, THE LANDSCAPE CONTRACTOR SHALL NOTIFY THE LANDSCAPE DESIGNER IN WRITING (VIA PROPER CHANNELS).
- PLANTS MAY BE INSPECTED AND APPROVED OR REJECTED ON THE JOBSITE BY THE OWNER OR OWNER'S REPRESENTATIVE.
- THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF ALL WORK SHOWN ON THESE PLANS FOR 90 DAYS BEYOND FINAL ACCEPTANCE OF ALL LANDSCAPE WORK BY THE OWNER. LANDSCAPE MAINTENANCE SHALL INCLUDE WEEKLY SITE VISITS FOR THE FOLLOWING ACTIONS (AS APPROPRIATE): PROPER PRUNING, RESTAKING OF TREES, RESETTling OF PLANTS THAT HAVE SETTLED, MOWING AND AERATION OF LAWNS, WEEDING, RESEEDING AREAS WHICH HAVE NOT GERMINATED WELL, TREATING FOR INSECTS AND DISEASES, REPLACEMENT OF MULCH, REMOVAL OF LITTER, REPAIRS TO THE IRRIGATION SYSTEM DUE TO FAULTY PARTS AND/OR WORKMANSHIP, AND THE APPROPRIATE WATERING OF ALL PLANTINGS. THE LANDSCAPE CONTRACTOR SHALL MAINTAIN THE IRRIGATION SYSTEM IN PROPER WORKING ORDER, WITH SCHEDULING ADJUSTMENTS BY SEASON TO MAXIMIZE WATER CONSERVATION.
- SHOULD SEEDING AND/OR SODDED AREAS NOT BE COVERED BY AN AUTOMATIC IRRIGATION SYSTEM, THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR WATERING THESE AREAS AND OBTAINING A FULL STAND OF GRASS AT NO ADDITIONAL COST TO THE OWNER.
- TO ACHIEVE FINAL ACCEPTANCE AT THE END OF THE MAINTENANCE PERIOD, ALL OF THE FOLLOWING CONDITIONS MUST OCCUR:
 - THE LANDSCAPE SHALL SHOW ACTIVE, HEALTHY GROWTH (WITH EXCEPTIONS MADE FOR SEASONAL DORMANCY). ALL PLANTS NOT MEETING THIS CONDITION SHALL BE REJECTED AND REPLACED BY HEALTHY PLANT MATERIAL PRIOR TO FINAL ACCEPTANCE.
 - ALL HARDSCAPE SHALL BE CLEANED PRIOR TO FINAL ACCEPTANCE.
 - SODDED AREAS MUST BE ACTIVELY GROWING AND MUST REACH A MINIMUM HEIGHT OF 1 1/2 INCHES BEFORE FIRST MOWING. HYDROMULCHED AREAS SHALL SHOW ACTIVE, HEALTHY GROWTH. BARE AREAS LARGER THAN TWELVE SQUARE INCHES MUST BE RESEEDING OR RESEEDING (AS APPROPRIATE) PRIOR TO FINAL ACCEPTANCE. ALL SODDED TURF SHALL BE NEATLY MOWED.
- SEE SPECIFICATIONS AND DETAILS FOR FURTHER REQUIREMENTS.

ROOT BARRIERS

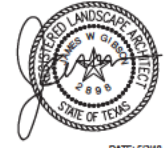
THE CONTRACTOR SHALL INSTALL ROOT BARRIERS NEAR ALL NEWLY-PLANTED TREES THAT ARE LOCATED WITHIN FIVE (5) FEET OF PAVING OR CURBS. ROOT BARRIERS SHALL BE "CENTURY" OR "DEEP-ROOT" 24" DEEP PANELS (OR EQUAL). BARRIERS SHALL BE LOCATED IMMEDIATELY ADJACENT TO HARDSCAPE. INSTALL PANELS PER MANUFACTURER'S RECOMMENDATIONS. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR USE ROOT BARRIERS OF A TYPE THAT COMPLETELY ENCIRCLE THE ROOTBALL.

MULCHES

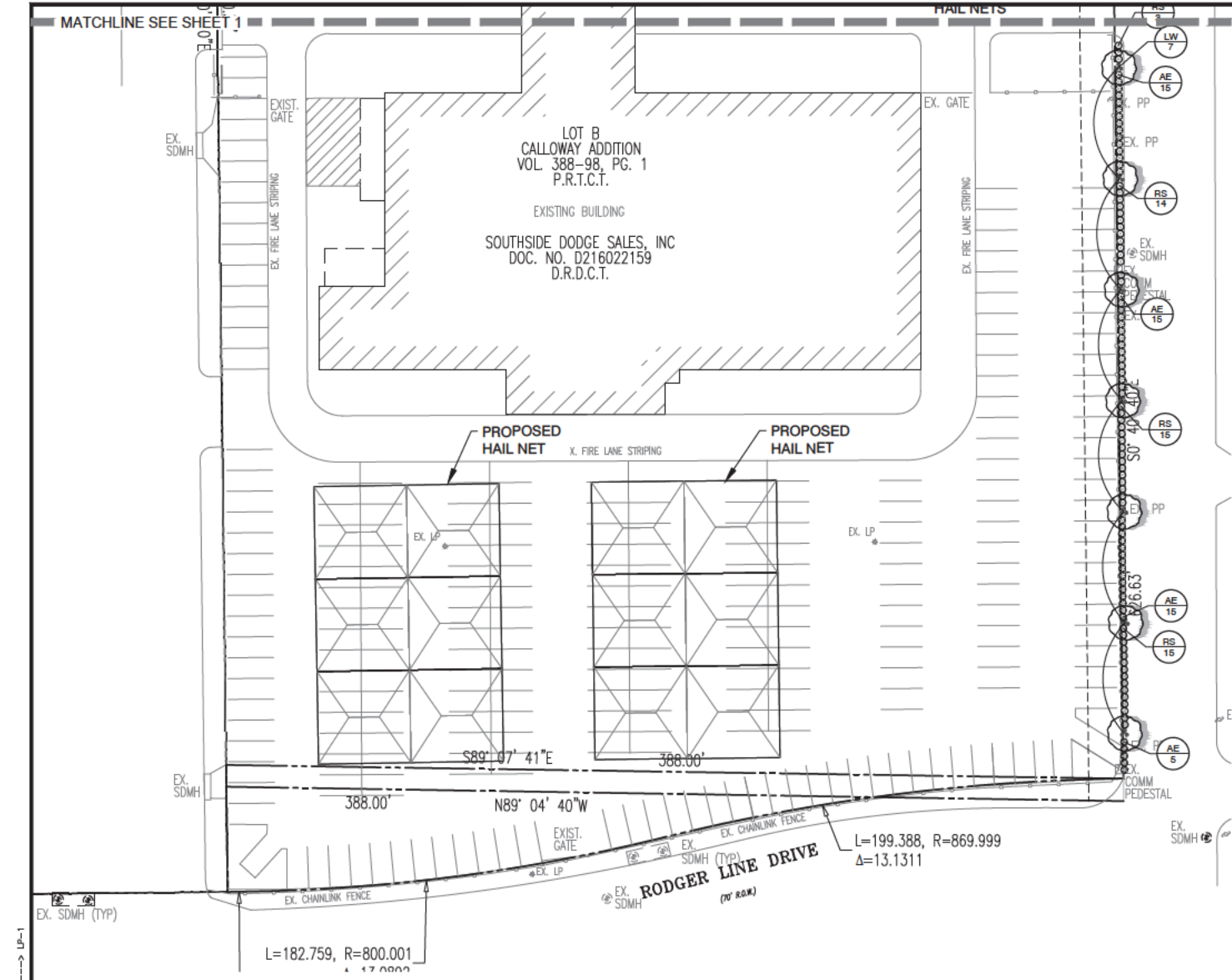
AFTER ALL PLANTING IS COMPLETE, CONTRACTOR SHALL INSTALL 4" THICK LAYER OF "RARE RED ROCK #1" GRAVEL MULCH TOPDRESSING, AS AVAILABLE FROM FULLER 5 LANDSCAPE SUPPLY, CUSSETA, ALABAMA, (888) 749-2880 (OR EQUAL), OVER LANDSCAPE FABRIC IN ALL PLANTING AREAS. CONTRACTOR SHALL SUBMIT SAMPLES OF ALL MULCHES TO LANDSCAPE ARCHITECT AND OWNER FOR APPROVAL PRIOR TO CONSTRUCTION. ABSOLUTELY NO EXPOSED GROUND SHALL BE LEFT SHOWING ANYWHERE ON THE PROJECT AFTER MULCH HAS BEEN INSTALLED.

LANDSCAPE CALCULATIONS CDJR





TOTAL SITE AREA	257,881 SF
LANDSCAPE AREA REQUIRED	38,853 SF (15% OF SITE AREA)
LANDSCAPE AREA PROVIDED	7,704 SF (2.9% OF SITE AREA)
LANDSCAPE SETBACK	
15' LANDSCAPE SETBACK REQUIRED ADJACENT TO ROW	
NE LOOP 820	17'-1" SETBACK PROVIDED
RODGER LINE RD	0' SETBACK PROVIDED
BOOTH CALLAWAY RD	0' SETBACK PROVIDED
REQUIRED TREES IN SETBACK	
NE LOOP 820 387 FEET / 50' 7.74 8 TREES REQUIRED	8 TREES PROVIDED
RODGER LINE RD 388 FEET / 50' 7.78 8 TREES REQUIRED	0 TREES PROVIDED
BOOTH CALLAWAY RD 836 FEET / 50' 12.7 13 TREES REQUIRED	13 TREES PROVIDED
REQUIRED SHRUBS IN SETBACK	
NE LOOP 820 387 FEET / 50 x 10' 77 SHRUBS REQUIRED	138 SHRUBS PROVIDED
RODGER LINE RD 388 FEET / 50 x 10' 77 SHRUBS REQUIRED	0 SHRUBS PROVIDED
BOOTH CALLAWAY RD 836 FEET / 50 x 10' 127 SHRUBS REQUIRED	179 SHRUBS PROVIDED
PARKING LOT SCREENING	
PARKING LOTS SHALL BE SCREENED WITH EVERGREEN SHRUBS PLACED AT 3 FEET O.C.	PROVIDED
NE LOOP 820	NOT PROVIDED
RODGER LINE RD	NOT PROVIDED
BOOTH CALLAWAY RD	PROVIDED
PARKING LOT LANDSCAPING	
PARKING LOTS SHALL HAVE 5% LANDSCAPED AREA ONE LARGE TREE PER 20 SPACES REQUIRED 150 SPACES / 20' 7.5 8 LARGE TREES	NOT PROVIDED
LANDSCAPE ENTRANCES SHALL BE PLANTED WITH SMALL SHRUBS	0 TREES PROVIDED
NE LOOP 820	PROVIDED
RODGER LINE RD	NOT PROVIDED
PARKING LOTS SHALL BE AT LEAST 5% LANDSCAPED	2,744 SF PROVIDED
222,881 SF x .05 11,129 SF LANDSCAPING REQUIRED	



DYNAMIC ENGINEERING (d) (a) (b) (c) (d) (e) (f) (g) (h) (i) (j) (k) (l) (m) (n) (o) (p) (q) (r) (s) (t) (u) (v) (w) (x) (y) (z) (aa) (ab) (ac) (ad) (ae) (af) (ag) (ah) (ai) (aj) (ak) (al) (am) (an) (ao) (ap) (aq) (ar) (as) (at) (au) (av) (aw) (ax) (ay) (az) (ba) (bb) (bc) (bd) (be) (bf) (bg) (bh) (bi) (bj) (bk) (bl) (bm) (bn) (bo) (bp) (bq) (br) (bs) (bt) (bu) (bv) (bw) (bx) (by) (bz) (ca) (cb) (cc) (cd) (ce) (cf) (cg) (ch) (ci) (cj) (ck) (cl) (cm) (cn) (co) (cp) (cq) (cr) (cs) (ct) (cu) (cv) (cw) (cx) (cy) (cz) (da) (db) (dc) (dd) (de) (df) (dg) (dh) (di) (dj) (dk) (dl) (dm) (dn) (do) (dp) (dq) (dr) (ds) (dt) (du) (dv) (dw) (dx) (dy) (dz) (ea) (eb) (ec) (ed) (ee) (ef) (eg) (eh) (ei) (ej) (ek) (el) (em) (en) (eo) (ep) (eq) (er) (es) (et) (eu) (ev) (ew) (ex) (ey) (ez) (fa) (fb) (fc) (fd) (fe) (ff) (fg) (fh) (fi) (fj) (fk) (fl) (fm) (fn) (fo) (fp) (fq) (fr) (fs) (ft) (fu) (fv) (fw) (fx) (fy) (fz) (ga) (gb) (gc) (gd) (ge) (gf) (gg) (gh) (gi) (gj) (gk) (gl) (gm) (gn) (go) (gp) (gq) (gr) (gs) (gt) (gu) (gv) (gw) (gx) (gy) (gz) (ha) (hb) (hc) (hd) (he) (hf) (hg) (hh) (hi) (hj) (hk) (hl) (hm) (hn) (ho) (hp) (hq) (hr) (hs) (ht) (hu) (hv) (hw) (hx) (hy) (hz) (ia) (ib) (ic) (id) (ie) (if) (ig) (ih) (ii) (ij) (ik) (il) (im) (in) (io) (ip) (iq) (ir) (is) (it) (iu) (iv) (iw) (ix) (iy) (iz) (ja) (jb) (jc) (jd) (je) (jf) (jg) (jh) (ji) (jj) (jk) (jl) (jm) (jn) (jo) (jp) (jq) (jr) (js) (jt) (ju) (jv) (jw) (jx) (jy) (jz) (ka) (kb) (kc) (kd) (ke) (kf) (kg) (kh) (ki) (kj) (kk) (kl) (km) (kn) (ko) (kp) (kq) (kr) (ks) (kt) (ku) (kv) (kw) (kx) (ky) (kz) (la) (lb) (lc) (ld) (le) (lf) (lg) (lh) (li) (lj) (lk) (ll) (lm) (ln) (lo) (lp) (lq) (lr) (ls) (lt) (lu) (lv) (lw) (lx) (ly) (lz) (ma) (mb) (mc) (md) (me) (mf) (mg) (mh) (mi) (mj) (mk) (ml) (mm) (mn) (mo) (mp) (mq) (mr) (ms) (mt) (mu) (mv) (mw) (mx) (my) (mz) (na) (nb) (nc) (nd) (ne) (nf) (ng) (nh) (ni) (nj) (nk) (nl) (nm) (nn) (no) (np) (nq) (nr) (ns) (nt) (nu) (nv) (nw) (nx) (ny) (nz) (oa) (ob) (oc) (od) (oe) (of) (og) (oh) (oi) (oj) (ok) (ol) (om) (on) (oo) (op) (oq) (or) (os) (ot) (ou) (ov) (ow) (ox) (oy) (oz) (pa) (pb) (pc) (pd) (pe) (pf) (pg) (ph) (pi) (pj) (pk) (pl) (pm) (pn) (po) (pp) (pq) (pr) (ps) (pt) (pu) (pv) (pw) (px) (py) (pz) (qa) (qb) (qc) (qd) (qe) (qf) (qg) (qh) (qi) (qj) (qk) (ql) (qm) (qn) (qo) (qp) (qq) (qr) (qs) (qt) (qu) (qv) (qw) (qx) (qy) (qz) (ra) (rb) (rc) (rd) (re) (rf) (rg) (rh) (ri) (rj) (rk) (rl) (rm) (rn) (ro) (rp) (rq) (rr) (rs) (rt) (ru) (rv) (rw) (rx) (ry) (rz) (sa) (sb) (sc) (sd) (se) (sf) (sg) (sh) (si) (sj) (sk) (sl) (sm) (sn) (so) (sp) (sq) (sr) (ss) (st) (su) (sv) (sw) (sx) (sy) (sz) (ta) (tb) (tc) (td) (te) (tf) (tg) (th) (ti) (tj) (tk) (tl) (tm) (tn) (to) (tp) (tq) (tr) (ts) (tt) (tu) (tv) (tw) (tx) (ty) (tz) (ua) (ub) (uc) (ud) (ue) (uf) (ug) (uh) (ui) (uj) (uk) (ul) (um) (un) (uo) (up) (uq) (ur) (us) (ut) (uu) (uv) (uw) (ux) (uy) (uz) (va) (vb) (vc) (vd) (ve) (vf) (vg) (vh) (vi) (vj) (vk) (vl) (vm) (vn) (vo) (vp) (vq) (vr) (vs) (vt) (vu) (vv) (vw) (vx) (vy) (vz) (wa) (wb) (wc) (wd) (we) (wf) (wg) (wh) (wi) (wj) (wk) (wl) (wm) (wn) (wo) (wp) (wq) (wr) (ws) (wt) (wu) (wv) (ww) (wx) (wy) (wz) (xa) (xb) (xc) (xd) (xe) (xf) (xg) (xh) (xi) (xj) (xk) (xl) (xm) (xn) (xo) (xp) (xq) (xr) (xs) (xt) (xu) (xv) (xw) (xx) (xy) (xz) (ya) (yb) (yc) (yd) (ye) (yf) (yg) (yh) (yi) (yj) (yk) (yl) (ym) (yn) (yo) (yp) (yq) (yr) (ys) (yt) (yu) (yv) (yw) (yx) (yy) (yz) (za) (zb) (zc) (zd) (ze) (zf) (zg) (zh) (zi) (zj) (zk) (zl) (zm) (zn) (zo) (zp) (zq) (zr) (zs) (zt) (zu) (zv) (zw) (zx) (zy) (zz)	
LANDSCAPE PLANTING	
PROJECT: VPS CHRYSLER DODGE JEEP RAM N. RICHLAND HILLS LOT B, LOT 1C, BLOCK E, LOT 1R, BLOCK CR 7740 NE LOOP 820 CITY OF NORTH RICHLAND HILLS, TARRANT COUNTY, TEXAS	JOB No: 2320-99-007 DATE: 11/11/2018 DRAWN BY: JWG DESIGNED BY: JWG CHECKED BY: RM CONSTRUCTION CHECK: DATE CONSTRUCTION CHECK: DATE DEC Client Code: 2320 Rev. # 0



PLANT SCHEDULE

TREES	CODE	BOTANICAL NAME / COMMON NAME	CONT	CAL	HEIGHT	QTY
	LW	Lagerstroemia indica 'Watermelon Red' / Watermelon Red Crape Myrtle Multi trunk - 3-5 canes, 2" caliper overall.	30 gal	2" Cal	8'-10'	13
SHRUBS	CODE	BOTANICAL NAME / COMMON NAME	SIZE		SPACING	QTY
	AE	Abelia x grandiflora 'Edward Goucher' / Glossy Abelia	3 gal		36" o.c.	95
	IN	Ilex vomitoria 'Nana' / Dwarf Yaupon	3 gal		36" o.c.	104
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- INSTALL 5 OUNCE, WOVEN, NEEDLE-PUNCHED POLYPROPYLENE FABRIC UNDER ALL MULCHED AREAS AND INDIVIDUAL TREE RINGS.
- INSTALL 3" THICK LAYER OF "RARE RED ROCK #1" GRAVEL MULCH TOPDRESSING, AS AVAILABLE FROM FULLER 5 LANDSCAPE SUPPLY, CUSSETA, ALABAMA, (888) 749-2880, IN ALL PLANTING BEDS.
- INSTALL 1/4" GREEN STEEL EDGING BETWEEN ALL PLANTING BEDS AND TURF AREAS, AND BETWEEN GROUNDCOVERS AND OTHER PLANTS (WHERE INDICATED ON THE PLAN).
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 - THE LANDSCAPE SHALL SHOW ACTIVE, HEALTHY GROWTH (WITH EXCEPTIONS MADE FOR SEASONAL DORMANCY). ALL PLANTS NOT MEETING THIS CONDITION SHALL BE REJECTED AND REPLACED BY HEALTHY PLANT MATERIAL PRIOR TO FINAL ACCEPTANCE.
 - ALL HARDSCAPE SHALL BE CLEANED PRIOR TO FINAL ACCEPTANCE.
 - SODDED AREAS MUST BE ACTIVELY GROWING AND MUST REACH A MINIMUM HEIGHT OF 1 1/2 INCHES BEFORE FIRST MOWING. HYDROMULCHED AREAS SHALL SHOW ACTIVE, HEALTHY GROWTH. BARE AREAS LARGER THAN TWELVE SQUARE INCHES MUST BE RESEEDDED OR RESEEDDED (AS APPROPRIATE) PRIOR TO FINAL ACCEPTANCE. ALL SODDED TURF SHALL BE NEATLY MOWED.
- SEE SPECIFICATIONS AND DETAILS FOR FURTHER REQUIREMENTS.

ROOT BARRIERS

THE CONTRACTOR SHALL INSTALL ROOT BARRIERS NEAR ALL NEWLY-PLANTED TREES THAT ARE LOCATED WITHIN FIVE (5) FEET OF PAVING OR CURBS. ROOT BARRIERS SHALL BE "CENTURY" OR "DEEP-ROOT" 24" DEEP PANELS (OR EQUAL). BARRIERS SHALL BE LOCATED IMMEDIATELY ADJACENT TO HARDSCAPE. INSTALL PANELS PER MANUFACTURER'S RECOMMENDATIONS. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR USE ROOT BARRIERS OF A TYPE THAT COMPLETELY ENCIRCLE THE ROOTBALL.

MULCHES

AFTER ALL PLANTING IS COMPLETE, CONTRACTOR SHALL INSTALL 4" THICK LAYER OF "RARE RED ROCK #1" GRAVEL MULCH TOPDRESSING, AS AVAILABLE FROM FULLER 5 LANDSCAPE SUPPLY, CUSSETA, ALABAMA, (888) 749-2880 (OR EQUAL), OVER LANDSCAPE FABRIC IN ALL PLANTING AREAS. CONTRACTOR SHALL SUBMIT SAMPLES OF ALL MULCHES TO LANDSCAPE ARCHITECT AND OWNER FOR APPROVAL PRIOR TO CONSTRUCTION. ABSOLUTELY NO EXPOSED GROUND SHALL BE LEFT SHOWING ANYWHERE ON THE PROJECT AFTER MULCH HAS BEEN INSTALLED.

LANDSCAPE CALCULATIONS CDJR

TOTAL SITE AREA 257,891 SF
LANDSCAPE AREA REQUIRED 38,653 SF (15% OF SITE AREA)
LANDSCAPE AREA PROVIDED 7,704 SF (2.9% OF SITE AREA)

LANDSCAPE SETBACK

15' LANDSCAPE SETBACK REQUIRED ADJACENT TO ROW

NE LOOP 820 17'-1' SETBACK PROVIDED
RODGER LINE RD 0' SETBACK PROVIDED
BOOTH CALLAWAY RD 0' SETBACK PROVIDED

REQUIRED TREES IN SETBACK

NE LOOP 820 387 FEET / 50' 7.74 8 TREES REQUIRED 8 TREES PROVIDED
RODGER LINE RD 388 FEET / 50' 7.76 8 TREES REQUIRED 0 TREES PROVIDED
BOOTH CALLAWAY RD 636 FEET / 50' 12.7 13 TREES REQUIRED 13 TREES PROVIDED

REQUIRED SHRUBS IN SETBACK

NE LOOP 820 387 FEET / 50' x 10' 77 SHRUBS REQUIRED 138 SHRUBS PROVIDED
RODGER LINE RD 388 FEET / 50' x 10' 77 SHRUBS REQUIRED 0 SHRUBS PROVIDED
BOOTH CALLAWAY RD 636 FEET / 50' x 10' 127 SHRUBS REQUIRED 179 SHRUBS PROVIDED

PARKING LOT SCREENING

PARKING LOTS SHALL BE SCREENED WITH EVERGREEN SHRUBS PLACED AT 3 FEET O.C.

NE LOOP 820 PROVIDED
RODGER LINE RD NOT PROVIDED
BOOTH CALLAWAY RD PROVIDED

PARKING LOT LANDSCAPING

PARKING LOTS SHALL HAVE 5% LANDSCAPED AREA ONE LARGE TREE PER 20 SPACES REQUIRED 150 SPACES / 20 7.5 8 LARGE TREES

LANDSCAPE ENTRANCES SHALL BE PLANTED WITH SMALL SHRUBS
NE LOOP 820 PROVIDED
RODGER LINE RD NOT PROVIDED

PARKING LOTS SHALL BE AT LEAST 5% LANDSCAPED 222,581 SF x .05 11,129 SF LANDSCAPING REQUIRED

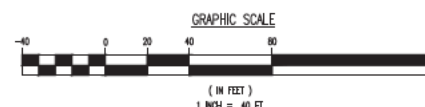
PROVIDED
NOT PROVIDED
PROVIDED

NOT PROVIDED
0 TREES PROVIDED

PROVIDED
NOT PROVIDED

2,744 SF PROVIDED





GENERAL NOTES

1. THIS LIGHTING PLAN ILLUSTRATES ILLUMINATION LEVELS CALCULATED FROM LABORATORY DATA TAKEN UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY OF NORTH AMERICA (IESNA) APPROVED METHODS. ACTUAL LIGHTING LEVELS AND PERFORMANCE OF LUMINAIRES MAY VARY DUE TO VARIATIONS IN WEATHER, ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS, AND OTHER RELATED VARIABLE FIELD CONDITIONS.
2. ALL EXISTING CONDITIONS LIGHTING LEVELS ARE REPRESENTATIVE OF AN APPROXIMATION UTILIZING LABORATORY DATA FOR SIMILAR FIXTURES AND/OR ACTUAL FIELD MEASUREMENTS TAKEN WITH A LIGHT METER. DUE TO FACTORS SUCH AS PLANT MATURATION, EQUIPMENT TOLERANCES, WEATHER CONDITIONS, ETC., ACTUAL LIGHTING LEVELS MAY DIFFER AND THE LIGHTING LEVELS DERIVED ON THIS PLAN SHOULD BE CONSIDERED AS APPROXIMATE.
3. ALL WIRING METHODS AND EQUIPMENT CONSTRUCTION SHALL CONFORM TO THE CURRENT NATIONAL ELECTRICAL CODE.
4. ALL EXISTING LIGHTING CONDITIONS HAVE BEEN OBTAINED FROM SITE VIEWS. LIGHTING LEVEL, BENEATH SHED ROOF STRUCTURES ARE NOT SHOWN.

[illegible]

DESCRIPTION

The Lumark Nighthawk III utilizes a soft-cornered aerodynamic design to provide excellent EPA ratings and an aesthetically pleasing appearance. Dark bronze polyester powder coat finish assures corrosion resistance and long-lasting aesthetics. U.L. listed and CSA certified for wet locations. The Nighthawk III uses an innovative die-cut optical design which delivers maximum beam control for storage areas, rail yards, loading docks and building perimeters.

Lumark

Catalog #	Type
Project	Date
Comments	
Prepared by	

SPECIFICATION FEATURES

Construction LATCHES: Formed aluminum flush draw-action latches offer easy access to lamp compartment without tools and maintain integrity of seal when closed. HOUSING: Aerodynamically designed die-cast aluminum housing has low EPA rating. DOOR: Die-cast aluminum with integral cast hinges for removal without tools. GASKET: Door gasket is foam-in-place silicone, providing maximum protection of interior components from the elements.	Electrical BALLAST: Ballast components are hard mounted to fixture housing for maximum heat dissipation and extended component and lamp life.	Mounting Slipfitter: Die-cast aluminum integral slipfitter mounts on nominal 2 3/8" or 3" O.D. tenons. A degree-marked quadrant is cast in for easy and accurate aiming. Yoke: Heavy-duty steel yoke provides flexibility in mounting from a variety of surfaces. Trunnion: Die-formed steel trunnion is easily adapted to many areas and allows easy fixture aiming.
Optical LENS: Heat- and impact-resistant tempered glass. Lens is mounted flush with door surface to reduce wind drag and prevent dirt or moisture from accumulating. REFLECTOR: Computer designed die-cut reflector system delivers superior beam control and efficiency.		Efficiency Standards Notice Select luminaires are manufactured to USA and California efficiency regulations.

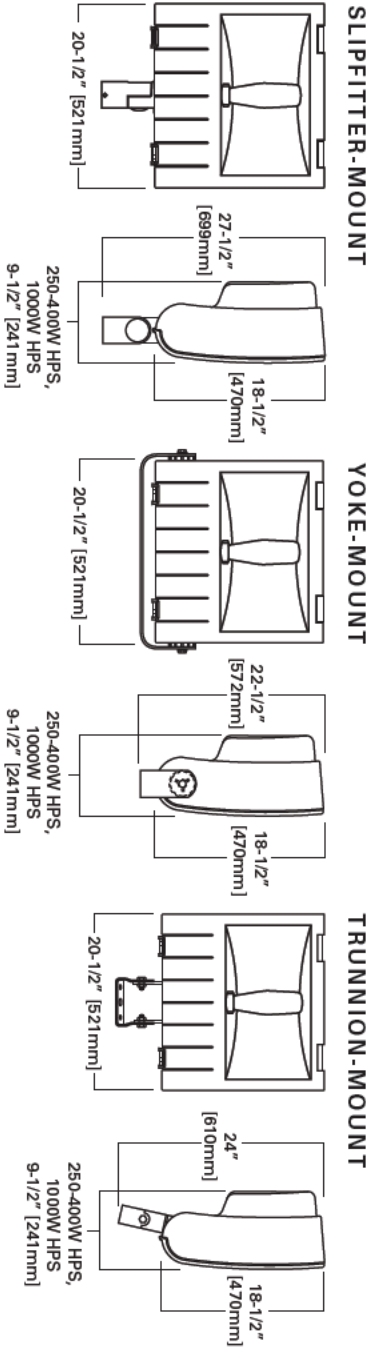


NK
NIGHTHAWK III

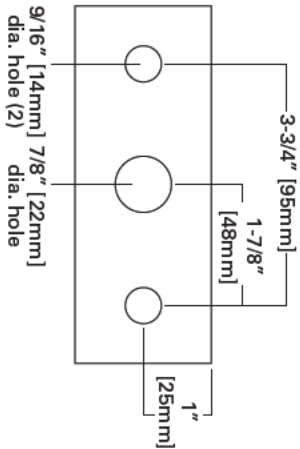
250 - 1000W
Pulse Start Metal Halide
250 - 1000W
High Pressure Sodium

SLIPFITTER-, YOKE-, TRUNNION-MOUNT FLOODLIGHT

DIMENSIONS



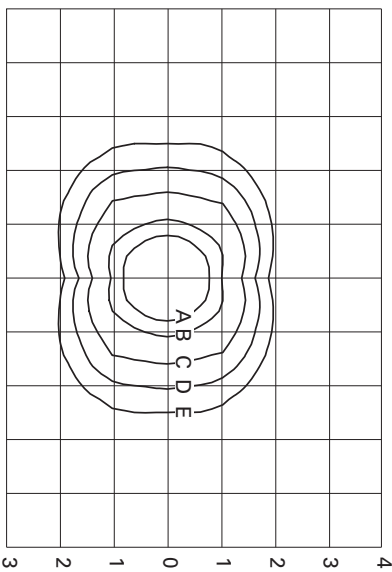
DRILLING PATTERN FOR YOKE- AND TRUNNION-MOUNT



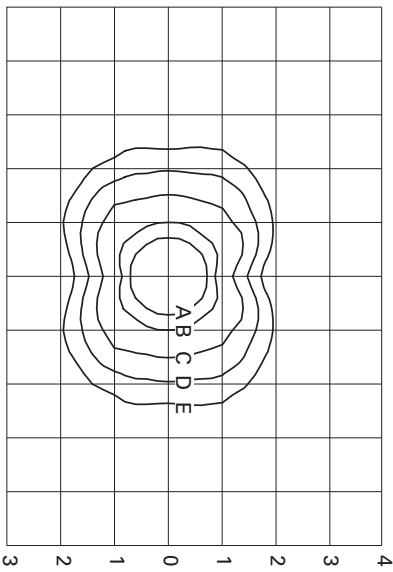
EPA
Effective Projected Area: 2.7
SHIPPING DATA
Approximate Net Weight:
59 lbs. (27 kgs.)

TECHNICAL DATA
U.L. Wet Location Listed
CSA Certified
EISA Compliant ®

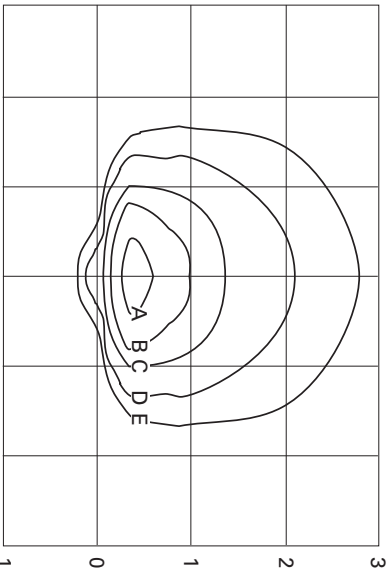
PHOTOMETRICS



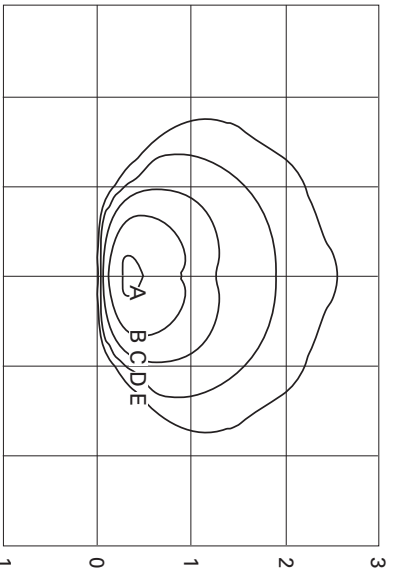
HPNK-X76-400
400-Watt HP
50,000-Lumen Clear Lamp



MPNK-X76-400
400-Watt MP
42,000-Lumen Clear Lamp



HPNK-X76-1000
1000-Watt HP
140,000-Lumen Clear Lamp



MPNK-X76-1000
1000-Watt MP
110,000-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
400W					
20'	10.00	5.00	2.00	1.00	0.50
25'	6.40	3.20	1.28	0.64	0.32
30'	4.44	2.22	0.89	0.44	0.22
35'	3.27	1.63	0.65	0.33	0.16
40'	2.50	1.25	0.50	0.25	0.13
1000W					
30'	20.00	10.00	5.00	2.00	1.00
35'	14.69	7.35	3.67	1.47	0.73
40'	11.25	5.63	2.81	1.13	0.56
45'	8.89	4.44	2.22	0.89	0.44
50'	7.20	3.60	1.80	0.72	0.36

EPA Ratings:

Fixture Angle	Wind Direction (sq. ft.)	
	Front	Side
45° from Horizontal	2.7	1.2
90° from Horizontal	4.2	1.2
0° from Horizontal	1.1	1.2

ORDERING INFORMATION

Sample Number: MPNK-S76-400-277V

Lamp Type ¹	Product Family	Mounting	Distribution	Lamp Wattage	Voltage ¹
MP=Pulse Start Metal Halide HP=High Pressure Sodium	NK=Nighthawk III	S=Slipfitter T=Trunnion Y=Yoke	76=7H x 6V Beam Spread	MP 250=250W 400=400W 1000=1000W HP 250=250W 400=400W 1000=1000W	120V=120V 208V=208V 240V=240V 277V=277V 347V=347V ² 480V=480V MT=Multi-Tap, Wired 277V TT=Triple-Tap, Wired 347V ²
Options (Add as Suffix)			Finish	Accessories (Order Separately) ⁶	
F1=Single Fuse (120, 277 or 347V only) F2=Double Fuse (208, 240 or 480V only) O=Quartz Restrike (Hot Strike Only) EM=Quartz Restrike with "Delay Relay" (Quartz lamp strikes at both hot and cold starts) ³ LL=Lamp Included ⁴ PER=NEMA Twistlock Photocontrol Receptacle PC=Button Type Photocontrol ⁵ T=Removable Quick-Disconnect Power Tray ³			—=Bronze (Standard) BLK=Black GRY=Grey WHT=White	TVS-XX=Trunnion or Yoke Slipfitter for 2-3/8", 3", or 3-1/2" O.D. Tenon ⁷ VS/NK=Vandal Shield for 150 - 320W WG/NK=Wire Guard VS/NK/1000=Vandal Shield for 400 - 1000W Units OA/RA1016=Photoelectric Control, 105-285 Volt NEMA Type OA/RA1201=Photoelectric Control, 347V NEMA Type OA/RA1027=Photoelectric Control, 480V NEMA Type OA1028=Field Installed NEMA Twistlock Photocontrol Receptacle (Order Photocontrol Separately) TV/NK-XX=Top or Bottom Visor SV1/NK-XX=Single Side Visor SV/NK-XX=Double Side Visor OA/RA1013=Shorting Cap	

NOTES:

- 1. Consult an Eaton representative for lamp/ballast type/voltage compatibility.
- 2. 88% efficient EISA Compliant fixtures not available in 347V or TT voltages.
- 3. Not available in 1000W.
- 4. Lamp is shipped separate from luminaire. Lamp is Eaton designated product based on luminaire requirements. Specified lamps must be ordered as a separate line item.
- 5. PC option not available with trunnion or yoke mount.
- 6. Replace XX with color designation.
- 7. Not available with slipfitter-mount.

STOCK SAMPLE NUMBER: (LAMP INCLUDED)

Sample Number: MPNKS40

Lamp Type	Product Family	Mounting	Lamp Wattage ²	Accessories
MP=Pulse Start Metal Halide HP=High Pressure Sodium	NK=Nighthawk III ¹	S=Slipfitter Y=Yoke	40=400W 1K=1000W	TYS=Trunnion or Yoke Slipfitter for 2-3/8", 3", or 3-1/2" O.D. Tenon

NOTES:

- 1. Multi-tap ballast, 7Hx6V beam spread, bronze finish, and lamp are standard for stock product. Refer to In Stock Guide for availability.
- 2. DOE/EISA regulations replace the state of California's requirements and CEC designation will no longer be required for California installations on products manufactured beginning February 10, 2017.



Eaton
1121 Highway 74 South
Peachtree City, GA 30269
P: 770-486-4800
www.eaton.com/lighting

Specifications and
dimensions subject to
change without notice.

SHARK4-50W/D10



The four-foot SHARK 4 s available in 36W and 50W versions. This compact slant near LED washdown fixture is ideal for car washes, tunnels, stairs and other hard-to-reach areas where reaming is difficult and costly.

Color: White

Weight: 13.3 lbs

Project:	Type:
Prepared By:	Date:

Driver Info		LED Info	
Type:	Constant Current	Watts:	50W
120V:	0.42A	Color Temp:	5000K
208V:	0.24A	Color Accuracy:	75 CRI
240V:	0.21A	L70 L lifespan:	100000
277V:	0.18A	Lumens:	5161
Input Watts:	48W	Eff cacy:	107 LPW
Eff cency:	N/A		

Technical Specifications

Listings

UL Listing:

Suitable for wet locations.

DLC Listed:

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

DLC Product Code: PV941B8V

NEMA Rating:

4X, protected against corrosion

IESNA LM-79 & LM-80 Testing:

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

Electrical

Driver:

Class 2 Constant Current, 4kV, 100-277VAC, 50-60Hz

Dimming Driver:

Driver includes dimming control wiring for 0-10V dimming systems. Requires separate 0-10V DC dimming circuit. Dimmer as low as 10%.

THD:

7.5% at 120V, 8.9% at 277V

Power Factor:

99.1% at 120V, 95.2% at 277V

Construction

IP Rating:

Ingress Protection rating of IP66 for dust and water

Reflector/Tray:

Aluminum

Housing:

5VA impact-resistant polycarbonate. 1/2" openings for conduit and bushing/cord entry. Polycarbonate is affected by cleaning agents or other fluids containing a solvent such as isopropyl alcohol. Weights and measures, ketones, esters, aromatic hydrocarbons and perchlorinated hydrocarbons.

Mounting:

Quick-mount, surface, stainless steel springs supplied. 4 additional mounting accessories available.

Lens:

Diffuse polycarbonate lenses for low glare and maximum protection

Gaskets:

EVA cone foam

Maximum Ambient Temperature:

Suitable for use in 40°C (104°F) ambient temperatures

Cold Weather Starting:

Minimum starting temperature is -40°C (-40°F)

Green Technology:

Mercury and UV free. RoHS compliant components. Polyester powder coating in formulated without the use of VOC or toxic heavy metals.

Finish:

Formulated for high-durability and long-lasting color.

LED Characteristics

LEDs:

Long-life, high-efficiency surface mounting LEDs

Lifespan:

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

Color Stability:

LED color temperature is warranted to shift no more than 200K in CCT over a 5 year period

Color Uniformity:

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

Other

Warranty:

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

American Bureau of Shipping (ABS) :

For use on Mobile Offshore Drilling Units (MODU) and shipper vessels.

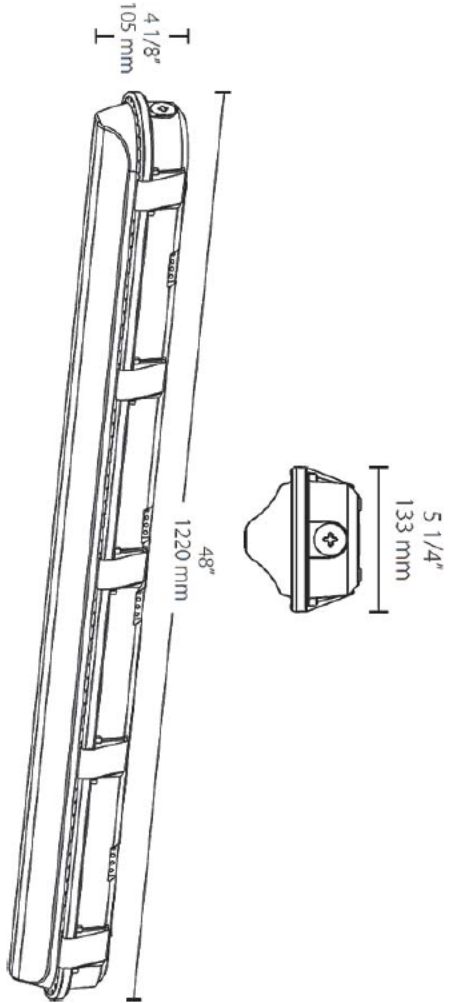
Buy American Act Compliance:

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

SHARK4-50W/D10



Dimensions

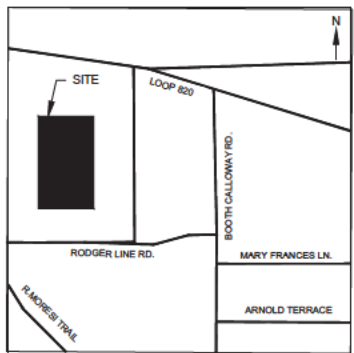


Features

- Impact-res stant near washdown
- Idea for car washes, tunnels and stairs
- Mounting options: Chain, junction box, angled surface mount or vanderstant surface mount
- IP66 Rating protects against dust & water ingress
- 0-10V dimming
- 5-Year, no compromise warranty
- 100,000-Hour LED lifespan

Ordering Matrix

Family	Length	Watts	Color Temp	Finish	Dimming	Voltage
SHARK	4	50		W	/D10	
	4 = 4 ft	36 = 36W 50 = 50W	Blank = 5000K (Cool) Y = 3000K (Warm) YN = 3500K (Warm Neutral) N = 4000K (Neutral)	W = White	D10 = Dimmable	Blank = 120-277V /480 = 480V

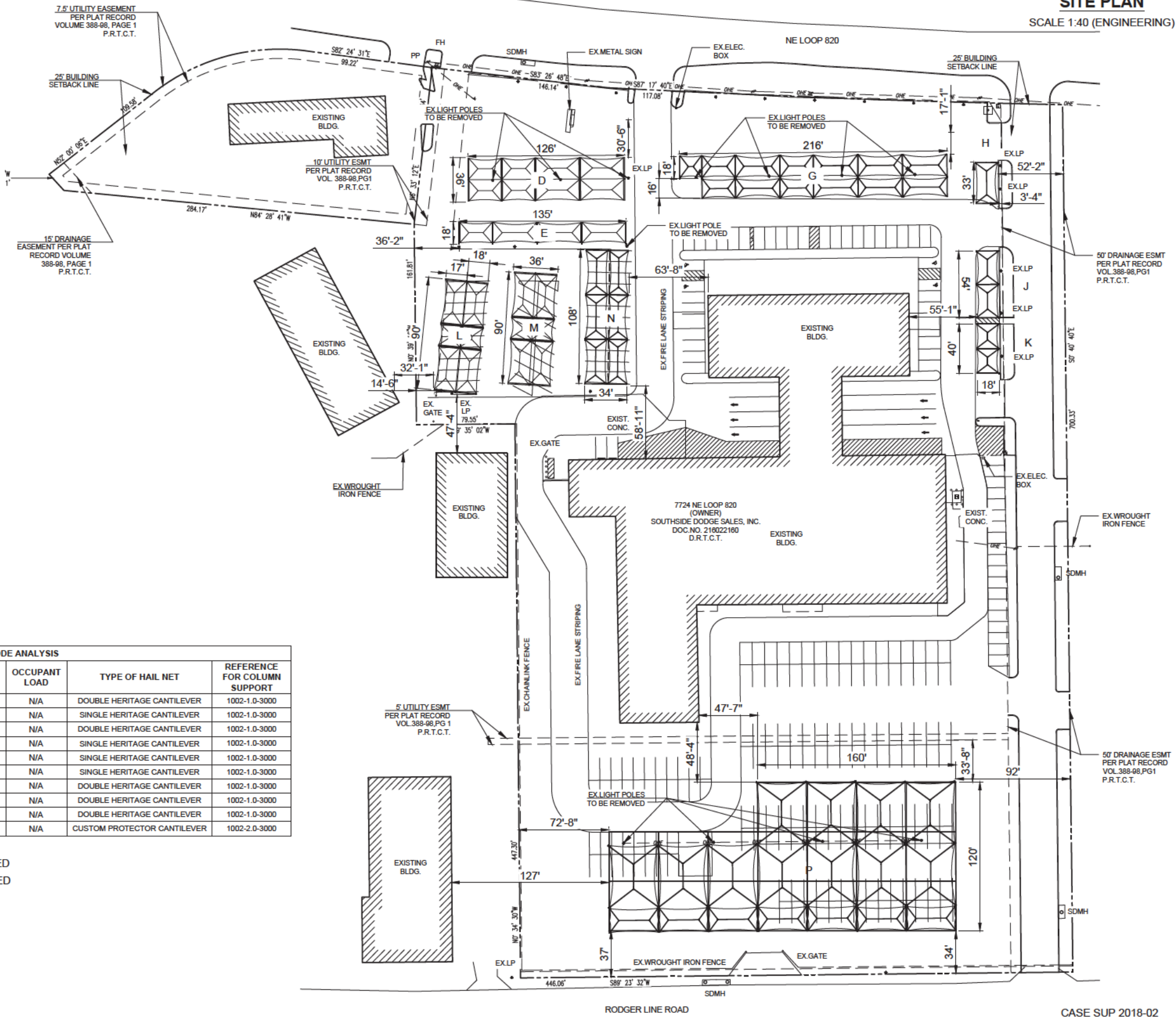


VICINITY MAP
N.T.S.

ADDRESS:
7724 NE LOOP 820
NORTH RICHLAND HILLS, TX 76180

CODE ANALYSIS						
BUILDING	OCCUPANCY	CONSTRUCTION TYPE	AREA (SQF)	OCCUPANT LOAD	TYPE OF HAIL NET	REFERENCE FOR COLUMN SUPPORT
D	S2	2-B	4536	N/A	DOUBLE HERITAGE CANTILEVER	1002-1.0-3000
E	S2	2-B	2430	N/A	SINGLE HERITAGE CANTILEVER	1002-1.0-3000
G	S2	2-B	6750	N/A	DOUBLE HERITAGE CANTILEVER	1002-1.0-3000
H	S2	2-B	564	N/A	SINGLE HERITAGE CANTILEVER	1002-1.0-3000
J	S2	2-B	918	N/A	SINGLE HERITAGE CANTILEVER	1002-1.0-3000
K	S2	2-B	713	N/A	SINGLE HERITAGE CANTILEVER	1002-1.0-3000
L	S2	2-B	3150	N/A	DOUBLE HERITAGE CANTILEVER	1002-1.0-3000
M	S2	2-B	3240	N/A	DOUBLE HERITAGE CANTILEVER	1002-1.0-3000
N	S2	2-B	3780	N/A	DOUBLE HERITAGE CANTILEVER	1002-1.0-3000
P	S2	2-B	27600	N/A	CUSTOM PROTECTOR CANTILEVER	1002-2.0-3000

NOTE: EXISTING LIGHT POLES TO BE REMOVED
THAT ARE IN CONFLICT WITH PROPOSED
HAIL NETS



N
SITE PLAN
SCALE 1:40 (ENGINEERING)

THESE PLANS AND SPECIFICATIONS ARE THE PROPERTY OF VPS SHADE AND FABRIC STRUCTURES AND SHALL NOT BE REPRODUCED WITHOUT THEIR WRITTEN PERMISSION.

CORPORATE HEADQUARTERS
8505-A CHANCELLOR ROW
DALLAS, TX, 75247
800-966-5005

CERTIFICATIONS
IAS CERTIFICATION No FA-428
CLARK COUNTY MANUFACTURER
CERTIFICATION NUMBER (NEVADA) 355

CUSTOMER
AUTONATION INC.
PROJECT NAME
HYUNDAI N. RICHLAND HILLS
LOCATION
NORTH RICHLAND HILLS TX
PROJECT NUMBER.
63012

STRUCTURE TYPE
HERITAGE CANTILEVERS & DIAMOND PROTECTORS
SIZE
ARIOUS
SCALE
ENGINEERING
DRAWING SIZE
D

JO	ENG
JO	CHK
SA	DRW
05/08/18	DATE
NC	REV

RELEASE FOR FABRICATION
DESCRIPTION

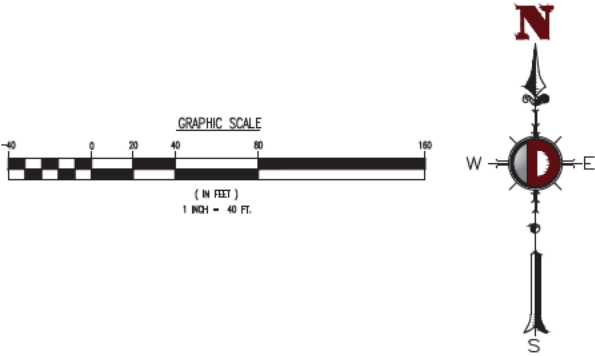
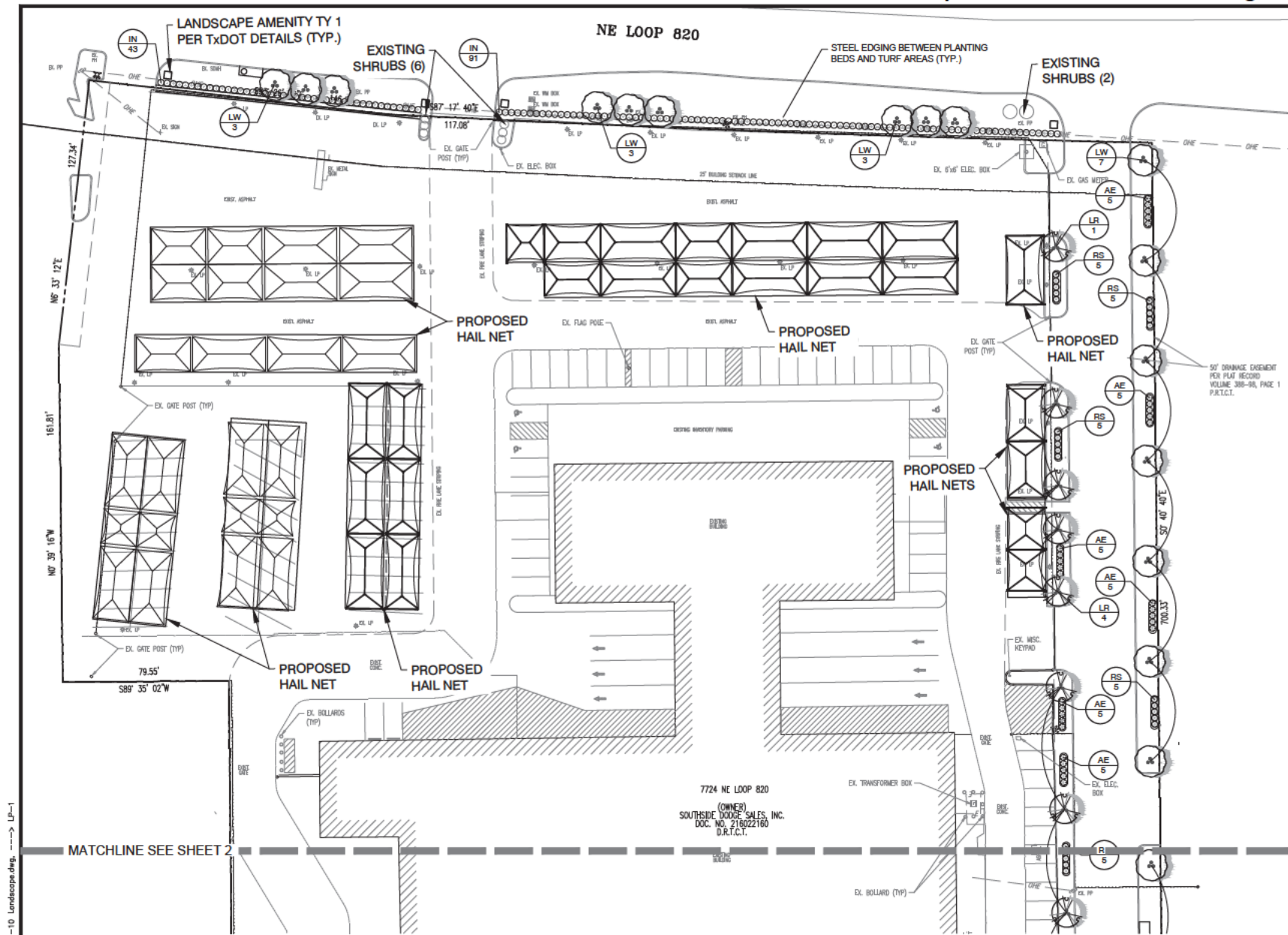
Eng. By JO 05/08/18
Design By SA 05/08/18
Approved By JO 05/08/18

DRAWING DESCRIPTION
SITE PLAN







DWG. **63012-1.9**

PAGE **4000**

REV. **NC**



PLANT SCHEDULE

TREES	CODE	BOTANICAL NAME / COMMON NAME	CONT	CAL	HEIGHT	QTY
	LW	Lagerstroemia indica 'Watermelon Red' / Watermelon Red Crape Myrtle Mul / trunk - 3-5 canes, 2" caliper overall.	30 gal	2" Cal	8'-10'	24
	LR	Lagerstroemia x 'Tuscarora' / Red Crape Myrtle Mul / trunk - 3-5 canes, 2" caliper overall.	30 gal	2" Cal		15
	UC	Ulmus crassifolia / Cedar Elm	B & B	3" Cal	10'-12'	9
SHRUBS	CODE	BOTANICAL NAME / COMMON NAME	SIZE		SPACING	QTY
	AE	Abelia x grandiflora 'Edward Goucher' / Glossy Abelia	3 gal		36" o.c.	168
	IN	Ilex vomitoria 'Nana' / Dwarf Yaupon	3 gal		36" o.c.	134
	RS	Rhaphiolepis indica 'Snow White' / Snow White Indian Hawthorn	5 gal		36" o.c.	55

GENERAL LANDSCAPE NOTES

- THE GENERAL CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL EXISTING VEGETATION (EXCEPT WHERE NOTED TO REMAIN). BEFORE STARTING WORK, THE LANDSCAPE CONTRACTOR SHALL VERIFY THAT THE GRADE OF ALL LANDSCAPE AREAS ARE WITHIN +40.1' OF FINISH GRADE. THE LANDSCAPE CONTRACTOR SHALL NOTIFY THE OWNER IMMEDIATELY SHOULD ANY DISCREPANCIES EXIST. SEE SPECIFICATIONS FOR MORE DETAILED INSTRUCTION ON TURF AREA AND PLANTING BED PREPARATION.
- THE LANDSCAPE CONTRACTOR SHALL CONSTRUCT AND MAINTAIN FINISH GRADES AS SHOWN ON GRADING PLANS, AND CONSTRUCT AND MAINTAIN SLOPES AS RECOMMENDED BY THE GEOTECHNICAL REPORT. ALL LANDSCAPE AREAS SHALL HAVE POSITIVE DRAINAGE AWAY FROM STRUCTURES AT THE MINIMUM SLOPE SPECIFIED IN THE REPORT, AND AREAS OF POTENTIAL PONDING SHALL BE REGRADED TO BLEND IN WITH THE SURROUNDING GRADES AND ELIMINATE PONDING POTENTIAL. SHOULD ANY CONFLICTS AND/OR DISCREPANCIES ARISE BETWEEN THE GRADING PLANS, GEOTECHNICAL REPORT, THESE NOTES, AND ACTUAL CONDITIONS, THE CONTRACTOR SHALL IMMEDIATELY BRING SUCH ITEMS TO THE ATTENTION OF THE LANDSCAPE ARCHITECT AND OWNER. CONTRACTOR SHALL ENSURE THAT THE GRADE IN SOD AREAS SHALL BE 1" BELOW FINISH GRADE BEFORE INSTALLING SOIL AMENDMENTS, AND 2" BELOW FINISH GRADE IN SHRUB AREAS BEFORE INSTALLING SOIL AMENDMENTS. MULCH COVER WITHIN 6" OF CONCRETE WALKS AND CURBS SHALL NOT PROTRUDE ABOVE THE FINISH SURFACE OF THE WALKS AND CURBS. MULCH COVER WITHIN 12" OF WALLS SHALL BE AT LEAST 3" LOWER THAN THE TOP OF WALL.
- INSTALL 5 OUNCE WOVEN NEEDLE-PUNCHED POLYPROPYLENE FABRIC UNDER ALL MULCHED AREAS AND INDIVIDUAL TREE RINGS.
- INSTALL 3" THICK LAYER OF "RARE RED ROCK #1" GRAVEL MULCH TOPDRESSING, AS AVAILABLE FROM FULLER 5 LANDSCAPE SUPPLY, CUSSETA, ALABAMA, (888) 749-2880, IN ALL PLANTING BEDS.
- INSTALL 14G, GREEN STEEL EDGING BETWEEN ALL PLANTING BEDS AND TURF AREAS, AND BETWEEN GROUNDCOVERS AND OTHER PLANTS (WHERE INDICATED ON THE PLAN).
- HYDROMULCH ALL DISTURBED AREAS OUTSIDE OF PROPERTY LIMITS (UNLESS SHOWN AS SOD).
- ALL PLANT LOCATIONS ARE DIAGRAMMATIC. ACTUAL LOCATIONS SHALL BE VERIFIED WITH THE LANDSCAPE ARCHITECT OR DESIGNER PRIOR TO PLANTING. THE LANDSCAPE CONTRACTOR SHALL ENSURE THAT ALL REQUIREMENTS OF THE PERMITTING AUTHORITY ARE MET (I.E. MINIMUM PLANT QUANTITIES, PLANTING METHODS, TREE PROTECTION MEASURES, ETC.).
- THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR DETERMINING PLANT QUANTITIES; PLANT QUANTITIES SHOWN ON LEGENDS AND CALLOUTS ARE FOR GENERAL INFORMATION ONLY. IN THE EVENT OF A DISCREPANCY BETWEEN THE PLAN AND THE PLANT LEGEND, THE PLANT QUANTITY AS SHOWN ON THE PLAN (FOR INDIVIDUAL SYMBOLS) OR CALLOUT (FOR GROUNDCOVER PATTERNS) SHALL TAKE PRECEDENCE.
- NO SUBSTITUTIONS OF PLANT MATERIALS SHALL BE ALLOWED. IF SOME OF THE PLANTS ARE NOT AVAILABLE, THE LANDSCAPE CONTRACTOR SHALL NOTIFY THE LANDSCAPE DESIGNER IN WRITING (VIA PROPER CHANNELS).
- PLANTS MAY BE INSPECTED AND APPROVED OR REJECTED ON THE JOBSITE BY THE OWNER OR OWNER'S REPRESENTATIVE.
- THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF ALL WORK SHOWN ON THESE PLANS FOR 90 DAYS BEYOND FINAL ACCEPTANCE OF ALL LANDSCAPE WORK BY THE OWNER. LANDSCAPE MAINTENANCE SHALL INCLUDE WEEKLY SITE VISITS FOR THE FOLLOWING ACTIONS (AS APPROPRIATE): PROPER PRUNING, RESTAKING OF TREES, RESETTling OF PLANTS THAT HAVE SETTLED, MOWING AND AERATION OF LAWNS, WEEDING, RESEEDING AREAS WHICH HAVE NOT GERMINATED WELL, TREATING FOR INSECTS AND DISEASES, REPLACEMENT OF MULCH, REMOVAL OF LITTER, REPAIRS TO THE IRRIGATION SYSTEM DUE TO FAULTY PARTS AND/OR WORKMANSHIP, AND THE APPROPRIATE WATERING OF ALL PLANTINGS. THE LANDSCAPE CONTRACTOR SHALL MAINTAIN THE IRRIGATION SYSTEM IN PROPER WORKING ORDER, WITH SCHEDULING ADJUSTMENTS BY SEASON TO MAXIMIZE WATER CONSERVATION.
- SHOULD SEEDED AND/OR SODDED AREAS NOT BE COVERED BY AN AUTOMATIC IRRIGATION SYSTEM, THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR WATERING THESE AREAS AND OBTAINING A FULL STAND OF GRASS AT NO ADDITIONAL COST TO THE OWNER.
- TO ACHIEVE FINAL ACCEPTANCE AT THE END OF THE MAINTENANCE PERIOD, ALL OF THE FOLLOWING CONDITIONS MUST OCCUR:
 - THE LANDSCAPE SHALL SHOW ACTIVE, HEALTHY GROWTH (WITH EXCEPTIONS MADE FOR SEASONAL DORMANCY). ALL PLANTS NOT MEETING THIS CONDITION SHALL BE REJECTED AND REPLACED BY HEALTHY PLANT MATERIAL PRIOR TO FINAL ACCEPTANCE.
 - ALL LANDSCAPE SHALL BE CLEANED PRIOR TO FINAL ACCEPTANCE.
 - SODDED AREAS MUST BE ACTIVELY GROWING AND MUST REACH A MINIMUM HEIGHT OF 12 INCHES BEFORE FIRST MOWING. HYDROMULCHED AREAS SHALL SHOW ACTIVE, HEALTHY GROWTH. BARE AREAS LARGER THAN TWELVE SQUARE INCHES MUST BE RESEEDDED OR RESEEDED (AS APPROPRIATE) PRIOR TO FINAL ACCEPTANCE. ALL SODDED TURF SHALL BE NEATLY MOWED.
- SEE SPECIFICATIONS AND DETAILS FOR FURTHER REQUIREMENTS.

ROOT BARRIERS

THE CONTRACTOR SHALL INSTALL ROOT BARRIERS NEAR ALL NEWLY-PLANTED TREES THAT ARE LOCATED WITHIN FIVE (5) FEET OF PAVING OR CURBS. ROOT BARRIERS SHALL BE "CENTURY" OR "DEEP-ROOT" 24" DEEP PANELS (OR EQUAL). BARRIERS SHALL BE LOCATED IMMEDIATELY ADJACENT TO HARDSCAPE. INSTALL PANELS PER MANUFACTURER'S RECOMMENDATIONS. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR USE ROOT BARRIERS OF A TYPE THAT COMPLETELY ENCLOSE THE ROOTBALL.

MULCHES

AFTER ALL PLANTING IS COMPLETE, CONTRACTOR SHALL INSTALL 4" THICK LAYER OF "RARE RED ROCK #1" GRAVEL MULCH TOPDRESSING, AS AVAILABLE FROM FULLER 5 LANDSCAPE SUPPLY, CUSSETA, ALABAMA, (888) 749-2880 (OR EQUAL), OVER LANDSCAPE FABRIC IN ALL PLANTING AREAS. CONTRACTOR SHALL SUBMIT SAMPLES OF ALL MULCHES TO LANDSCAPE ARCHITECT AND OWNER FOR APPROVAL PRIOR TO CONSTRUCTION. ABSOLUTELY NO EXPOSED GROUND SHALL BE LEFT SHOWING ANYWHERE ON THE PROJECT AFTER MULCH HAS BEEN INSTALLED.

LANDSCAPE CALCULATIONS

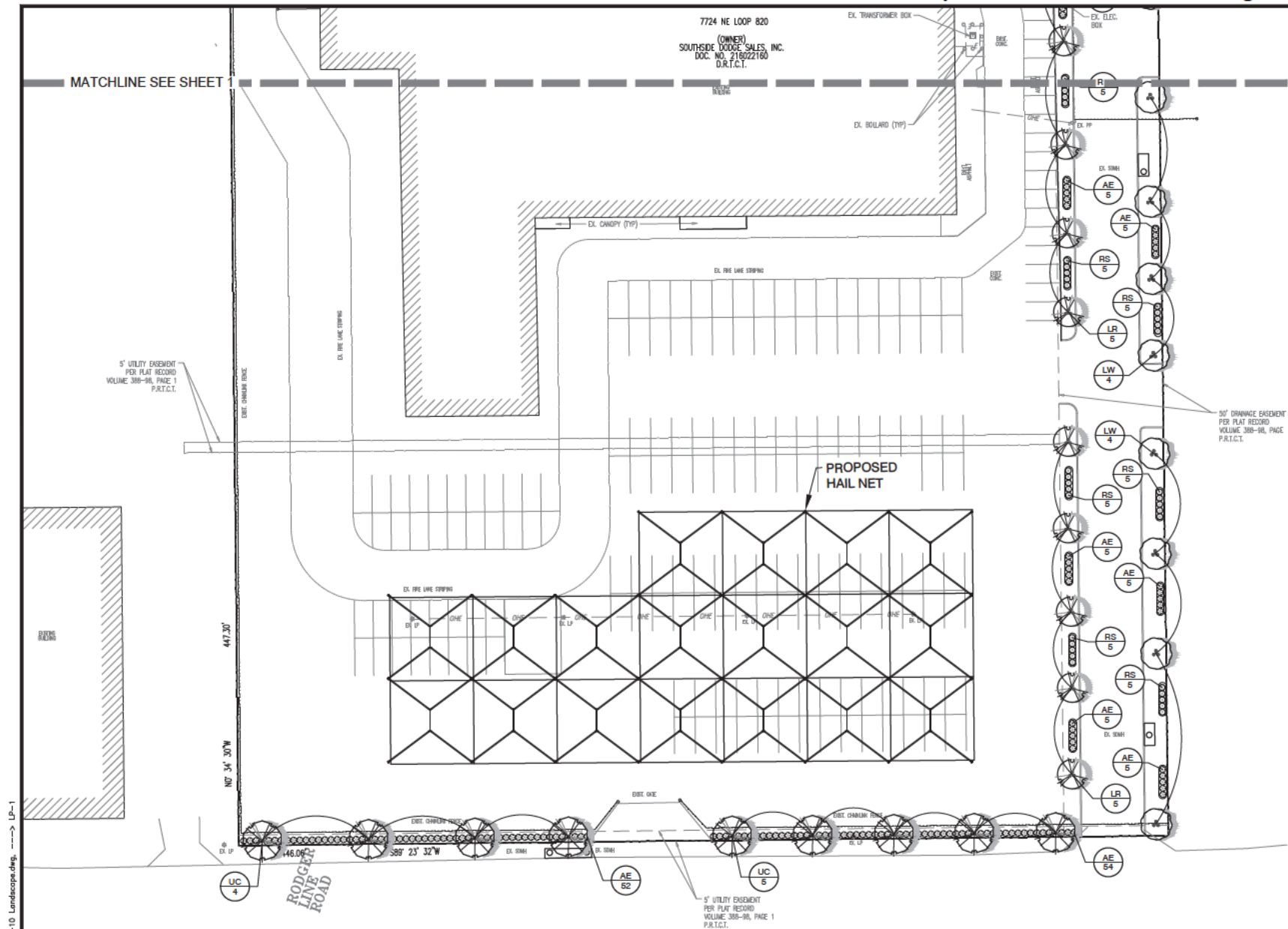
TOTAL SITE AREA	338,307 SF
LANDSCAPE AREA REQUIRED	50,746 SF (15% OF SITE AREA)
LANDSCAPE AREA PROVIDED	7,296 SF (2.1% OF SITE AREA)
LANDSCAPE SETBACK	
15' LANDSCAPE SETBACK REQUIRED ADJACENT TO ROW	
NE LOOP 820	0' SETBACK PROVIDED
RODGER LINE RD	6' SETBACK PROVIDED
REQUIRED TREES IN SETBACK - 1 LARGE TREE PER 50'	
NE LOOP 820 206 FEET / 50' 10.1 11 TREES REQUIRED	11 TREES PROVIDED
RODGER LINE RD 446 FEET / 50' 8.9 9 TREES REQUIRED	9 TREES PROVIDED
REQUIRED SHRUBS IN SETBACK - 10 SHRUBS PER 50'	
NE LOOP 820 436 FEET / 50' x 10 87 SHRUBS REQUIRED	134 SHRUBS PROVIDED
RODGER LINE RD 446 FEET / 50' x 89 89 SHRUBS REQUIRED	108 SHRUBS PROVIDED
PARKING LOT SCREENING	
PARKING LOTS SHALL BE SCREENED WITH EVERGREEN SHRUBS PLACED AT 3 FEET O.C.	
NE LOOP 820	PROVIDED
RODGER LINE RD	PROVIDED
PARKING LOT LANDSCAPING	
ONE LARGE TREE PER 20 SPACES REQUIRED	
150 SPACES / 20 7.5 8 LARGE TREES	0 TREES PROVIDED
LANDSCAPE ENTRANCES SHALL BE PLANTED WITH SMALL SHRUBS	
NE LOOP 820	PROVIDED
RODGER LINE RD	PROVIDED
PARKING LOTS SHALL BE AT LEAST 5% LANDSCAPED	
222,581 SF x .05 11,129 SF LANDSCAPING REQUIRED	430 SF PROVIDED









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Case SUP 2018-02

DYNAMIC ENGINEERING (800) 468-6630 15305 Dallas Pkwy., Ste 300 Addicks, TX 75001 www.dynamic-engineering.com		Title: LANDSCAPE PLAN	
PROJECT: VPS HYUNDAI N. RICHLAND HILLS LOT A3, AREA 1 7724 NE LOOP 820 CITY OF NORTH RICHLAND HILLS	JOB No: XXXX-XX-XXXX	DATE: 5/3/18	SCALE: (N) AS SHOWN
DRAWN BY: JWG	DESIGNED BY: JWG	CHECKED BY: RM	SHEET No: 1
CONSTRUCTION CHECK: DATE		1 OF 3	
CONSTRUCTION CHECK: DATE		Rev: 0	
DEC Client Code: XXXX			



PLANT SCHEDULE

TREES	CODE	BOTANICAL NAME / COMMON NAME	CONT	CAL	HEIGHT	QTY
	LW	Lagerstroemia indica 'Watermelon Red' / Watermelon Red Crape Myrtle Multi trunk - 3-5 canes, 2" caliper over 1.	30 gal	2" Cal	8'-10'	24
	LR	Lagerstroemia x 'Tuscarora' / Red Crape Myrtle Multi trunk - 3-5 canes, 2" caliper over 1.	30 gal	2" Cal		15
	UC	Ulmus crassifolia / Cedar Elm	B & B	3" Cal	10'-12'	9
SHRUBS	CODE	BOTANICAL NAME / COMMON NAME	SIZE		SPACING	QTY
	AE	Abelia x grandiflora 'Edward Goucher' / Glossy Abelia	3 gal		36" o.c.	166
	IN	Ilex vomitoria 'Nana' / Dwarf Yaupon	3 gal		36" o.c.	134
	RS	Rhaphiolepis indica 'Snow White' / Snow White Indian Hawthorn	5 gal		36" o.c.	55

GENERAL LANDSCAPE NOTES

- THE GENERAL CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL EXISTING VEGETATION (EXCEPT WHERE NOTED TO REMAIN). BEFORE STARTING WORK, THE LANDSCAPE CONTRACTOR SHALL VERIFY THAT THE GRADE OF ALL LANDSCAPE AREAS ARE WITHIN +0.1' OF FINISH GRADE. THE LANDSCAPE CONTRACTOR SHALL NOTIFY THE OWNER IMMEDIATELY SHOULD ANY DISCREPANCIES EXIST. SEE SPECIFICATIONS FOR MORE DETAILED INSTRUCTION ON TURF AREA AND PLANTING BED PREPARATION.
- THE LANDSCAPE CONTRACTOR SHALL CONSTRUCT AND MAINTAIN FINISH GRADES AS SHOWN ON GRADING PLANS, AND CONSTRUCT AND MAINTAIN SLOPES AS RECOMMENDED BY THE GEOTECHNICAL REPORT. ALL LANDSCAPE AREAS SHALL HAVE POSITIVE DRAINAGE AWAY FROM STRUCTURES AT THE MINIMUM SLOPE SPECIFIED IN THE REPORT, AND AREAS OF POTENTIAL PONDING SHALL BE REGRADED TO BLEND IN WITH THE SURROUNDING GRADES AND ELIMINATE PONDING POTENTIAL. SHOULD ANY CONFLICTS AND/OR DISCREPANCIES ARISE BETWEEN THE GRADING PLANS, GEOTECHNICAL REPORT, THESE NOTES, AND ACTUAL CONDITIONS, THE CONTRACTOR SHALL IMMEDIATELY BRING SUCH ITEMS TO THE ATTENTION OF THE LANDSCAPE ARCHITECT AND OWNER.
- CONTRACTOR SHALL ENSURE THAT THE GRADE IN SOD AREAS SHALL BE 1" BELOW FINISH GRADE BEFORE INSTALLING SOIL AMENDMENTS, AND 2" BELOW FINISH GRADE IN SHRUB AREAS BEFORE INSTALLING SOIL AMENDMENTS. MULCH COVER WITHIN 6" OF CONCRETE WALKS AND CURBS SHALL NOT PROTRUDE ABOVE THE FINISH SURFACE OF THE WALKS AND CURBS. MULCH COVER WITHIN 12" OF WALLS SHALL BE AT LEAST 3" LOWER THAN THE TOP OF WALL.
- INSTALL 5 OUNCE, WOVEN, NEEDLE-PUNCHED POLYPROPYLENE FABRIC UNDER ALL MULCHED AREAS AND INDIVIDUAL TREE RINGS.
- INSTALL 3" THICK LAYER OF "RARE RED ROCK #1" GRAVEL MULCH TOPDRESSING, AS AVAILABLE FROM FULLER 5 LANDSCAPE SUPPLY, CUSSETA, ALABAMA, (888) 749-2880, IN ALL PLANTING BEDS.
- INSTALL 14G, GREEN STEEL EDGING BETWEEN ALL PLANTING BEDS AND TURF AREAS, AND BETWEEN GROUNDCOVERS AND OTHER PLANTS (WHERE INDICATED ON THE PLAN).
- HYDROMULCH ALL DISTURBED AREAS OUTSIDE OF PROPERTY LIMITS (UNLESS SHOWN AS SOD).
- ALL PLANT LOCATIONS ARE DIAGRAMMATIC. ACTUAL LOCATIONS SHALL BE VERIFIED WITH THE LANDSCAPE ARCHITECT OR DESIGNER PRIOR TO PLANTING. THE LANDSCAPE CONTRACTOR SHALL ENSURE THAT ALL REQUIREMENTS OF THE PERMITTING AUTHORITY ARE MET (I.E., MINIMUM PLANT QUANTITIES, PLANTING METHODS, TREE PROTECTION METHODS, ETC.).
- THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR DETERMINING PLANT QUANTITIES; PLANT QUANTITIES SHOWN ON LEGENDS AND CALLOUTS ARE FOR GENERAL INFORMATION ONLY. IN THE EVENT OF A DISCREPANCY BETWEEN THE PLAN AND THE PLANT LEGEND, THE PLANT QUANTITY AS SHOWN ON THE PLAN (FOR INDIVIDUAL SYMBOLS) OR CALLOUT (FOR GROUNDCOVER PATTERNS) SHALL TAKE PRECEDENCE.
- NO SUBSTITUTIONS OF PLANT MATERIALS SHALL BE ALLOWED. IF SOME OF THE PLANTS ARE NOT AVAILABLE, THE LANDSCAPE CONTRACTOR SHALL NOTIFY THE LANDSCAPE DESIGNER IN WRITING (VIA PROPER CHANNELS).
- PLANTS MAY BE INSPECTED AND APPROVED OR REJECTED ON THE JOBSITE BY THE OWNER OR OWNER'S REPRESENTATIVE.
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 - ALL HARDSCAPE SHALL BE CLEANED PRIOR TO FINAL ACCEPTANCE.
 - SODDED AREAS MUST BE ACTIVELY GROWING AND MUST REACH A MINIMUM HEIGHT OF 1 1/2" INCHES BEFORE FIRST MOWING. HYDROMULCHED AREAS SHALL SHOW ACTIVE, HEALTHY GROWTH. BARE AREAS LARGER THAN TWELVE SQUARE INCHES MUST BE RESEEDDED OR RESEEDED (AS APPROPRIATE) PRIOR TO FINAL ACCEPTANCE. ALL SODDED TURF SHALL BE NEATLY MOWED.
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LANDSCAPE CALCULATIONS

TOTAL SITE AREA	338,307 SF
LANDSCAPE AREA REQUIRED	50,746 SF (15% OF SITE AREA)
LANDSCAPE AREA PROVIDED	7,290 SF (2.1% OF SITE AREA)
LANDSCAPE SETBACK	
15' LANDSCAPE SETBACK REQUIRED ADJACENT TO ROW	
NE LOOP 820	0' SETBACK PROVIDED
RODGER LINE RD	0' SETBACK PROVIDED
REQUIRED TREES IN SETBACK - 1 LARGE TREE PER 50'	
NE LOOP 820 206 FEET / 50' 10.1 11 TREES REQUIRED	11 TREES PROVIDED
RODGER LINE RD 446 FEET / 50' 8.9 9 TREES REQUIRED	9 TREES PROVIDED
REQUIRED SHRUBS IN SETBACK - 10 SHRUBS PER 50'	
NE LOOP 820 436 FEET / 50' x 10 87 SHRUBS REQUIRED	134 SHRUBS PROVIDED
RODGER LINE RD 446 FEET / 50' x 89 89 SHRUBS REQUIRED	106 SHRUBS PROVIDED
PARKING LOT SCREENING	
PARKING LOTS SHALL BE SCREENED WITH EVERGREEN SHRUBS	
PLACED AT 3 FEET O.C.	PROVIDED
NE LOOP 820	PROVIDED
RODGER LINE RD	PROVIDED
PARKING LOT LANDSCAPING	
ONE LARGE TREE PER 20 SPACES REQUIRED	
150 SPACES / 20 7.5 8 LARGE TREES	0 TREES PROVIDED
LANDSCAPE ENTRANCES SHALL BE PLANTED WITH SMALL SHRUBS	
NE LOOP 820	PROVIDED
RODGER LINE RD	PROVIDED
PARKING LOTS SHALL BE AT LEAST 5% LANDSCAPED	
222,981 SF x .05 11,129 SF LANDSCAPING REQUIRED	430 SF PROVIDED



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14021 Old Lady Road Suite 300 Houston, TX 77059 T: 281 715 4400 F: 281 715 4401 1504 North Street Suite 300 Dallas, TX 75201 T: 214 714 0100 F: 214 714 0101 200 Westwood Boulevard Suite 400 Dallas, TX 75201 T: 214 714 0100 F: 214 714 0101	
TITLE: LANDSCAPE PLAN	
PROJECT: VPS HYUNDAI N. RICHLAND HILLS LOT A3, ARI1A 7724 NE LOOP 820 CITY OF NORTH RICHLAND HILLS	JOB No: XXXX-XX-XXXX DATE: 5/3/18
DRAWN BY: JWG	SCALE: (N) AS SHOWN
DESIGNED BY: JWG	SHEET No: 2
CHECKED BY: RM	2 OF 3
CONSTRUCTION CHECK: DATE	DEC Client Code: XXXX
CONSTRUCTION CHECK: DATE	Rev: 0

PLANTING SPECIFICATIONS

GENERAL

A. QUALIFICATIONS OF LANDSCAPE CONTRACTOR

1. ALL LANDSCAPE WORK SHOWN ON THESE PLANS SHALL BE PERFORMED BY A SINGLE FIRM SPECIALIZING IN LANDSCAPE PLANTING.
2. A LIST OF SUCCESSFULLY COMPLETED PROJECTS OF THIS TYPE, SIZE AND NATURE MAY BE REQUESTED BY THE OWNER FOR FURTHER QUALIFICATION MEASURES.
3. THE LANDSCAPE CONTRACTOR SHALL HOLD A VALID NURSERY AND FLORA CERTIFICATE ISSUED BY THE TEXAS DEPARTMENT OF AGRICULTURE, AS WELL AS OPERATE UNDER A COMMERCIAL PESTICIDE APPLICATOR LICENSE ISSUED BY EITHER THE TEXAS DEPARTMENT OF AGRICULTURE OR THE TEXAS STRUCTURAL PEST CONTROL BOARD.

B. SCOPE OF WORK

1. WORK COVERED BY THESE SECTIONS INCLUDES THE FURNISHING AND PAYMENT OF ALL MATERIALS, LABOR, SERVICES, EQUIPMENT, LICENSES, TAXES AND ANY OTHER ITEMS THAT ARE NECESSARY FOR THE EXECUTION, INSTALLATION AND COMPLETION OF ALL WORK, SPECIFIED HEREIN AND / OR SHOWN ON THE LANDSCAPE PLANS, NOTES, AND DETAILS.
2. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE LAWS, CODES AND REGULATIONS REQUIRED BY AUTHORITIES HAVING JURISDICTION OVER SUCH WORK, INCLUDING ALL INSPECTIONS AND PERMITS REQUIRED BY FEDERAL, STATE AND LOCAL AUTHORITIES IN SUPPLY, TRANSPORTATION AND INSTALLATION OF MATERIALS.
3. THE LANDSCAPE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITY LINES (WATER, SEWER, ELECTRICAL, TELEPHONE, GAS, CABLE, TELEVISION, ETC.) PRIOR TO THE START OF ANY WORK.

PRODUCTS

A. ALL MANUFACTURED PRODUCTS SHALL BE NEW

B. CONTAINERS AND BALLED-AND-BURLAPED PLANTS

1. FURNISH NURSERY-GROWN PLANTS COMPLYING WITH ANSI Z60.1-2004. PROVIDE WELL-SHAPED, FULLY BRANCHED, HEALTHY, VIGOROUS STOCK FREE OF DISEASE, INSECTS, EGGS, LARVAE, AND DEFECTS (SUCH AS KNOTS, SUN SCALD, INJURIES, ABRASIONS, AND DISFIGUREMENT). ALL PLANTS WITH A SPECIES SHALL HAVE SIMILAR SIZE, AND SHALL BE OF A FORM TYPICAL FOR THE SPECIES. ALL TREES SHALL BE OBTAINED FROM SOURCES WITHIN 200 MILES OF THE PROJECT SITE, AND WITH SIMILAR CLIMATIC CONDITIONS.
2. ROOT SYSTEMS SHALL BE HEALTHY, DENSELY BRANCHED ROOT SYSTEMS, NON-POD-SOUND, FREE FROM ENCODING AND/OR OTHER ROOTING ROOTS, AND FREE FROM ANY OTHER ROOT DEFECTS (SUCH AS J-SHAPED ROOTS).
3. ANY PLANT DEEMED UNACCEPTABLE BY THE LANDSCAPE ARCHITECT OR OWNER SHALL BE IMMEDIATELY REMOVED FROM THE SITE AND SHALL BE REPLACED WITH AN ACCEPTABLE PLANT OF LIKE TYPE AND SIZE AT THE CONTRACTOR'S OWN EXPENSE. ANY PLANTS APPEARING TO BE UNHEALTHY, EVEN IF DETERMINED TO STILL BE ALIVE, SHALL NOT BE ACCEPTED. THE LANDSCAPE ARCHITECT AND OWNER SHALL BE THE SOLE JUDGES AS TO THE ACCEPTABILITY OF PLANT MATERIAL.
4. ALL TREES SHALL BE STANDARD IN FORM, UNLESS OTHERWISE SPECIFIED. TREES WITH CENTRAL LEADERS SHALL NOT BE ACCEPTED IF LEADER IS DAMAGED OR REMOVED. PRUNE ALL DAMAGED TWIGS AFTER PLANTING.

5. CALIPER MEASUREMENTS FOR STANDARD (SINGLE TRUNK) TREES SHALL BE AS FOLLOWS: SIX INCHES ABOVE THE ROOT FLARE FOR TREES UP TO AND INCLUDING FOUR INCHES IN CALIPER, AND TWELVE INCHES ABOVE THE ROOT FLARE FOR TREES EXCEEDING FOUR INCHES IN CALIPER.
6. MULTI-TRUNK TREES SHALL BE MEASURED BY THE OVERALL HEIGHT, MEASURED FROM THE TOP OF THE ROOT BALL.
7. ANY TREE OR SHRUB SHOWN TO HAVE EXCESS SOIL PLACED ON TOP OF THE ROOT BALL, SO THAT THE ROOT FLARE HAS BEEN COMPLETELY COVERED, SHALL BE REJECTED.

8. SOIL: PROVIDE WELL-ROOTED SOIL OF THE VARIETY NOTED ON THE PLANS. SOIL SHALL BE CUT FROM HEALTHY, MATURE TURF WITH SOIL THICKNESS OF 3/4" TO 1". EACH PALLET OF SOIL SHALL BE ACCOMPANIED BY A CERTIFICATE FROM SUPPLIER STATING THE COMPOSITION OF THE SOIL.
9. SEED: PROVIDE BLEND OF SPECIES AND VARIETIES AS NOTED ON THE PLANS, WITH MAXIMUM PERCENTAGES OF PURITY, GERMINATION, AND MINIMUM PERCENTAGE OF WEED SEED AS NOTED ON PLANS. EACH BAG OF SEED SHALL BE ACCOMPANIED BY A TAG FROM THE SUPPLIER INDICATING THE COMPOSITION OF THE SEED.

10. TOPSOIL: SANDY TO CLAY LOAM TOPSOIL, FREE OF STONES LARGER THAN 1/2 INCH, FOREIGN MATTER, PLANTS, ROOTS, AND SEEDS.
11. COMPOST: WELL-COMPOSTED, STABLE, AND WEED-FREE ORGANIC MATTER, PH RANGE OF 5.5 TO 8. MOISTURE CONTENT TO BE 30 TO 50 PERCENT BY WEIGHT. 10 PERCENT PASSING THROUGH 1/8 INCH SIEVE. SOLUBLE SALT CONTENT OF 5 TO 10 DECIS/CM. NOT EXCEEDING 0.5 PERCENT NITRATES CONTAMINANTS AND FREE OF SUBSTANCES TOXIC TO PLANT TISSUE. NO MANURE OR ANIMAL-BASED PRODUCTS SHALL BE USED.

12. FERTILIZER: GRANULAR FERTILIZER CONSISTING OF NITROGEN, PHOSPHORUS, POTASSIUM, AND OTHER NUTRIENTS IN PROPORTIONS, AMOUNTS, AND RELEASE RATES RECOMMENDED IN A SOIL REPORT FROM A QUALIFIED SOIL-TESTING AGENCY (SEE BELOW).
13. MULCH: SIZE AND TYPE AS INDICATED ON PLANS, FREE FROM DELETERIOUS MATERIALS AND SUITABLE AS A TOP DRESSING OF TREES AND SHRUBS.

14. WEED FABRIC: 5 OUNCE, WOVEN, NEEDLE-PUNCHED FABRIC, SUCH AS DEWITT PROS LANDSCAPE FABRIC (OR APPROVED EQUAL).
15. TREE STAKING AND GUARDING

1. STAKES: 6' LONG GREEN METAL T-POSTS.
2. GUYS AND TIE WIRE: ASTM A 641, CLASS 1, GALVANIZED-STEEL WIRE, 2-STRAND, TWISTED, 0.6 INCH DIAMETER.
3. STRAP CHANGING GUARD: REINFORCED NYLON OR CANVAS AT LEAST 1-1/2 INCH WIDE, WITH GROMMETS TO PROTECT TREE TRUNKS FROM DAMAGE.

4. STEEL EDGING: PROFESSIONAL STEEL EDGING, 14 GAUGE THICK X 4 INCHES WIDE, FACTORY PAINTED DARK GREEN. ACCEPTABLE MANUFACTURERS INCLUDE COLMET OR APPROVED EQUAL.
5. PRE-EMERGENT HERBICIDES: ANY GRANULAR, NON-STAINING PRE-EMERGENT HERBICIDE THAT IS LABELED FOR THE SPECIFIC ORNAMENTALS OR TURF ON WHICH IT WILL BE UTILIZED. PRE-EMERGENT HERBICIDES SHALL BE APPLIED PER THE MANUFACTURER'S LABELED RATES.

6. METHODS
1. SOIL PREPARATION

1. BEFORE STARTING WORK, THE LANDSCAPE CONTRACTOR SHALL VERIFY THAT THE GRADE OF ALL LANDSCAPE AREAS ARE WITHIN ±0.1" OF FINISH GRADE. THE CONTRACTOR SHALL NOTIFY THE OWNER IMMEDIATELY SHOULD ANY DISCREPANCIES EXIST.
2. SOIL TESTING

1. AFTER FINISH GRADES HAVE BEEN ESTABLISHED, CONTRACTOR SHALL HAVE SOIL SAMPLES TESTED BY AN ESTABLISHED SOIL TESTING LABORATORY FOR THE FOLLOWING: SOIL TEXTURAL CLASS, GENERAL SOIL FERTILITY, PH, ORGANIC MATTER CONTENT, SALT (CEC), LIME, SODIUM ADSORPTION RATIO (SAR), AND BORON CONTENT. EACH SAMPLE SUBMITTED SHALL CONTAIN NO LESS THAN ONE QUART OF SOIL.
2. CONTRACTOR SHALL ALSO SUBMIT THE PROJECT'S PLANT LIST TO THE LABORATORY ALONG WITH THE SOIL SAMPLES.
3. THE SOIL REPORT PRODUCED BY THE LABORATORY SHALL CONTAIN RECOMMENDATIONS FOR THE FOLLOWING (AS APPROPRIATE): GENERAL SOIL PREPARATION AND BACKFILL MIXES, PRE-PLANT FERTILIZER APPLICATION, AND ANY OTHER SOIL-RELATED ISSUES. THE REPORT SHALL ALSO PROVIDE A FERTILIZER PROGRAM FOR THE ESTABLISHMENT PERIOD AND FOR LONG-TERM MAINTENANCE.

4. THE CONTRACTOR SHALL INSTALL SOIL AMENDMENTS AND FERTILIZERS PER THE SOILS REPORT RECOMMENDATIONS. ANY CHANGE IN COST DUE TO THE SOILS REPORT RECOMMENDATIONS, EITHER INCREASE OR DECREASE, SHALL BE SUBMITTED TO THE OWNER WITH THE REPORT.
5. FOR SOILS PURPOSES ONLY, THE SOIL PREPARATION SHALL CONSIST OF THE FOLLOWING:
 - a. TURF: INCORPORATE THE FOLLOWING AMENDMENTS INTO THE TOP 8" OF SOIL BY MEANS OF ROTOTILLING AFTER CROSS-RIPPING:
 - i. NITROGEN STABILIZED ORGANIC AMENDMENT - 4 CU. YDS. PER 1,000 S.F.
 - ii. AMMONIUM PHOSPHATE 16-20-0 - 15 LBS PER 1,000 S.F.
 - iii. AGRI-CULTURAL GYP-SUM - 120 LBS PER 1,000 S.F.
 - b. TREES, SHRUBS, AND PERENNIALS: INCORPORATE THE FOLLOWING AMENDMENTS INTO THE TOP 8" OF SOIL BY MEANS OF ROTOTILLING AFTER CROSS-RIPPING:
 - i. NITROGEN STABILIZED ORGANIC AMENDMENT - 4 CU. YDS. PER 1,000 S.F.
 - ii. 12-12-12 FERTILIZER - 10 LBS. PER CU. YD.
 - iii. AGRI-CULTURAL GYP-SUM - 10 LBS. PER CU. YD.
 - iv. IRON SULFATE - 2 LBS. PER CU. YD.

6. CONTRACTOR SHALL ENSURE THAT THE GRADE IN SOIL AREAS SHALL BE 1" BELOW FINISH GRADE BEFORE INSTALLING SOIL AMENDMENTS, AND 2" BELOW FINISH GRADE IN SHRUB AREAS BEFORE INSTALLING SOIL AMENDMENTS. MULCH COVER WITHIN 6" OF CONCRETE WALKS AND CURBS SHALL NOT PROTRUDE ABOVE THE FINISH SURFACE OF THE WALKS AND CURBS. MULCH COVER WITHIN 12" OF WALLS SHALL BE AT LEAST 7" LOWER THAN THE TOP OF WALL.
7. ONCE SOIL PREPARATION IS COMPLETE, THE LANDSCAPE CONTRACTOR SHALL ENSURE THAT THERE ARE NO DEBRIS, TRASH, OR STONES LARGER THAN 1" REMAINING IN THE TOP 6" OF SOIL.

C. GENERAL PLANTING

1. REMOVE ALL NURSERY TAGS AND STAKES FROM PLANTS.
2. EXCEPT IN AREAS TO BE PLANTED WITH ORNAMENTAL GRASSES, APPLY PRE-EMERGENT HERBICIDES AT THE MANUFACTURER'S RECOMMENDED RATE.
3. TRENDING NEARBY TREES

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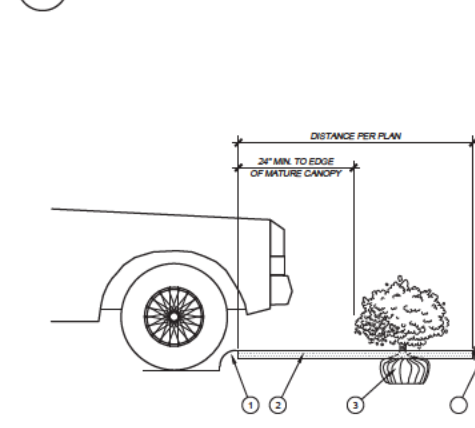
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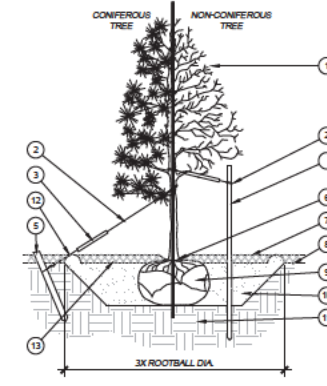
D. STEEL EDGING

SCALE: NOT TO SCALE



E. PLANTING AT PARKING AREA

SCALE: NOT TO SCALE



A. TREE PLANTING

SCALE: NOT TO SCALE



B. SHRUB AND PERENNIAL PLANTING

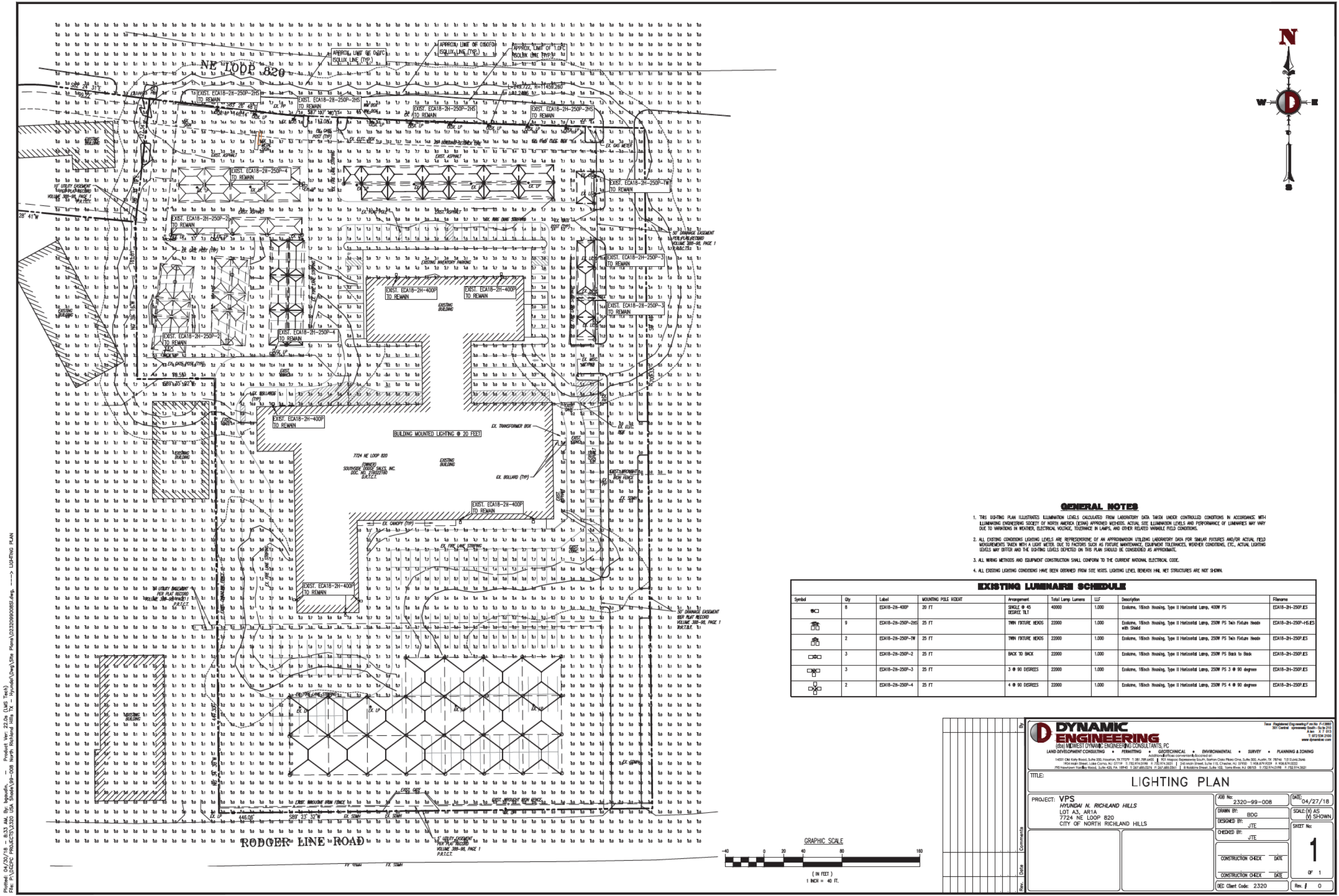
SCALE: NTS



1. TREE CANOPY.
2. CINCH-TIES (2" BOX 2" CAL. TREES AND SMALLER) OR 12 GAUGE GALVANIZED WIRE WITH NYLON TREE STRAPS AT TREE AND STAKE (2" BOX 2" CAL. TREES AND LARGER). SECURE TIES OR STRAPS TO TRUNK JUST ABOVE LOWEST MAJOR BRANCHES.
3. 24" X 34" P.V.C. MARKERS OVER WIRES.
4. GREEN STEEL T-POSTS. EXTEND POSTS 12" MIN. INTO UNDISTURBED SOIL.
5. PRESSURE-TREATED WOOD DEAMON, TWO PER TREE (MIN.). BURIED OUTSIDE OF FINISH GRADE AND 18" MIN. INTO UNDISTURBED SOIL.
6. TRUNK FLARE.
7. MULCH TYPE AND DEPTH PER PLANS. DO NOT PLACE MULCH WITHIN 6" OF TRUNK.
8. FINISH GRADE.
9. ROOT BALL.
10. BACKFILL, AMEND AND FERTILIZE ONLY AS RECOMMENDED IN SOIL FERTILITY ANALYSIS.
11. UNDISTURBED NATIVE SOIL.
12. 4" HIGH EARTHEN WATERING BASIN.
13. FINISH GRADE.

NOTES

1. SCARIFY SIDES OF PLANTING PIT PRIOR TO SETTING TREE.
2. REMOVED SOIL SHALL BE APPLIED ON TOP OF THE ROOTBALL. THE PLANTING HOLE DEPTH SHALL BE SUCH THAT THE ROOTBALL RESTS ON UNDISTURBED SOIL, AND THE ROOT FLARE IS 2-4" ABOVE FINISH GRADE.
3. FOR B&B TREES, CUT OFF BOTTOM 1/3 OF WIRE BASKET BEFORE PLACING TREE IN HOLE. CUT OFF AND REMOVE REMAINDER OF BASKET AFTER TREE IS SET IN HOLE. REMOVE ALL NYLON TIES, TWINE, ROPE, AND OTHER PACKING MATERIAL. REMOVE AS MUCH BURLAP FROM AROUND ROOTBALL AS IS PRACTICAL.
4. REMOVE ALL N



GENERAL NOTES

- 1. THIS LIGHTING PLAN ILLUSTRATES ILLUMINATION LEVELS CALCULATED FROM LABORATORY DATA TAKEN UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY OF NORTH AMERICA (IESNA) APPROVED METHODS. ACTUAL SITE ILLUMINATION LEVELS AND PERFORMANCE OF LUMINAIRES MAY VARY DUE TO VARIATIONS IN WEATHER, ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS, AND OTHER RELATED VARIABLE FIELD CONDITIONS.
- 2. ALL EXISTING CONDITIONS LIGHTING LEVELS ARE REPRESENTATIVE OF AN APPROXIMATION UTILIZING LABORATORY DATA FOR SIMILAR FIXTURES AND/OR ACTUAL FIELD MEASUREMENTS TAKEN WITH A LIGHT METER. DUE TO FACTORS SUCH AS FUTURE MAINTENANCE, EQUIPMENT TOLERANCES, WEATHER CONDITIONS, ETC., ACTUAL LIGHTING LEVELS MAY DIFFER AND THE LIGHTING LEVELS DEPICTED ON THIS PLAN SHOULD BE CONSIDERED AS APPROXIMATE.
- 3. ALL WIRING METHODS AND EQUIPMENT CONSTRUCTION SHALL CONFORM TO THE CURRENT NATIONAL ELECTRICAL CODE.
- 4. ALL EXISTING LIGHTING CONDITIONS HAVE BEEN OBTAINED FROM SITE VISITS. LIGHTING LEVELS BENEATH HAIL NET STRUCTURES ARE NOT SHOWN.

EXISTING LUMINAIRE SCHEDULE

Symbol	Qty	Label	Mounting Pole Height	Arrangement	Total Lamp Lumens	LLF	Description	Reference
	8	ESAI8-2H-400P	20 FT	SINGLE @ 45 DEGREE TILT	40000	1.000	Endura, 18inch Housing, Type II Horizontal Lamp, 400W PS	ESAI8-2H-250P-ES
	9	ESAI8-2H-250P-2HS	25 FT	TWIN FIXTURE HEADS	22000	1.000	Endura, 18inch Housing, Type II Horizontal Lamp, 250W PS Twin Fixture Heads with Shield	ESAI8-2H-250P-HSES
	2	ESAI8-2H-250P-1W	25 FT	TWIN FIXTURE HEADS	22000	1.000	Endura, 18inch Housing, Type II Horizontal Lamp, 250W PS Twin Fixture Heads	ESAI8-2H-250P-ES
	3	ESAI8-2H-250P-2	25 FT	BACK TO BACK	22000	1.000	Endura, 18inch Housing, Type II Horizontal Lamp, 250W PS Back to Back	ESAI8-2H-250P-ES
	3	ESAI8-2H-250P-3	25 FT	3 @ 90 DEGREES	22000	1.000	Endura, 18inch Housing, Type II Horizontal Lamp, 250W PS 3 @ 90 degrees	ESAI8-2H-250P-ES
	2	ESAI8-2H-250P-4	25 FT	4 @ 90 DEGREES	22000	1.000	Endura, 18inch Housing, Type II Horizontal Lamp, 250W PS 4 @ 90 degrees	ESAI8-2H-250P-ES

Product Ver: 22.0a (LMS Tech)
Printed: 04/20/2018 - 8:33 AM, By: bgaudin
File: P:\PROJECTS\SP2018-02\SP2018-02-008 North Richland Hills TX - Hyundai\Drawings - Lighting Plan

DYNAMIC ENGINEERING
1850 NEWEST DYNAMIC ENGINEERING CONSULTANTS, PC
LAND DEVELOPMENT CONSULTING • PLANNING • SURVEY • PLANNING & ZONING
14501 Oak Ridge Road, Suite 200, Houston, TX 77057 • P: 281.289.4400 • F: 281.289.4401 • E: info@dynamiceng.com
10000 North Loop West, Suite 100, Houston, TX 77057 • P: 281.289.4400 • F: 281.289.4401 • E: info@dynamiceng.com

PROJECT: **VPS**
HYUNDAI N. RICHLAND HILLS
LOT A3, AR1A
7724 NE LOOP 820
CITY OF NORTH RICHLAND HILLS

DATE: **04/27/18**
SCALE: **(H) AS SHOWN**
SHEET No: **1**
OF 1

CONSTRUCTION CHECK: _____ DATE: _____
CONSTRUCTION CHECK: _____ DATE: _____
Client Code: 2320 Rev: 0

Job:

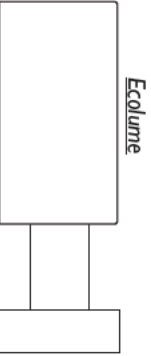
Type:

Notes:

Ecolume

Page 1 of 3

Arm Mount and Wall Mount



Ecolume

Ecolume is a rectilinear arm-mounted area luminaires, also suitable for wall mounting. The precision segmented optical systems provide required light levels, even illumination, wide pole spacings and glare control. The housing is dieformed and the door frame is extruded aluminum. The luminaire is completely sealed and gasketed, preventing intrusion from moisture, insects and contaminants.

Flat glass lens luminaires provide full cutoff performance.

PREFIX

MOUNTING

DISTRIBUTION

WATTAGE

VOLTAGE

FINISH

OPTIONS

Enter the order code into the appropriate box above. Note: Gardco reserves the right to refuse a configuration. Not all combinations and configurations are valid. Refer to notes below for exclusions and limitations. For questions or concerns, please consult the factory.

PREFIX

Ecolume

MOUNTING

- 1

Single Pole Mount
- 2

Twin Pole Mount at 180°
- 2@90°

Twin Pole Mount at 90°
- 3

3-way Pole Mount at 90°
- 3@120°

3-way Pole Mount at 120°
- 4

4-way Pole Mount

Use "1" for wall mounted units.

Arm Mount to Pole*	ECA18	18" Square Luminaire
Direct Wall Mount	ECW18	18" Square Luminaire
Wall Mount with Arm	ECWA18	18" Square Luminaire

*Arm mounting on round poles is designed to mount to poles measuring 3.5" OD or larger only.

DISTRIBUTION

Horizontal Lamp

- 3H

Type III
- FH

Type IV Forward Throw
- QH

Type V

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Specifications are subject to change without notice.
www.philips.com/luminaires



Ecolume

Arm Mount and Wall Mount

WATTAGE

18"	
Pulse Start MH Magnetic Ballast	250PSMH [Ⓔ] 250PS90* [Ⓔ] 320PSMH ^{1,5} [Ⓔ] 350PSMH ⁵ [Ⓔ] 400PSMH [Ⓔ]
MasterColor Elite Electronic System	210MCE-3K [Ⓔ] [Ⓔ] 210MCE-4K [Ⓔ] [Ⓔ] 315MCE-3K [Ⓔ] [Ⓔ] 315MCE-4K [Ⓔ] [Ⓔ]
Pulse Start MH Electronic Ballast	250PSE [Ⓔ] [Ⓔ] 320PSE ^{5,6} [Ⓔ]
High Pressure Sodium Magnetic Ballast	250HPS 400HPS

* 250PS90 includes a 90% efficient magnetic PSMH ballast, meeting the requirements of California Title 20.

VOLTAGE

120	BRP	Bronze Paint
208	BLP	Black Paint
240	WP	White Paint
277	NP	Natural Aluminum Paint
347	OC	Optional Color Paint
480		Specify <i>Optional Color</i> or RAL ex: RAL7024.
QUAD 120/208/240/277 factory tied to 277V.		
200-277 MCE, and PSE types only.	SC	Special Paint Specify. <i>Must supply color chip.</i>

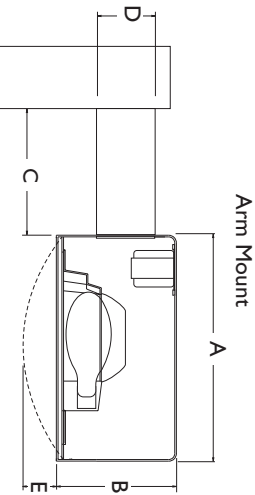
FINISH

OPTIONS

HS ⁷	Internal House Side Shield	SG ¹¹	Sag Glass Lens
F	Fusing	QS ¹²	Quartz Standby
LF ⁸	In-Pole/In-Line Fusing	QST ¹²	Quartz Standby - Timed Delay
PCT ¹	Locking Type Photocontrol Receptacle with Photocontrol	Q924 ¹²	Quartz Emergency Quartz
PCR	Locking Type Photocontrol Receptacle	QT924 ¹²	Emergency - Timed Delay
PCB ¹	Butron Photocontrol		
MF ^{9,14}	Mast Arm Fitter		
PTF2	Pole top fitter fits 2 3/8-2 1/2" OD x 4" depth tenon		
PTF3	Pole top fitter fits 3-3 1/2" OD x 6" depth tenon		
PTF4	Pole top fitter fits 3 1/2-4" OD x 6" depth tenon		
AP ¹⁰	Adjustable Knuckle - Square Pole Mount		
AT ¹³	Adjustable Knuckle - Tenon Mount		

DIMENSIONS AND EPA (CONTINUED ON PAGE 3)

ARM MOUNT	
	18"
A	18" sq 45.72cm
B	10" 25.40cm
C	9" 22.86cm
D	5" 12.70cm
E	4" 10.16cm



ECOLUME	EPA (Effective Projected Area) ft ² / m ²		
	Single	Twin 180°	Quad
18" units	1.9 / .177	3.8 / .354	4.8 / .446

ECOLUME	Single Luminaire Weight (lbs / kg)
18" units	50 / 22.68

1. Not available in 480V.
5. Requires BT28/E28 lamp.
6. Available in 120V, 200-277V, or 480V. 120V, 347V, and 480V require and include an auxiliary transformer. "-3K" indicates a 3,000°K lamp, "-4K" indicates a 4,000°K lamp. Supplied with lamp as standard
7. Supplied standard for FH optics.
8. Kit includes In-Line Fuses. Ships as a separate accessory.
9. Requires 2 3/8" O.D. Mast Arm.
10. Only available with single and twin luminaires @ 180°. Mounts to square pole only.
11. In lieu of flat glass.
12. See QS/Q924 Table. Separate 120V power source is required.
13. Only available with Single luminaire. Mounts to 2-3/8" tenon only.

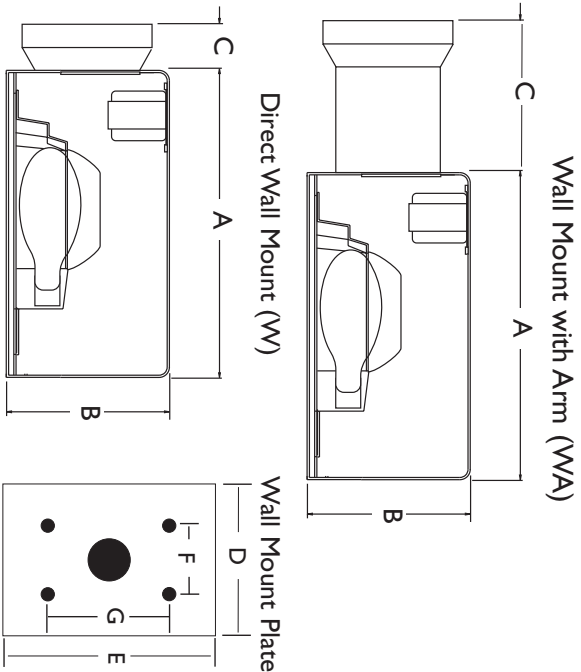
(Note 12)	QS / Q924 Table	Maximum Quartz Lamp Watts
HID Lamp Watts		
175 watts or less		100 Watts
Above 175 watts up to 400 watts		150 Watts

Ecolume

Arm Mount and Wall Mount

DIMENSIONS AND EPA (CONTINUED FROM PAGE 2)

WALL MOUNT / WALL MOUNT PLATE	
	18"
A (W & WA)	18" sq 45.72cm
B (W & WA)	10" 25.40cm
C (WA only)	11" 27.94cm
C (W only)	2" 5.08cm
D (W & WA)	5" 12.70cm
E (W & WA)	7" 17.78cm
F (W & WA)	2.25" 5.72cm
G (W & WA)	4" 10.16cm



SPECIFICATIONS

GENERAL DESCRIPTION: Ecolume is a cutoff luminaire for high intensity discharge lamps. Internal components are totally enclosed, rain-tight, dust-tight, and corrosion resistant. No venting of the optical system or electrical components is required or permitted. Lamping requires no lifting or hinging of the luminaire housing, disturbing wiring or exposing uninsulated live parts.

HOUSING: The housing wrapper is one-piece dieformed aluminum. The housing has an integral reinforcing spine and no welded corners. Silicone seals provide a weathertight seal at all points of material transition.

LENS: A mitered, extruded anodized aluminum door frame retains the optically clear, heat and impact resistant tempered flat glass in a sealed manner using hollow section, high compliance, memory retentive extruded silicone rubber. A single flush 1/4 turn captive fastener permits easy access to the luminaire.

OPTICAL SYSTEMS: The segmented reflector system consists of two levels of highly specular aluminum facets precisely aligned to achieve specified photometric distributions. The entire optical system is field rotatable in 90° increments. The position-oriented mogul base socket is glazed porcelain with a nickel plated screw shell. A lamp stabilizer is standard on 3H and QH 400W PSMH units.

ELECTRICAL: All electrical components are UL recognized and factory tested. Electronic and magnetic HID ballasts are high power factor. Magnetic HID ballasts are the separate component type. The ballast is mounted on a unitized tray and secured within the luminaire, above the reflector system. Electronic and magnetic HID ballasts are capable of providing reliable lamp starting down to -20°F / -29°C. Standard fluorescent ballasts are solid state.

Luminaires provided with the MasterColor Elite high performance ceramic metal halide electronic system include high power factor electronic ballasts, designed specifically for the system selected.

FINISH: Each luminaire receives a fade and abrasion resistant, electrostatically applied, thermally-cured polyester powder finish after fabrication.

LABELS: All luminaires bear UL or CUL (where applicable) Wet Location labels.

WARRANTY: Ecolume Luminaires feature a 5 year limited warranty. See www.usa.lighting.philips.com/support/support/warranty for complete details and exclusions.



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Specifications are subject to change without notice.
www.philips.com/luminaires

Philips Lighting
North America Corporation
200 Franklin Square Drive
Somerset, NJ 08873
Phone: 855-486-2216

Philips Lighting Company
281 Hillmount Road
Markham ON, Canada L6C 2S3
Phone: 800-668-9008

SHARK4-50W/D10



The four-foot SHARK 4 s available in 36W and 50W versions. This compact slant near LED washdown fixture is ideal for car washes, tunnels, stairs and other hard-to-reach areas where reaming is difficult and costly.

Color: White

Weight: 13.3 lbs

Project:	Type:
Prepared By:	Date:

Driver Info		LED Info	
Type:	Constant Current	Watts:	50W
120V:	0.42A	Color Temp:	5000K
208V:	0.24A	Color Accuracy:	75 CRI
240V:	0.21A	L70 L lifespan:	100000
277V:	0.18A	Lumens:	5161
Input Watts:	48W	Eff cacy:	107 LPW
Eff cency:	N/A		

Technical Specifications

Listings

UL Listing:

Suitable for wet locations.

DLC Listed:

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

DLC Product Code: PV941B8V

NEMA Rating:

4X, protected against corrosion

IESNA LM-79 & LM-80 Testing:

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

Electrical

Driver:

Class 2 Constant Current, 4kV, 100-277VAC, 50-60Hz

Dimming Driver:

Driver includes dimming control wiring for 0-10V dimming systems. Requires separate 0-10V DC dimming circuit. Dimmer as low as 10%.

THD:

7.5% at 120V, 8.9% at 277V

Power Factor:

99.1% at 120V, 95.2% at 277V

Construction

IP Rating:

Ingress Protection rating of IP66 for dust and water

Reflector/Tray:

Aluminum

Housing:

5VA impact-resistant polycarbonate. 1/2" openings for conduit and bushing/cord entry. Polycarbonate is affected by cleaning agents or other fluids containing a solvent such as isopropyl alcohol, acetone, a dehydrates and ethers, ketones, esters, aromatic hydrocarbons and perchlorinated hydrocarbons.

Mounting:

Quick-mount, surface, stainless steel springs supplied. 4 additional mounting accessories available.

Lens:

Diffuse polycarbonate lens for low glare and maximum protection

Gaskets:

EVA cone foam

Maximum Ambient Temperature:

Suitable for use in 40°C (104°F) ambient temperatures

Cold Weather Starting:

Minimum starting temperature is -40°C (-40°F)

Green Technology:

Mercury and UV free. RoHS compliant components. Polyester powder coating in formulated without the use of VOC or toxic heavy metals.

Finish:

Formulated for high-durability and long-lasting color.

LED Characteristics

LEDs:

Long-life, high-efficiency surface mounting LEDs

Lifespan:

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

Color Stability:

LED color temperature is warranted to shift no more than 200K in CCT over a 5 year period

Color Uniformity:

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

Other

Warranty:

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

American Bureau of Shipping (ABS) :

For use on Mobile Offshore Drilling Units (MODU) and shipper vessels.

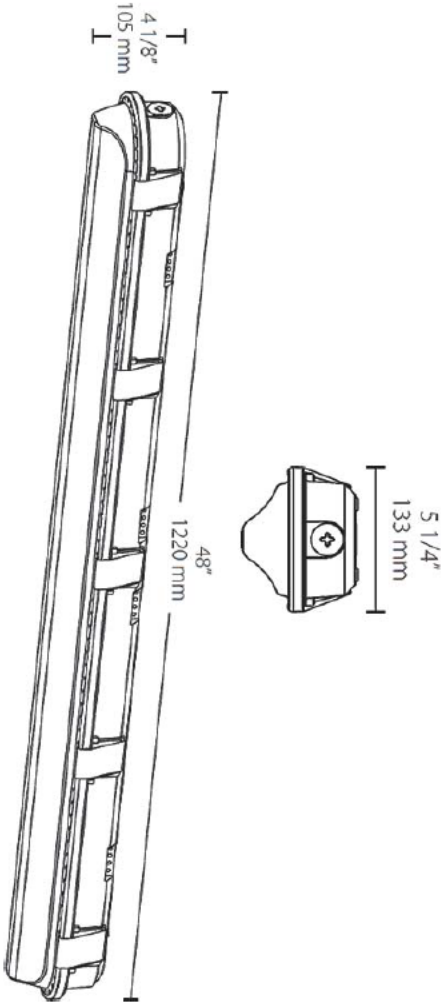
Buy American Act Compliance:

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

SHARK4-50W/D10



Dimensions



Features

- Impact-res stant near washdown
- Idea for car washes, tunnels and stairs
- Mounting options: Chain, junction box, angled surface mount or vanderstant surface mount
- IP66 Rating protects against dust & water ingress
- 0-10V dimming
- 5-Year, no compromise warranty
- 100,000-Hour LED lifespan

Ordering Matrix

Family	Length	Watts	Color Temp	Finish	Dimming	Voltage
SHARK	4	50		W	/D10	
	4 = 4 ft	36 = 36W 50 = 50W	Blank = 5000K (Cool) Y = 3000K (Warm) YN = 3500K (Warm Neutral) N = 4000K (Neutral)	W = White	D10 = Dimmable	Blank = 120-277V /480 = 480V

GENERAL NOTES

DESIGN LOADS

BUILDING CODE	IBC 2012
LIVE LOADS	5 PSF
SNOW LOAD	5 PSF
WIND LOADS	115 MPH
	3-Sec. Gust, RISK CATEGORY II & EXPOSURE C

1.- 115 MPH ACCORDING THE ULTIMATE WIND SPEED MAPS OF ASCE 7-10 IS EQUIVALENT TO THE NOMINAL WIND SPEED OF 90 MPH ACCORDING ASCE 7-05 AND IBC 2012 EQ 16-32.

STRUCTURAL STEEL

1.- ALL STRUCTURAL SHAPES SHALL BE COLD FORMED HSS ASTM A500 GRADE C, UNLESS OTHERWISE NOTED, TYPICAL MECHANICAL PROPERTIES FOR HSS PRODUCTS:
SQUARE AND RECTANGULAR 50,000 PSI YIELD / 62,000 PSI TENSILE
ROUND PIPE 46,000 PSI YIELD / 62,000 PSI TENSILE

2.- ALL GALVANIZED STEEL TUBE PRODUCTS ARE MANUFACTURED PER ASTM A500, TYPICAL MECHANICAL PROPERTIES ACHIEVED FOR GALVANIZED TUBE PRODUCTS:
ROUND TUBE 45,000 PSI YIELD / 48,000 PSI TENSILE

3.- ALL PLATES SHALL COMPLY WITH ASTM A572 GRADE 50.

4.- ALL STEEL TUBING SHALL BE TRIPLE COATED FOR RUST PROTECTION USING THE IN-LINE ELECTROPLATING COAT PROCESS, TUBING SHALL BE INTERNALLY COATED WITH ZINC AND ORGANIC COATINGS TO PREVENT CORROSION AS MANUFACTURED BY ALLIED TUBE & CONDUIT,

5.- STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH A.I.S.C. SPECIFICATIONS.

6.- ALL SHOP WELDS SHALL BE EXECUTED IN ACCORDANCE WITH THE LATEST EDITION OF THE AMERICAN WELDING SOCIETY (AWS) D1.1 SPECIFICATIONS. ALL WELDS SHALL BE CONTINUOUS WHERE LENGTH IS NOT GIVEN, UNLESS OTHERWISE SHOWN OR NOTED ON DRAWINGS. ALL WELDS SHALL DEVELOP THE FULL STRENGTH OF THE WEAKER MEMBER. ALL WELDS SHALL BE MADE USING E70XX .045 WIRE.

7.- SHOP CONNECTIONS SHALL BE WELDED UNLESS NOTED OTHERWISE. FIELD CONNECTIONS SHALL BE AS INDICATED ON THE DRAWINGS (IF REQUIRED), ALL FILLET WELDS SHALL BE A MINIMUM OF 3/16" UNLESS OTHERWISE NOTED. FIELD WELDS SHALL NOT BE ALLOWED.

8.- ALL HIGH STRENGTH BOLTS SHALL COMPLY WITH ASTM A325 TYPE 1 OR A490 TYPE 1. ALL NUTS SHALL COMPLY WITH ASTM A563DH, AND WASHERS SHALL COMPLY WITH ASTM F436.

9.- ALL HIGH STRENGTH BOLTS SHALL BE TIGHTENED TO A SNUG TIGHT CONDITION.

10.- ALL STAINLESS STEEL BOLTS / STUDS SHALL COMPLY WITH ASTM F-593, ALLOY GROUP 1 OR 2 ALL NUTS SHALL COMPLY WITH ASTM F-594 ALLOY GROUP 1 OR 2.

11.- ALL STRUCTURAL STEEL SHALL BE PAINTED WITH ONE SHOP COAT (2.5 TO 3.5 MILS THICK MIN). THIS COAT IS A WEATHER RESISTANT POWDER COATING BASED ON POLYESTER TGIC (MANUFACTURED BY SHERWIN WILLIAMS OR TIGER DRYLAC). TO ACHIEVE OPTIMUM ADHESION, IT IS RECOMMENDED THAT THE PROPER TREATMENT AND DRYING TAKE PLACE BEFORE COATING. POLYESTER POWDER (TGIC) SPECIFICATIONS SHALL BE AS FOLLOWS:
- PENCIL HARDNESS (ASTM D-3363)
- HUMIDITY (ASTM D-2247)
- SOLVENT RESISTANCE (PCI METHOD) - 50 DBL RUBS SL. SOFTNES

FABRIC SPECIFICATION

1.- FABRIC SHALL BE A HIGH DENSITY POLYETHYLENE WITH ULTRA VIOLET ADDITIVES, WITH MONOFILAMENT AND TAPE CONSTRUCTION GIVING A STABLE MATERIAL AND RACHEL KNITTED TO ENSURE MATERIAL WILL NOT UNRAVEL IF CUT.

2.- FABRIC SPECIFICATIONS: SOLID COLORS STRIPE COLORS
- FADING MINIMUM FADING AFTER 5 YEARS
- LIFE EXPECTANCY A MINIMUM OF 8 YEARS CONTINUOUS EXPOSURE TO THE SUN

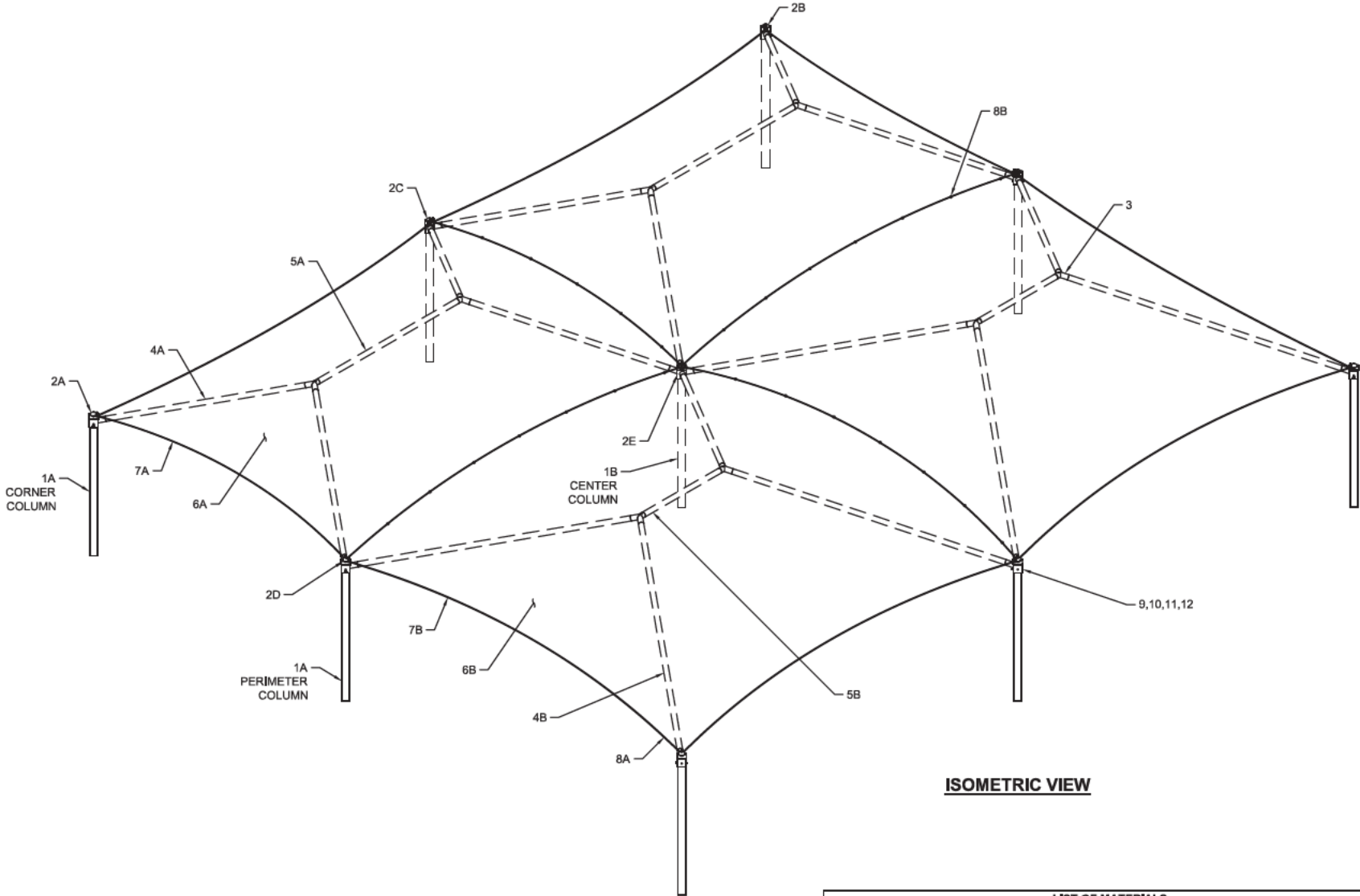
3.- FIRE TEST ON FABRIC: NFPA 701 TEST 2 AND ASTM E 84

4.- THREAD-PTFE (TEFLON) USED MEET THE FOLLOWING SPECIFICATIONS: HIGH STRENGTH, LOW SHRINKAGE, WIDE TEMPERATURE RANGE, FLEX & ABRASION RESISTANT AND UV RADIATION IMMUNITY. LOCKSTITCH - 1200 DENIER. CHAINSTITCH THREAD - 2400 DENIER.

AIRCRAFT CABLE

1.- WIRE ROPE CABLE SHALL BE 7x19 STRAND CORE GALVANIZED WIRE ROPE WITH A BREAKING STRENGTH VALUE OF 14,400 LBS (3/8" DIAMETER).

2.- CABLES SHALL BE FED THROUGH THE FABRIC SLEEVES AROUND THE PERIMETER OF THE CANOPY AND TENSIONED UNTIL THE FABRIC PANELS (DESIGNED PURPOSELY UNDERSIZED) REACH A TAUNT APPEARANCE. ANY LONG TERM CABLE SAG SHALL BE MINIMIZED DURING THE MAINTENANCE RE-TIGHTENING VISITS AS REQUIRED.



ISOMETRIC VIEW

LIST OF MATERIALS				
ITEM	QTY.	DESCRIPTION	MATERIAL / DWG	SMI PART NO.
1A	TBD	COLUMN CORNER & PERIMETER	HSS 7 x 7 x 0.375	N/A
1B	TBD	COLUMN CENTER	HSS 7 x 7 x 0.250	N/A
2A	TBD	CROWN SINGLE RIGHT	HSS 8 x 8 x 0.375	N/A
2B	TBD	CROWN SINGLE LEFT	HSS 8 x 8 x 0.375	N/A
2C	TBD	CROWN DOUBLE LONG SIDE	HSS 8 x 8 x 0.375	N/A
2D	TBD	CROWN DOUBLE SHORT SIDE	HSS 8 x 8 x 0.375	N/A
2E	TBD	CROWN CENTER	HSS 8 x 8 x 0.375	N/A
3	TBD	CROSSPIECE	5.0 GA. 7 RD. TUBE	N/A
4A	TBD	EXTENSION	5.0 GA. 7 RD. TUBE	LENGTH VARIES
4B	TBD	EXTENSION	5.0 GA. 7 RD. TUBE	LENGTH VARIES
5A	TBD	RIDGE	5.0 GA. 7 RD. TUBE	LENGTH VARIES
5B	TBD	RIDGE	5.0 GA. 7 RD. TUBE	LENGTH VARIES
6A	TBD	FABRIC TOP (CUSTOM)	EXTREME 32	LENGTH VARIES
6B	TBD	FABRIC TOP (CUSTOM)	EXTREME 32	LENGTH VARIES
7A	TBD	3/8" STEEL CABLE	GALVANIZED CABLE	LENGTH VARIES
7B	TBD	3/8" STEEL CABLE	GALVANIZED CABLE	LENGTH VARIES
8A	TBD	Ø3/8" CABLE CLAMP	GALVANIZED	307629
8B	TBD	Ø1/2" CABLE CLAMP	GALVANIZED	307627
9	TBD	Ø3/4"-10NC x 9 1/2" HEX BOLT	ASTM A325 GALVANIZED	308328
10	TBD	Ø3/4"-10NC HEX NUT	ASTM A563 GALVANIZED	307687
11	TBD	Ø3/4" SPLIT LOCK WASHER	ASTM F436 GALVANIZED	307832
12	TBD	Ø3/4" FLAT WASHER	ASTM F436 GALVANIZED	307624

CODE ANALYSIS				
BUILDING	OCCUPANCY	CONSTRUCTION TYPE	AREA (SQF)	OCCUPANT LOAD
SHADE STRUCTURE	U	V-B	TBD	N/A
DIAMOND PROTECTORS				

THESE PLANS AND SPECIFICATIONS ARE THE PROPERTY OF USA SHADE AND FABRIC STRUCTURES AND SHALL NOT BE REPRODUCED WITHOUT THEIR WRITTEN PERMISSION.



CORPORATE HEADQUARTERS
8505-A CHANCELLOR ROW
DALLAS, TX, 75247
800-966-5005

CERTIFICATIONS:
IAS CERTIFICATION No: FA-428
CLARK COUNTY MANUFACTURER
CERTIFICATION NUMBER (NEVADA): 355

CUSTOMER:
AUTONATION INC.

PROJECT NAME:
**HYUNDAI
N. RICHLAND HILLS**

LOCATION:
**NORTH RICHLAND HILLS
TX**

PROJECT NUMBER:
1002

STRUCTURE TYPE:
**DIAMOND PROTECTORS
(FULL CUSTOM)**

SIZE:
VARIES

SCALE : AS NOTED

DRAWING SIZE:
B

RELEASE FOR CONSTRUCTION	DATE	DRW	CHK	ENG
DESCRIPTION	DATE	DRW	CHK	ENG
NC	05/26/17	AK	JO	JO

Eng. By : AK 05/26/17

Design By : SA 05/26/17

Approved By : SA 05/26/17

DRAWING DESCRIPTION:


NOTES / LOM

DWG. **1002-2.0**

PAGE **1000**

REV. **NC**

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(FULL CUSTOM)

SIZE:
VARIES

SCALE : AS NOTED

DRAWING SIZE:
B

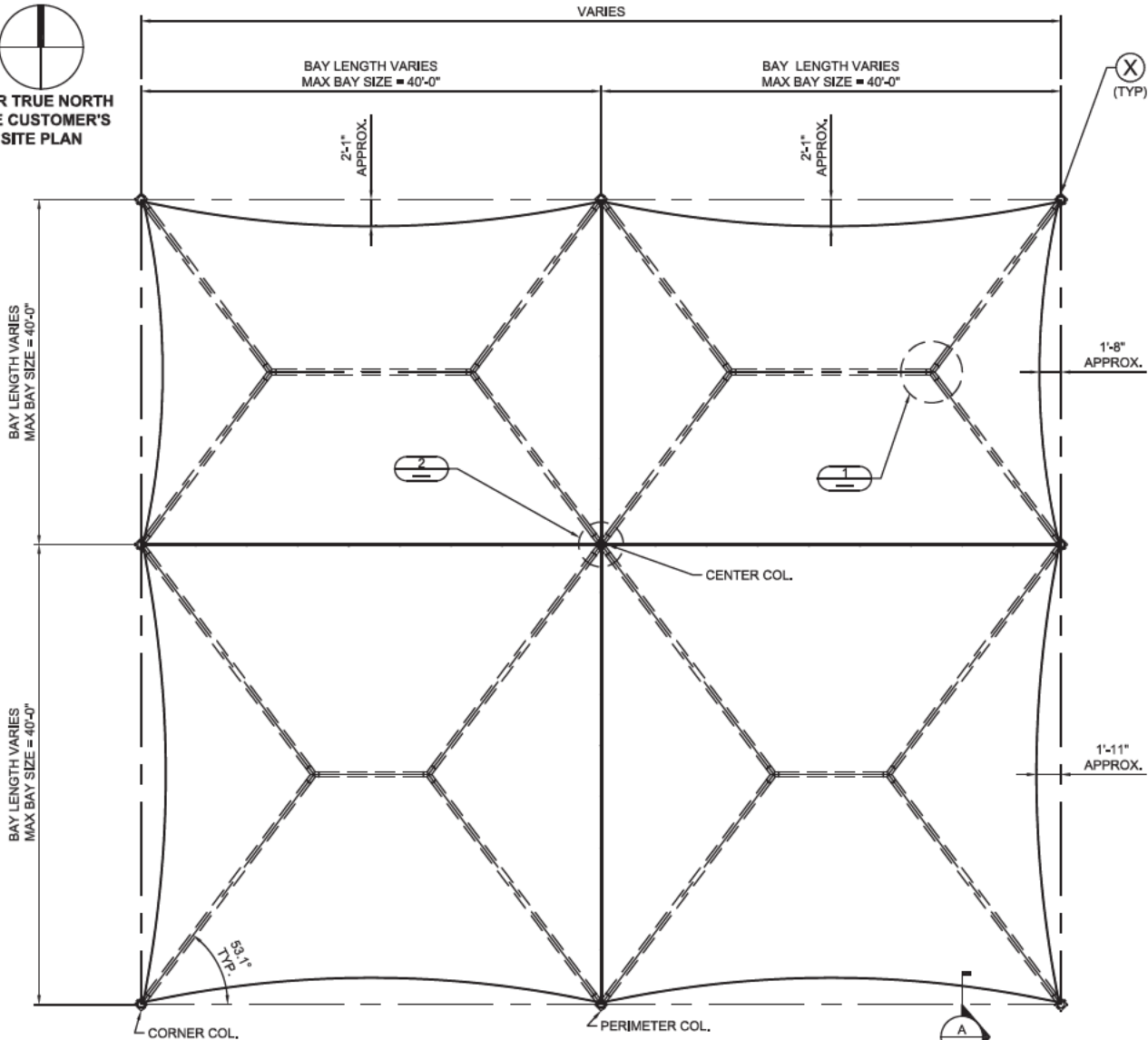
NC	REV	DESCRIPTION	RELEASE FOR CONSTRUCTION		
			DATE	DRW	CHK
			05/26/17	AK	JO
					ENG

Eng. By :	AK	05/26/17
Design By :	SA	05/26/17
Approved By :	SA	05/26/17

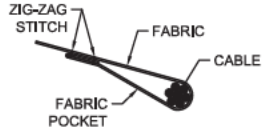
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VIEWS AND DETAILS

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PAGE	2000
REV.	NC

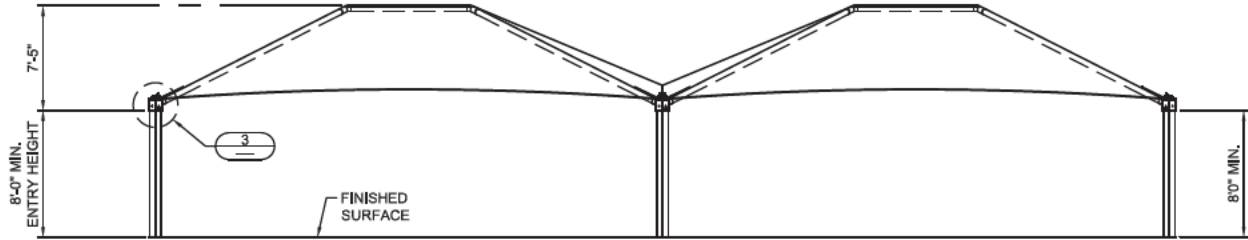
PLAN NORTH
FOR TRUE NORTH
SEE CUSTOMER'S
SITE PLAN



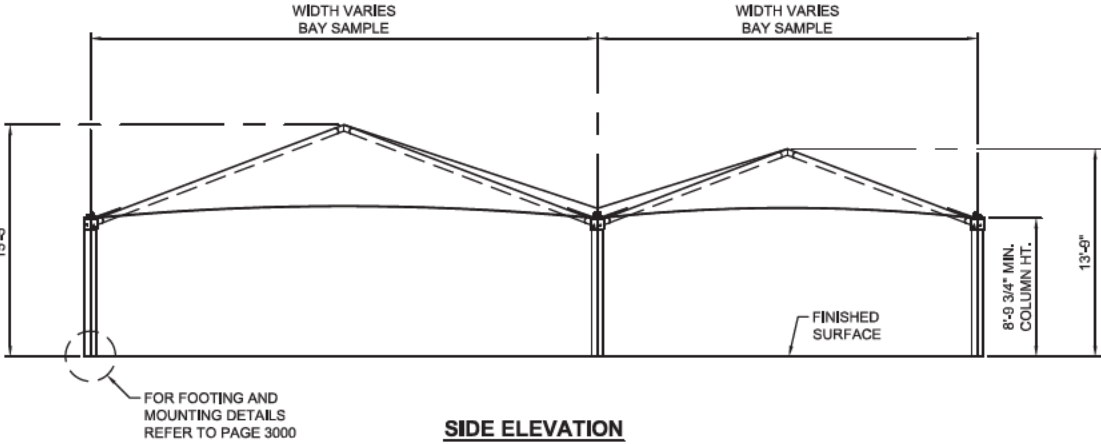
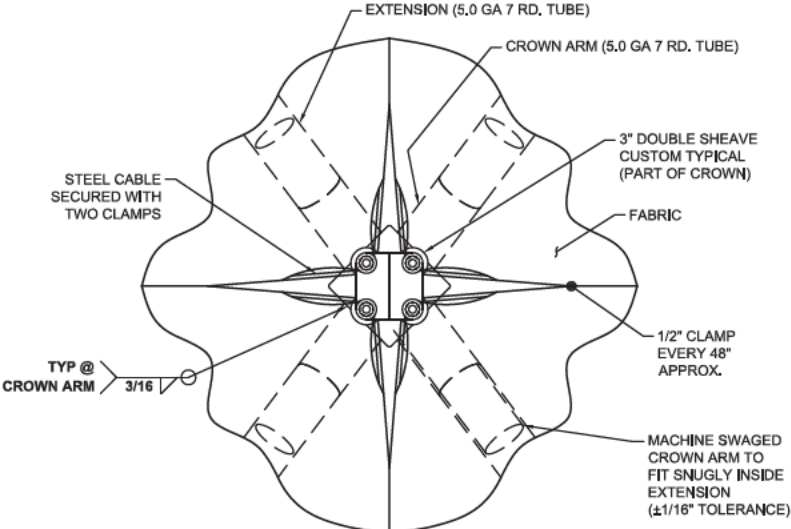
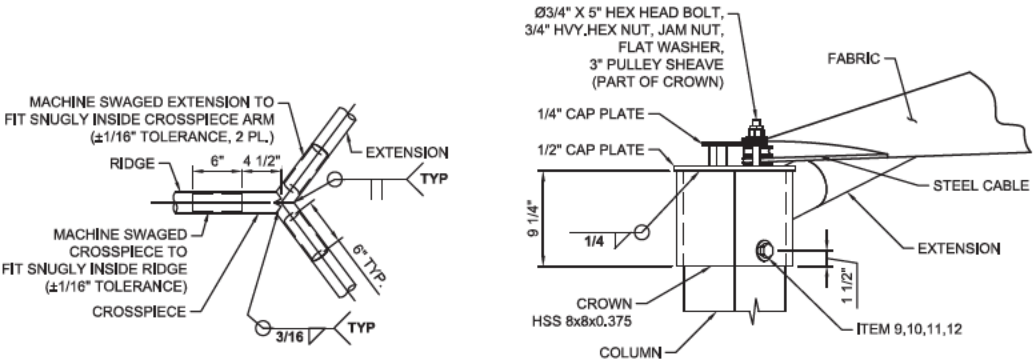
TOP VIEW



SECTION A-A



FRONT ELEVATION



SIDE ELEVATION

GENERAL NOTES

DESIGN LOADS

BUILDING CODE	IBC 2012
LIVE LOADS	5 PSF
SNOW LOAD	5 PSF
WIND LOADS	115 MPH± 3-Sec, Gust, RISK CATEGORY II & EXPOSURE C

1.- 115 MPH ACCORDING THE ULTIMATE WIND SPEED MAPS OF ASCE 7-10 IS EQUIVALENT TO THE NOMINAL WIND SPEED OF 90 MPH ACCORDING ASCE 7-05 AND IBC 2012 EQ 16-32.

STRUCTURAL STEEL

1.- ALL STRUCTURAL SHAPES SHALL BE COLD FORMED HSS ASTM A500 GRADE C, UNLESS OTHERWISE NOTED, TYPICAL MECHANICAL PROPERTIES FOR HSS PRODUCTS:
SQUARE AND RECTANGULAR 50,000 PSI YIELD / 62,000 PSI TENSILE
ROUND PIPE 46,000 PSI YIELD / 62,000 PSI TENSILE

2.- ALL GALVANIZED STEEL TUBE PRODUCTS ARE MANUFACTURED PER ASTM A500, TYPICAL MECHANICAL PROPERTIES ACHIEVED FOR GALVANIZED TUBE PRODUCTS:
ROUND TUBE 45,000 PSI YIELD / 48,000 PSI TENSILE

3.- ALL PLATES SHALL COMPLY WITH ASTM A572 GRADE 50,

4.- ALL STEEL TUBING SHALL BE TRIPLE COATED FOR RUST PROTECTION USING THE IN-LINE ELECTROPLATING COAT PROCESS. TUBING SHALL BE INTERNALLY COATED WITH ZINC AND ORGANIC COATINGS TO PREVENT CORROSION AS MANUFACTURED BY ALLIED TUBE & CONDUIT.

5.- STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH A.I.S.C. SPECIFICATIONS.

6.- ALL SHOP WELDS SHALL BE EXECUTED IN ACCORDANCE WITH THE LATEST EDITION OF THE AMERICAN WELDING SOCIETY (AWS) D1.1 SPECIFICATIONS. ALL WELDS SHALL BE CONTINUOUS WHERE LENGTH IS NOT GIVEN, UNLESS OTHERWISE SHOWN OR NOTED ON DRAWINGS. ALL WELDS SHALL DEVELOP THE FULL STRENGTH OF THE WEAKER MEMBER. ALL WELDS SHALL BE MADE USING E70XX .045 WIRE.

7.- SHOP CONNECTIONS SHALL BE WELDED UNLESS NOTED OTHERWISE. FIELD CONNECTIONS SHALL BE AS INDICATED ON THE DRAWINGS (IF REQUIRED). ALL FILLET WELDS SHALL BE A MINIMUM OF 3/16" UNLESS OTHERWISE NOTED. FIELD WELDS SHALL NOT BE ALLOWED.

8.- ALL HIGH STRENGTH BOLTS SHALL COMPLY WITH ASTM A325 TYPE 1 OR A490 TYPE 1. ALL NUTS SHALL COMPLY WITH ASTM A563DH, AND WASHERS SHALL COMPLY WITH ASTM F436.

9.- ALL HIGH STRENGTH BOLTS SHALL BE TIGHTENED TO A SNUG TIGHT CONDITION.

10.- ALL STAINLESS STEEL BOLTS SHALL COMPLY WITH ASTM F-593, ALLOY GROUP 1 OR 2 ALL NUTS SHALL COMPLY WITH ASTM F-594 ALLOY GROUP 1 OR 2.

11.- ALL STRUCTURAL STEEL SHALL BE PAINTED WITH ONE SHOP COAT (2.5 TO 3.5 MILS THICK MIN). THIS COAT IS A WEATHER RESISTANT POWDER COATING BASED ON POLYESTER TGIC (MANUFACTURED BY SHERWIN WILLIAMS OR TIGER DRYLAC). TO ACHIEVE OPTIMUM ADHESION, IT IS RECOMMENDED THAT THE PROPER TREATMENT AND DRYING TAKE PLACE BEFORE COATING. POLYESTER POWDER (TGIC) SPECIFICATIONS SHALL BE AS FOLLOWS:

- PENCIL HARDNESS (ASTM D-3363)
- HUMIDITY (ASTM D-2247)
- SOLVENT RESISTANCE (PCI METHOD) - 50 DBL RUBS SL. SOFTNES

FABRIC SPECIFICATION

1.- FABRIC SHALL BE A HIGH DENSITY POLYETHYLENE WITH ULTRA VIOLET ADDITIVES, WITH MONOFILAMENT AND TAPE CONSTRUCTION GIVING A STABLE MATERIAL AND RACHEL KNITTED TO ENSURE MATERIAL WILL NOT UNRAVEL IF CUT.

2.- FABRIC SPECIFICATIONS: SOLID COLORS STRIPE COLORS
- FADING MINIMUM FADING AFTER 5 YEARS
- LIFE EXPECTANCY A MINIMUM OF 8 YEARS CONTINUOUS
EXPOSURE TO THE SUN

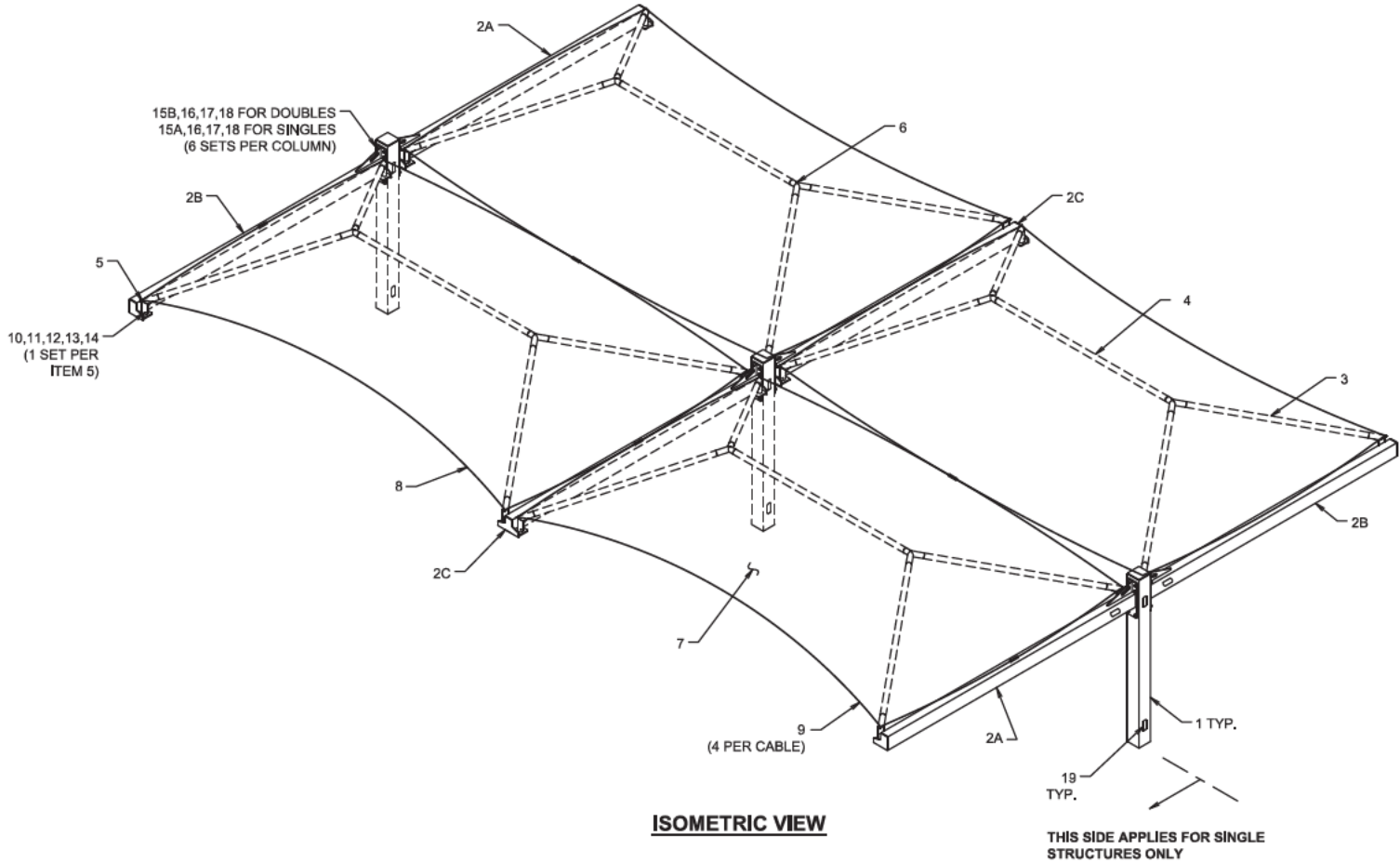
3.- FIRE TEST ON FABRIC: NFPA 701 TEST 2 AND ASTM E 84

4.- THREAD-PTFE (TEFLON) USED MEET THE FOLLOWING SPECIFICATIONS: HIGH STRENGTH, LOW SHRINKAGE, WIDE TEMPERATURE RANGE, FLEX & ABRASION RESISTANT AND UV RADIATION IMMUNITY. LOCKSTITCH - 1200 DENIER. CHAINSTITCH THREAD - 2400 DENIER.

AIRCRAFT CABLE

1.- WIRE ROPE CABLE SHALL BE 7x19 STRAND CORE GALVANIZED WIRE ROPE WITH A BREAKING STRENGTH VALUE OF 14,400 LBS (3/8" DIAMETER).

2.- CABLES SHALL BE FED THROUGH THE FABRIC SLEEVES AROUND THE PERIMETER OF THE CANOPY AND TENSIONED UNTIL THE FABRIC PANELS (DESIGNED PURPOSELY UNDERSIZED) REACH A TAUNT APPEARANCE. ANY LONG TERM CABLE SAG SHALL BE MINIMIZED DURING THE MAINTENANCE RE-TIGHTENING VISITS AS REQUIRED.



LIST OF MATERIALS (PROJECT TOTALS)				
ITEM	QTY.	DESCRIPTION	MATERIAL / DWG.	SMI PART No.
1	TBD	COLUMN (ELECTRICAL)	HSS 10.0 x 10.0 x 0.375	N/A
2A	TBD	RIGHT CANTILEVER BEAM (ELECTRICAL)	HSS 10.0 x 6.00 x 0.375	N/A
2B	TBD	LEFT CANTILEVER BEAM (ELECTRICAL)	HSS 10.0 x 6.00 x 0.375	N/A
2C	TBD	CENTER CANTILEVER BEAM (ELECTRICAL)	HSS 10.0 x 6.00 x 0.375	N/A
3	TBD	EXTENSION	4.0 GA 8 RD. TUBING	N/A
4	TBD	RIDGE (ELECTRICAL)	4.0 GA 8 RD. TUBING	N/A
5	TBD	RAFTER	4.0 GA 8 RD. TUBING	N/A
6	TBD	CROSSPIECE (ELECTRICAL)	4.0 GA 8 RD. TUBING	N/A
7	TBD	FABRIC TOP CANT	EXTREME 32	AREA & WEIGHT VARIES
8	TBD	3/8" STEEL CABLE	GALVANIZED	LENGTH VARIES
9	TBD	3/8" CABLE CLAMP	GALVANIZED	307629
10	TBD	Ø1/2"-13NC x 5" HEX BOLT	18-8 SS	307980
11	TBD	Ø1/2"-13NC HEX NUT	18-8 SS	307621
12	TBD	Ø1/2" FLAT WASHER	18-8 SS	307645
13	TBD	Ø1/2" FLAT WASHER	DELRI (ACETAL)	308083
14	TBD	Ø1/2" SPLIT LOCK WASHER	18-8 SS	117028
15A	TBD	Ø3/4"-10NC x 13" HEX BOLT	ASTM A325 GALVANIZED	307984
15B	TBD	Ø3/4"-10NC x 14" HEX BOLT	ASTM A325 GALVANIZED	307985
16	TBD	Ø3/4"-10NC HEX NUT	ASTM A563 GALVANIZED	307687
17	TBD	Ø3/4" SPLIT LOCK WASHER	ASTM F436 GALVANIZED	307832
18	TBD	Ø3/4" FLAT WASHER	ASTM F436 GALVANIZED	307624
19	TBD	HANDHOLE COVER KIT	5" x 5" HANDHOLE COVER KIT	HHCov KIT-55
20	TBD	ANCHOR ROD SET 1-1/4" x 36"	F1554 GR55	307615

CODE ANALYSIS				
BUILDING	OCCUPANCY	CONSTRUCTION TYPE	AREA (SQF)	OCCUPANT LOAD
SHADE STRUCTURE TOTAL PROJECT	U	V-B	TBD	N/A

THESE PLANS AND SPECIFICATIONS ARE THE PROPERTY OF USA SHADE AND FABRIC STRUCTURES AND SHALL NOT BE REPRODUCED WITHOUT THEIR WRITTEN PERMISSION.



CORPORATE HEADQUARTERS
8505-A CHANCELLOR ROW
DALLAS, TX, 75247
800-966-5005

CERTIFICATIONS:
IAS CERTIFICATION No: FA-428
CLARK COUNTY MANUFACTURER
CERTIFICATION NUMBER (NEVADA): 355

CUSTOMER:
AUTONATION INC.

PROJECT NAME:
**HYUNDAI
N. RICHLAND HILLS**
LOCATION:
**NORTH RICHLAND HILLS
TX**
PROJECT NUMBER:
1002

STRUCTURE TYPE:
**SINGLE & DOUBLE JOINED
HERITAGE CANTILEVERS**
SIZE:
VARIOUS

SCALE : AS NOTED

DRAWING SIZE: **B**

RELEASE FOR CONSTRUCTION	DATE	DESCRIPTION	JO	ENG
			AK	CHK
			DRW	CHK
			NC	REV

Eng. By : AK 05/26/17
Design By : SA 05/26/17
Approved By : SA 05/26/17

DRAWING DESCRIPTION:
NOTES / LOM

DWG. **1002-1.0**
PAGE **1000**
REV. **NC**



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Design By :	SA	05/26/17
Approved By :	SA	05/26/17

DRAWING DESCRIPTION:
VIEWS & DETAILS

DWG. **1002-1.0**

PAGE **2000**

REV. **NC**

