



*RENDERING REPRESENTS AN ARCHITECTURAL CONCEPT AND IS INTENDED AS AN ILLUSTRATIVE EXAMPLE ONLY. FINAL DESIGN, CONSTRUCTION AND MATERIALS, INCLUDING LANDSCAPE, MAY VARY.

OWNER

STEVE AND BEVERLY CHESNEY
7404 N. LAS BRISAS LANE
PARADISE VALLEY, AZ 85253

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CREATIVE DESIGNS IN LIGHTING
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GENERAL CONTRACTOR

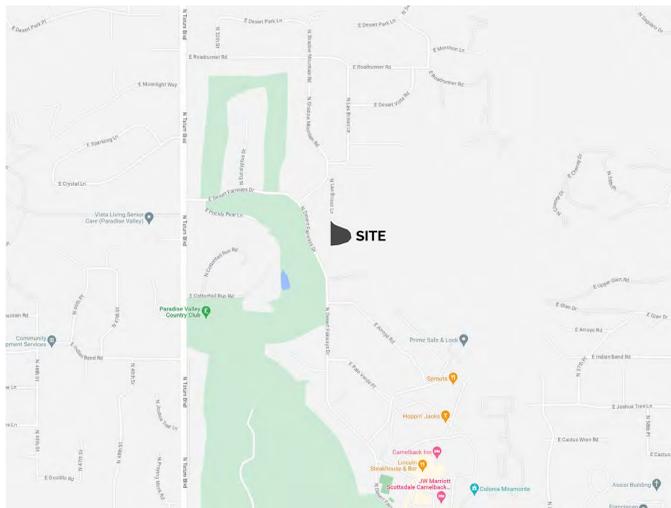
DESERT STAR CONSTRUCTION
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22
YEARS

CHESNEY RESIDENCE
7404 N. LAS BRISAS LANE
PARADISE VALLEY, AZ 85253

VICINITY MAP



SHEET INDEX

- DRB200 COVER SHEET
- C-1 HILLSIDE GRADING & DRAINAGE
- C-2 HILLSIDE GRADING & DRAINAGE
- C-3 DISTURBED AREA & HISTORIC CONTOURS
- C-4 STORMWATER POLLUTION PREVENTION PLAN
- C-5 STORMWATER POLLUTION PREVENTION PLAN
- C-6 STORMWATER POLLUTION PREVENTION PLAN
- C-7 STORMWATER POLLUTION PREVENTION PLAN
- DRB201 AERIAL
- DRB202 CONCEPTUAL SITE PLAN
- DRB203 SITE PLAN - CUT / FILL
- DRB204 FLOOR PLAN - LOWER
- DRB205 FLOOR PLAN - MAIN
- DRB206 FLOOR PLAN - UPPER
- DRB207 BUILDING SECTIONS
- DRB208 3D MASSING EXHIBIT
- DRB209 3D HISTORIC GRADE
- DRB210 ELEVATIONS - RENDERED
- DRB211 ELEVATIONS - B&W
- DRB212 RENDERINGS
- DRB213 CANTILEVER & UNBROKEN PLANE EXHIBIT
- DRB214 SITE PHOTOS
- DRB215 MATERIAL BOARD
- L0.0 COVER SHEET
- L2.1 LAYOUT PLAN
- L3.1 PLANTING PLAN
- L4.1 IRRIGATION PLAN
- LS.1 LIGHTING PLAN
- LE.1 HARDSCAPE DETAILS
- LE.2 HARDSCAPE DETAILS
- L7.1 PLANTING DETAILS

SQUARE FOOTAGE

LOWER GARAGE	2,022 SF
LOWER LEVEL COVD PATIO	1,358 SF
LOWER LIVABLE	3,160 SF
LOWER MECH	246 SF
LOWER STORAGE	388 SF
LOWER LEVEL TOTAL	7,177 SF
MAIN GARAGE	854 SF
MAIN LEVEL COVD PATIO	2,027 SF
MAIN LIVABLE	6,129 SF
MAIN MECH	107 SF
MAIN LEVEL TOTAL	9,117 SF
UPPER LEVEL COVD PATIO	330 SF
UPPER LIVABLE	1,958 SF
UPPER MECH	80 SF
UPPER LEVEL TOTAL	2,367 SF
OVERHANG	840 SF
TOTAL	19,501 SF

TOTAL FLOOR AREA

LOWER GARAGE	2,022 SF
LOWER LIVABLE	3,160 SF
LOWER MECH	246 SF
LOWER STORAGE	388 SF
MAIN GARAGE	854 SF
MAIN LEVEL COVD PATIO	2,027 SF
MAIN LIVABLE	6,129 SF
MAIN MECH	107 SF
UPPER LIVABLE	1,958 SF
UPPER MECH	80 SF
OVERHANG	840 SF
TOTAL	17,814 SF

FAR CALCULATIONS

FAR PRIOR TO BASEMENT DEDUCTION = 17,814 SF
BASEMENT DEDUCTION = 3,898 SF
TOTAL FLOOR AREA (TFA) = 17,814 - 3,898 = 13,916 SF
NET SITE AREA (NSA) = 55,539 SF
FAR = TFA / NSA = 13,916 SF / 55,539 SF = 25%

DISTURBED AREA CALCULATIONS

AREA OF LOT:	1.27 AC OR 55,539 S.F.
AREA UNDER ROOF:	19,501 S.F.
FLOOR AREA RATIO:	25%
ALLOWABLE DISTURBED AREA:	16.48% = 9,153 S.F.
EXISTING DISTURBED AREA:	69% = 38,688 S.F.
PROPOSED DISTURBED AREA CALCULATION	
GROSS DISTURBED AREA:	42,953 S.F.
LESS BUILDING FOOTPRINT:	8,267 S.F.
LESS GRADING REVEGETATED AREAS:	3,976 S.F.
NET PROPOSED DISTURBED AREA:	55.3% = 30,710 S.F.
VOLUME OF CUT:	7,539 C.Y.
VOLUME OF FILL:	228 C.Y.

ZONING

R-43

APN

169-06-090

LEGAL ADDRESS

7404 N. LAS BRISAS LANE
PARADISE VALLEY, AZ 85253

NET SITE AREA

55,539 SF

DREWETT WORKS

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22-46



DESIGN REVIEW

08-26-2024 Issue Date



DRB200

HILLSIDE - GRADING AND DRAINAGE PLAN

7404 N LAS BRISAS LANE

RETENTION CALCULATIONS

PRE VS POST
 $V_R = C(R/12)A$
 $R = 2.2" (100 \text{ YEAR/ 2 HOUR})$
 $A = 55,539$
 $C_{PRE} = 0.70 (SONORAN \text{ DESERT HILLSLOPE})$
 $C_{POST} = \frac{A_{HILL} C_{HILL} + A_{IMP} C_{IMP}}{A_{TOTAL}}$

$C_{HILL} = 0.70 (SONORAN \text{ DESERT HILLSLOPE})$
 $C_{IMP} = 0.95 (IMPERVIOUS \text{ AREA})$
 $C_{POST} = \frac{33,030(0.70) + 22,509(0.95)}{55,539}$

$C_{POST} = 0.801$
 $C_{POST} - C_{PRE} = 0.101$
 $V_R = 0.101 (2.2"/12) 55,539 = 1,028 \text{ CF}$

FIRST FLUSH
 $V_F = CPA$
 $C_{HILL} = 0.70 (SONORAN \text{ DESERT HILLSLOPE})$
 $P = 0.5"$
 $A = 55,539$
 $V = (0.70)(0.5IN)(55,539 \text{ SF})/12$
 $V = 1,620 \text{ CF}$

RETENTION VOLUME REQUIRED: 1,620 CUBIC FEET

VOLUME PROVIDED
 VOLUME PROVIDED: UNDERGROUND BASIN 1,834 CUBIC FEET

A STORMWATER RETENTION BASIN SHALL NOT RETAIN STANDING WATER LONGER THAN 36 HOURS ACCORDING TO SECTION 3-2. C13 OF THE TOPV STORM DRAINAGE DESIGN MANUAL. PERCOLATION TEST WILL BE PROVIDED PRIOR TO APPROVAL.

NATIVE PLANT INVENTORY

ALL NATIVE PLANTS IMPACTED BY CONSTRUCTION SHALL BE RELOCATED ONSITE. SEE LANDSCAPE PLAN AND NATIVE PLANT INVENTORY AND SALVAGE PLAN.

EARTHWORK QUANTITIES*

EARTHWORK
 CUT= 7,539 C.Y. FILL= 228 C.Y. NET= 7,311 C.Y. (CUT)

EARTHWORK TO RESTORE SITE TO HISTORIC GRADES
 CUT= 2068 C.Y. FILL= 3623 C.Y. NET= 1555 C.Y. (FILL)

* EARTHWORK QUANTITIES ARE FOR ESTIMATING PURPOSES ONLY.

HISTORIC CONTOURS NOTE

HISTORIC CONTOURS PROVIDED FROM HILLSIDE GRADING AND DRAINAGE PLAN BY ANDREWS' ATHERTON INC., JOB NUMBER 86-264 DATED 10/1986 AND MODIFIED TO REFLECT DISTURBANCE PRIOR TO THAT DATE AND TO MATCH NAVD '88 DATUM.

DRAINAGE STATEMENT

THE ULTIMATE LOW OUTFALL OF 1475.23 FEET IS LOCATED NEAR THE NORTHWEST CORNER OF THE PROPERTY.

RETENTION IS PROVIDED FOR THE FIRST FLUSH STORM EVENT PER THE STORM WATER DRAINAGE DESIGN MANUAL.

THE PROPOSED DEVELOPMENT DOES NOT IMPACT DRAINAGE CONDITIONS OF ADJOINING LOTS.

THE LOWEST FINISH FLOOR ELEVATION OF THE NEW RESIDENCE OF 1496.00 FEET ARE SAFE FROM INUNDATION DURING A 100 YEAR PEAK RUN-OFF EVENT IF CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PLANS.

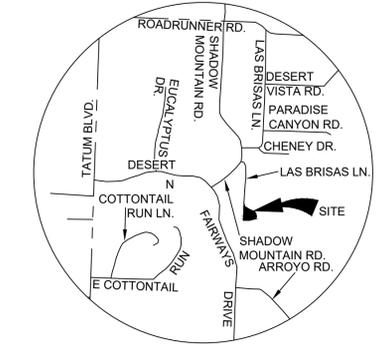
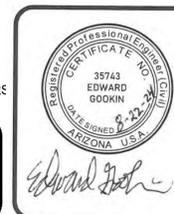
Edward Gookin
 EDWARD GOOKIN P.E. 8-22-24
 DATE

FLOOD INSURANCE RATE MAP (FIRM) INFORMATION

COMMUNITY NUMBER	PANEL NUMBER (PANEL DATE)	SUFFIX	DATE OF FIRM (INDEX DATE)	FIRM ZONE	BASIN FLOOD ELEVATION (IN AO ZONE, USE DEPTH)
040049	1765 10-16-13	"L"	10-16-2013	"X"	N/A

SHEET INDEX

SHEET 1 COVER SHEET, GENERAL NOTES
 SHEET 2 GRADING & DRAINAGE PLAN & SECTIONS
 SHEET 3 DISTURBED AREA AND HISTORIC CONTOURS



VICINITY MAP
 N.T.S.

OWNER

GANET PARTNERS LLC
 3750 LAS VEGAS BLVD S UNIT 3506
 LAS VEGAS, NEVADA 89158

ARCHITECT

ALYSSA ROWLEY
 DREWETT WORKS
 855-373-9388
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SITE ADDRESS

7404 N LAS BRISAS LANE
 PARADISE VALLEY, ARIZONA 85253

LEGAL DESCRIPTION

LOT 1, REPLAT OF MONTANA DE BONITAS CASAS, ACCORDING TO BOOK 221 OF MAPS, PAGE 11 AND REPLAT RECORDED IN BOOK 286 OF MAPS, PAGE 25, RECORDS OF MARICOPA COUNTY, ARIZONA

AREA

55,539 S.F. OR 1.27 AC ± (M)

GEOTECHNICAL ENGINEER

ACS SERVICES, LLC
 2235 W. BROADWAY ROAD
 MESA, AZ 85202
 480-968-0190
 ACCSSERVICESLLC.COM

ZONING

R-43

APN

169-06-090

BENCHMARK

GDACS CORNER 24521-2
 TOWN OF PARADISE VALLEY BRASS CAP FLUSH AT INTERSECTION OF INDIAN BEND ROAD AND 48TH STREET. NAVD 88 ELEVATION = 1419.804

PROJECT DESCRIPTION

CONSTRUCTION OF NEW HOUSE AND ASSOCIATED IMPROVEMENTS.

AS-BUILT CERTIFICATION

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

REGISTERED ENGINEER/LAND SURVEYOR

REGISTRATION NUMBER

UTILITY PROVIDERS

WATER: EPCOR
 SEWER: CITY OF PHOENIX/PRIVATE SEWER
 ELECTRIC: APS
 TELEPHONE: CENTURY LINK
 GAS: SOUTHWEST GAS
 CABLE TV: COX TV

FINISHED FLOOR CERTIFICATION

FINISHED FLOORS ELEVATION OF 1496.00 IS A MINIMUM OF 12" ABOVE THE 100 YEAR STORM ELEVATION OF 1476.05.

APPROVED: _____ DATE _____
 TOWN OF PARADISE VALLEY
 TOWN ENGINEER

THIS SET OF PLANS HAS BEEN REVIEWED FOR COMPLIANCE WITH THE TOWN OF PARADISE VALLEY REQUIREMENTS PRIOR TO THE ISSUE OF PERMIT. THE TOWN NEITHER ACCEPTS NOR ASSUMES ANY LIABILITY FOR ERRORS OR OMISSIONS. THE COMPLIANCE APPROVAL SHALL NOT PREVENT THE TOWN ENGINEER FROM REQUIRING CORRECTIONS OF ERRORS OR OMISSIONS IN THE PLANS TO BE FOUND IN VIOLATION OF LAWS OR ORDINANCES.

Q.S. 23-40

HILLSIDE GRADING & DRAINAGE

7404 N LAS BRISAS LANE
 PARADISE VALLEY, ARIZONA 85253

Scale NA
 Date 08/12/2024
 Rev _____
 Designed EG
 Drawn EG
 File: 2691 las brisas 8-19-24.dwg

GOOKIN ENGINEERS
 ENGINEERS • HYDROLOGISTS • PLANNERS • SURVEYORS
 4203 NORTH BROWN AVENUE
 SCOTTSDALE, ARIZONA 85251
 480-947-3741
 Civil@Gookin.biz

SHEET 1 of 3 SHEETS
 JOB NO. 2691

TOWN OF PARADISE VALLEY NOTES

- PRIOR TO THE FIRST INSPECTION OF STRUCTURES WITHIN 3 FEET OF A SETBACK LINE, THE PROPERTY PINS SHALL BE PLACED BY A REGISTERED CIVIL ENGINEER OR LAND SURVEYOR OF THE STATE OF ARIZONA, AND THE PROPERTY LINE(S) IDENTIFIED.
- WHERE EXCAVATION IS TO OCCUR THE TOP 4" OF EXCAVATED NATIVE SOIL SHALL REMAIN ON THE SITE AND SHALL BE REUSED IN A MANNER THAT TAKES ADVANTAGE OF THE NATURAL SOIL SEED BANK IT CONTAINS.
- ALL WORK REQUIRED TO COMPLETE THE CONSTRUCTION COVERED BY THIS PLAN SHALL BE IN ACCORDANCE WITH THE MARICOPA ASSOCIATION OF GOVERNMENTS (M.A.G.) STANDARD SPECIFICATIONS AND DETAILS AND CURRENT SUPPLEMENTS THEREOF PER THE LOCAL MUNICIPALITY UNLESS SPECIFIED OTHERWISE IN THESE PLANS OR ELSEWHERE IN THE CONTRACT DOCUMENTS.
- THE CONTRACTOR IS TO COMPLY WITH ALL LOCAL STATE, AND FEDERAL LAWS AND REGULATIONS APPLICABLE TO THE CONSTRUCTION COVERED BY THIS PLAN.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND COMPLYING WITH ALL PERMITS REQUIRED TO COMPLETE ALL WORK COVERED BY THIS PLAN.
- ALL EXTERIOR SITE LIGHTING SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS FOR TYPE, LOCATION, HEIGHT, WATTAGE, AND LUMEN BASED UPON THE FIXTURES INSTALLED PURSUANT TO SECTION 1023 OF THE TOWN OF PARADISE VALLEY ZONING ORDINANCE FOR NON-HILLSIDE PROPERTIES, SECTION 2208 OF THE TOWN OF PARADISE VALLEY ZONING ORDINANCE FOR HILLSIDE PROPERTIES, OR AS SPECIFIED IN THE SPECIAL USE PERMIT FOR SPECIAL USE PERMIT PROPERTIES.
- A DUST CONTROL PLAN AND PERMIT MEETING THE REQUIREMENTS OF RULE 310 OF THE MARICOPA COUNTY AIR POLLUTION CONTROL REGULATIONS, AS AMENDED, IS REQUIRED.
- A SEPARATE RIGHT-OF-WAY PERMIT IS NECESSARY FOR ANY OFF-SITE CONSTRUCTION.
- AN APPROVED GRADING AND DRAINAGE PLAN SHALL BE ON THE JOB SITE AT ALL TIMES. DEVIATIONS FROM THE PLAN MUST BE PRECEDED BY AN APPROVED PLAN REVISION.
- EAVE PROJECTIONS INTO REQUIRED SETBACKS ARE LIMITED TO A MAXIMUM OF 24" PURSUANT TO SECTION 1008 OF THE TOWN OF PARADISE VALLEY ZONING ORDINANCES.
- ALL STRUCTURES AND LANDSCAPING WITHIN THE SIGHT VISIBILITY TRIANGLE SHALL HAVE A 2 FOOT MAXIMUM HEIGHT.
- ALL NEW AND EXISTING ELECTRICAL SERVICE LINES SHALL BE BURIED PER THE TOWN OF PARADISE VALLEY REQUIREMENTS.
- IT SHALL BE THE RESPONSIBILITY OF THE PERMITTEE TO ARRANGE FOR THE RELOCATION AND RELOCATION COSTS OF ALL UTILITIES, AND TO SUBMIT A UTILITY RELOCATION SCHEDULE PRIOR TO THE ISSUANCE OF AN ENGINEERING CONSTRUCTION PERMIT.
- EXISTING AND/OR NEW UTILITY CABINETS AND PEDESTALS SHALL BE LOCATED A MINIMUM OF 4' BEHIND ULTIMATE BACK OF CURB LOCATION.
- POOL, SPA, BARBECUE AND ANY PROPOSED STRUCTURES OVER 8" ABOVE GRADE REQUIRE SEPARATE PERMIT APPLICATIONS.
- POOLS SHALL BE CONSTRUCTED BY SEPARATE PERMIT AND SECURED FROM UNWANTED ACCESS PER TOWN CODE, ARTICLE 5-2.
- ALL FILL MATERIAL UNDER SLABS AND WALKS SHALL BE COMPACTED TO NOT LESS THAN 95%.
- SETBACK CERTIFICATION IS REQUIRED AND SHALL BE PROVIDED TO TOWN INSPECTOR PRIOR TO STEM WALL INSPECTION.
- FOR BUILDING PADS THAT HAVE 1' OR MORE OF FILL MATERIAL, SOILS COMPACTION TEST RESULTS ARE REQUIRED AND SHALL BE PROVIDED TO TOWN INSPECTOR PRIOR TO PRE-SLAB INSPECTION.
- FINISHED FLOOR ELEVATION CERTIFICATION IS REQUIRED AND SHALL BE PROVIDED TO TOWN INSPECTOR PRIOR TO SHEAR INSPECTION.
- MAIL BOXES SHALL COMPLY WITH THE TOWN OF PARADISE VALLEY STANDARDS FOR MAIL BOXES IN THE RIGHT-OF-WAY FOR HEIGHT, WIDTH AND BREAK AWAY FEATURES.
- ALL PATIOS, WALKS, AND DRIVES TO SLOPE AWAY FROM BUILDING AND GARAGES AT A MINIMUM SLOPE OF 1/4" PER FOOT UNLESS SPECIFIED OTHERWISE.
- TRENCH BEDDING AND SHADING SHALL BE FREE OF ROCKS AND DEBRIS.
- THE TOWN ONLY APPROVES THE SCOPE OF WORK AND NOT THE ENGINEERING DESIGN. ANY CONSTRUCTION QUANTITIES SHOWN ARE NOT VERIFIED BY THE TOWN.
- THE APPROVAL OF THE PLANS IS VALID FOR 180 DAYS. IF A PERMIT FOR CONSTRUCTION HAS NOT BEEN ISSUED WITHIN 180 DAYS, THE PERMIT MUST BE RENEWED.
- THE TOWN INSPECTOR WILL INSPECT ALL WORK WITHIN THE TOWN'S RIGHTS-OF-WAY. NOTIFY TOWN INSPECTION SERVICES TO SCHEDULE A PRECONSTRUCTION MEETING PRIOR TO STARTING CONSTRUCTION.
- WHENEVER EXCAVATION IS NECESSARY, CALL ARIZONA811 BY DIALING 811 OR 602-263-1100, TWO (2) WORKING DAYS BEFORE EXCAVATION BEGINS.
- EXCAVATIONS SHALL COMPLY WITH REQUIREMENTS OF OSHA EXCAVATION STANDARDS (29 CFR, PART 1926, SUBPART P). UNDER NO CIRCUMSTANCES WILL THE CONTRACTORS BE ALLOWED TO WORK IN A TRENCH LOCATED WITHIN THE TOWN'S RIGHT-OF-WAY WITHOUT PROPER SHORING OR EXCAVATION METHODS.
- PERMIT HOLDER SHALL POST A 6 SQUARE FOOT (2'X3') IDENTIFICATION SIGN, MADE OF DURABLE MATERIAL, IN THE FRONT YARD OF SUBJECT PROPERTY AND NOT IN THE TOWN'S RIGHT-OF-WAY. THE SIGN MAY NOT EXCEED A MAXIMUM OF 6 FEET IN HEIGHT FROM GRADE TO TOP OF THE SIGN. THE SIGN MUST INCLUDE THE PERMITTEE OR COMPANY NAME, PHONE NUMBER, TYPE OF WORK, ADDRESS OF PROJECT AND TOWN CONTACT NUMBER, 480-348-3556.
- WHEN DEEMED NECESSARY, A 6-FOOT HIGH CHAIN LINK FENCE MUST BE INSTALLED AROUND THE CONSTRUCTION AREA TO PREVENT ANY POTENTIAL SAFETY HAZARD FOR THE PUBLIC. THE FENCE SHALL BE SETBACK AT LEAST 10 FEET FROM ALL RIGHT-OF-WAY AND HAVE A 50 FOOT STREET CORNER SITE TRIANGLE WHERE APPLICABLE.
- CLEAR ACCESS FOR NEIGHBORING PROPERTIES AND EMERGENCY VEHICLES MUST BE MAINTAINED AT ALL TIMES. CONSTRUCTION RELATED VEHICLES MUST BE LEGALLY PARKED ONLY ON ONE SIDE OF THE STREET OR JOB SITE PROPERTY.
- ALL CONSTRUCTION DEBRIS AND EQUIPMENT MUST BE CONTAINED ON SITE AT ALL TIMES. CONTRACTOR AND PROPERTY OWNER MUST MAINTAIN THE JOB SITE FREE OF LITTER AND UNSIGHTLY MATERIALS AT ALL TIMES. CONSTRUCTION MATERIALS ARE PROHIBITED IN THE TOWN'S RIGHT-OF-WAY.
- CONSTRUCTION ACTIVITIES ARE PERMITTED BETWEEN THE HOURS OF 7 AM AND 5 PM MONDAY THROUGH FRIDAY. CONSTRUCTION ACTIVITIES MAY START ONE (1) HOUR EARLIER DURING THE SUMMER (MAY 1ST THROUGH SEPTEMBER 30TH).
- THE USE AND OPERATION OF FUEL-FIRED GENERATORS IS PROHIBITED UNLESS DUE TO A HARDSHIP, TOWN APPROVAL SHALL BE REQUIRED.
- THE CONTRACTOR AND PROPERTY OWNER SHALL BE LIABLE FOR ANY DAMAGE DONE TO ANY PUBLIC PROPERTY AS A RESULT OF ANY CONSTRUCTION OR CONSTRUCTION RELATED ACTIVITIES. NO CERTIFICATE OF OCCUPANCY WILL BE ISSUED UNTIL ALL AFFECTED RIGHTS-OF-WAY ARE CLEANED AND/OR REPAIRED TO THEIR ORIGINAL CONDITION AND UNTIL ANY AND ALL DAMAGES TO AFFECTED PROPERTIES ARE RESTORED TO ORIGINAL CONDITION.
- A KEYPAD SWITCH SHALL BE REQUIRED ON ALL NEW AND EXISTING ELECTRIC ENTRY GATES. THE KEYPAD SWITCH SHALL BE INSTALLED IN A LOCATION THAT IS READILY VISIBLE AND ACCESSIBLE. KNOX BOX ORDER FORMS ARE AVAILABLE AT THE TOWN'S BUILDING SAFETY DEPARTMENT.
- PROPERTY OWNER, BUILDER, OR GENERAL CONTRACTOR WILL BE RESPONSIBLE FOR CONTROLLING DUST FROM THE SITE AT ALL TIMES. ALL MEANS NECESSARY SHALL BE USED BY THE BUILDER OR GENERAL CONTRACTOR TO CONTROL THE EXISTENCE OF DUST CAUSED BY ANY EARTHWORK, SPRAY APPLICATION OF MATERIALS, OR OTHER DUST-CAUSING PRACTICES REQUIRED BY THE CONSTRUCTION PROCESS.
- APPROVAL OF THESE PLANS ARE FOR PERMIT PURPOSES ONLY AND SHALL NOT PREVENT THE TOWN FROM REQUIRING CORRECTION OF ERRORS IN THE PLANS WHERE SUCH ERRORS ARE SUBSEQUENTLY FOUND TO BE IN VIOLATION OF ANY LAW, ORDINANCE, HEALTH, SAFETY, OR OTHER DESIGN ISSUES.
- ALL DRAINAGE PROTECTIVE DEVICES SUCH AS SWALES, INTERCEPTION DITCHES, PIPES PROTECTIVE BERMS, CONCRETE CHANNELS OR OTHER MEASURES DESIGNED TO PROTECT PROPOSED AND EXISTING IMPROVEMENTS FROM RUNOFF OR DAMAGE FROM STORM WATER, MUST BE CONSTRUCTED PRIOR TO THE CONSTRUCTION OF ANY IMPROVEMENTS.

HILLSIDE NOTES

- NO CERTIFICATE OF OCCUPANCY SHALL BE ISSUED UNTIL ALL HILLSIDE STIPULATIONS AND ALL TOWN CODE REQUIREMENTS ARE COMPLIED INCLUDING BUT NOT LIMITED TO LANDSCAPING, GROUND RESTORATION, FIRE FLOW, FIRE SAFETY AND ALL ON-SITE AND OFF-SITE IMPROVEMENTS.
- ALL OUTDOOR LIGHTING SHALL BE IN CONFORMANCE WITH ARTICLE XXII OF THE TOWN ZONING ORDINANCE.
- ALL EXCESS FILL MATERIAL SHALL BE REMOVED FROM THE SITE WITH NO NEW SPILL SLOPES.
- THE USE OF HYDRAULIC RAM HAMMERS, OR OTHER HEAVY EQUIPMENT USED TO CUT THROUGH ROCK, INCLUDING MACHINERY WITH AUDIBLE BACKUP WARNING DEVICES SHALL BE LIMITED TO USE BETWEEN THE HOURS OF 7 A.M. OR SUNRISE, WHICHEVER IS LATER, AND 6 P.M. OR SUNSET, WHICHEVER IS EARLIER, MONDAY THROUGH FRIDAY, WITH LIMITED WORK ON SATURDAY AND NO WORK ON SUNDAY OR LEGAL HOLIDAYS. RAM HAMMERS AND OTHER HEAVY EQUIPMENT CANNOT BE USED ON SATURDAYS WITHOUT A WAIVER FROM THE TOWN MANAGER.
- CONSTRUCTION STAKING AND /OR FENCING SHALL BE PLACED AROUND THE CONSTRUCTION SITE SO AS TO PROTECT THE UNDISTURBED NATURAL AREA.
- ALL RETAINING WALLS SHALL NOT EXTEND MORE THAN 6 IN ABOVE THE MATERIAL THEY RETAIN (WITH EXCEPTION OF DRIVEWAY RETAINING WALLS IN ACCORDANCE WITH 2207.VI.6).

GENERAL NOTES

- CONTRACTOR TO VERIFY LOCATION OF UTILITIES BY CONTACTING BLUE STAKE PRIOR TO CONSTRUCTION.
- NEW CMU WALLS SHALL HAVE 2 OPEN FACE BLOCK (AT GRADE) FOR DRAINAGE FOR EVERY 13 FOOT SECTION OF WALL PER TOWN OF PARADISE VALLEY STANDARD DETAIL. NEW CMU WALLS ARE TO BE FINISHED ON BOTH SIDES PER SECTION 2043 OF THE TOWN'S ZONING ORDINANCE.
- EXISTING AND PROPOSED UTILITIES ARE UNDERGROUND. WHERE UTILITY LINES CROSS RETENTION AREA, A MINIMUM 30" COVER SHALL BE MAINTAINED OVER UTILITY LINES. ALL UTILITIES SHALL COMPLY WITH TOWN OF PARADISE VALLEY UNDERGROUNDING OF UTILITY REQUIREMENTS.
- THIS IS NOT A BOUNDARY SURVEY. ALL BENCHMARK INFORMATION, DISTANCE-BEARING, BOUNDARY, AND TOPOGRAPHIC INFORMATION SHOWN ON THIS DRAWING OBTAINED FROM AN UNRECORDED SURVEY BY CLOUSE ENGINEERING, JOB NO. 180408 DATED 12/07/18. TOPOGRAPHY WAS VERIFIED BY GOOKIN ENGINEERS IN MAY 2021.
- ALL STEM WALLS/ HOUSE WALLS TO BE WATERPROOFED A MINIMUM OF 1' ABOVE FINISHED GRADE PER DETAILS ON ARCHITECTURAL PLANS.
- PER STRUCTURAL DETAILS TOP OF FOOTING FOR SITE WALLS IS MINIMUM OF 8" BELOW FINISHED GRADE.
- PROVIDE FALL PROTECTION ALONG RETAINING WALLS WITH DROP IN EXCESS OF 30".
- NO WORK OF ANY KIND MAY COMMENCE UNTIL ALL STORM WATER POLLUTION PREVENTION BMP'S ARE INSTALLED, INSPECTED AND APPROVED BY THE TOWN.
- ALL STORMDRAIN PIPE TO BE ADS N-12 PIPE AND ALL CATCH BASINS TO BE ADS DRAIN BASINS EXCEPT AS NOTED. ALL CATCH BASIN GRATES TO BE CAST IRON AND A MINIMUM OF 12" X 12" EXCEPT AS NOTED.
- ALL RIPRAP SHALL BE NATIVE TO THE SITE AND ANGULAR.
- ALL HEADWALLS SHALL BE COLORED CONCRETE (SAN DIEGO BUFF).

GRADING NOTES

- ALL GRADING IS TO COMPLY WITH THE REPORT OF GEOTECHNICAL INVESTIGATION FOR THE CHESNEY RESIDENCE, DATED OCTOBER 1, 2023 BY ACS SERVICES, LLC. SEE REPORT FOR DETAILS ON MATERIAL GRADATION AND COMPACTION.
- ALL RIPRAP SHALL BE ANGULAR AND WELL GRADED WITH A D₅₀ AS SPECIFIED HEREON. RIPRAP SLOPES SHALL NOT EXCEED 2:1. ALL RIPRAP SHALL BE NATIVE STONE TO MATCH EXISTING TERRAIN.
- ANY SLOPES IN EXCESS OF 2:1 SHALL HAVE A GEOTECHNICAL ENGINEER EXAMINE THE IN-PLACE MATERIAL FOR SLOPE STABILITY, OR SHALL BE REINFORCED BASED ON RECOMMENDATIONS FROM THE GEOTECHNICAL ENGINEER.

NATIVE PLANT STATEMENT

ALL NATIVE PLANTS IMPACTED BY CONSTRUCTION SHALL BE RELOCATED ON SITE. SEE LANDSCAPE PLAN AND NATIVE PLANT INVENTORY & SALVAGE PLAN.

FIRE SPRINKLER SYSTEM

FIRE SPRINKLER SYSTEM TO BE INSTALLED PER THE REQUIREMENTS OF THE TOWN OF PARADISE VALLEY AND IN ACCORDANCE WITH I.B.C. SECT. 904.2.2 AMD. AND I.F.C. SECT. 1003.2.1 AMD.

SITE DATA

AREA OF LOT	1.27 AC OR 55,539 S.F.
AREA UNDER ROOF (S.F.)	19,501 S.F.
FLOOR AREA RATIO (%)	25%
BUILDING PAD SLOPE	22%
VERTICAL	60 FT.
HORIZONTAL	273.5 FT.
ALLOWABLE DISTURBED AREA (%)	16.48%
ALLOWABLE DISTURBED AREA (S.F.)	9,153 S.F.
EXISTING GROSS DISTURBED AREA (%)	69%
EXISTING GROSS DISTURBED AREA (S.F.)	38,688 S.F.
EXISTING NET DISTURBED AREA (%)	69%
EXISTING NET DISTURBED AREA (S.F.)	38,688 S.F.
PROPOSED DISTURBED AREA CALCULATION	
GROSS DISTURBED AREA	42,953 S.F.
LESS BUILDING FOOTPRINT	8,267 S.F.
LESS GRADING REVEGETATED AREAS	3,976 S.F.
NET PROPOSED DISTURBED AREA (S.F.)	30,710 S.F.
NET PROPOSED DISTURBED AREA (%)	55.3%

PERCENT OF LOT STEEPER THAN NATURAL GRADE (5% MAX.) _____ 2%
 VOLUME OF CUT (C.Y.*) _____ 7,539 C.Y.
 VOLUME OF FILL (C.Y.*) _____ 228 C.Y.
 GRADING PERMIT FEES _____ \$7,560
 HILLSIDE ASSURANCE @ 35 X GRADING PERMIT FEES _____ \$457,750
 SLOPE OF LOWER DRIVEWAY (30% MAX.) _____ 1.0 % (AVG)
 SLOPE OF UPPER DRIVEWAY (30% MAX.) _____ 1.6 % (AVG)
 MAX LENGTH OF VISIBLE WALL _____ 93 FT.

* EARTHWORK QUANTITIES ARE FOR ESTIMATING PURPOSES ONLY AND DO NOT INCLUDE POOL/SPA AREAS OR ADJUSTMENTS FOR SHRINK OR SWELL.

HILLSIDE - GRADING AND DRAINAGE PLAN

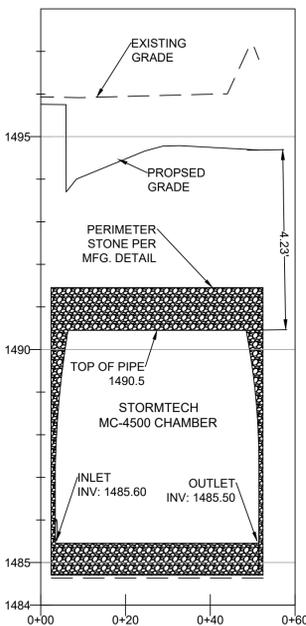
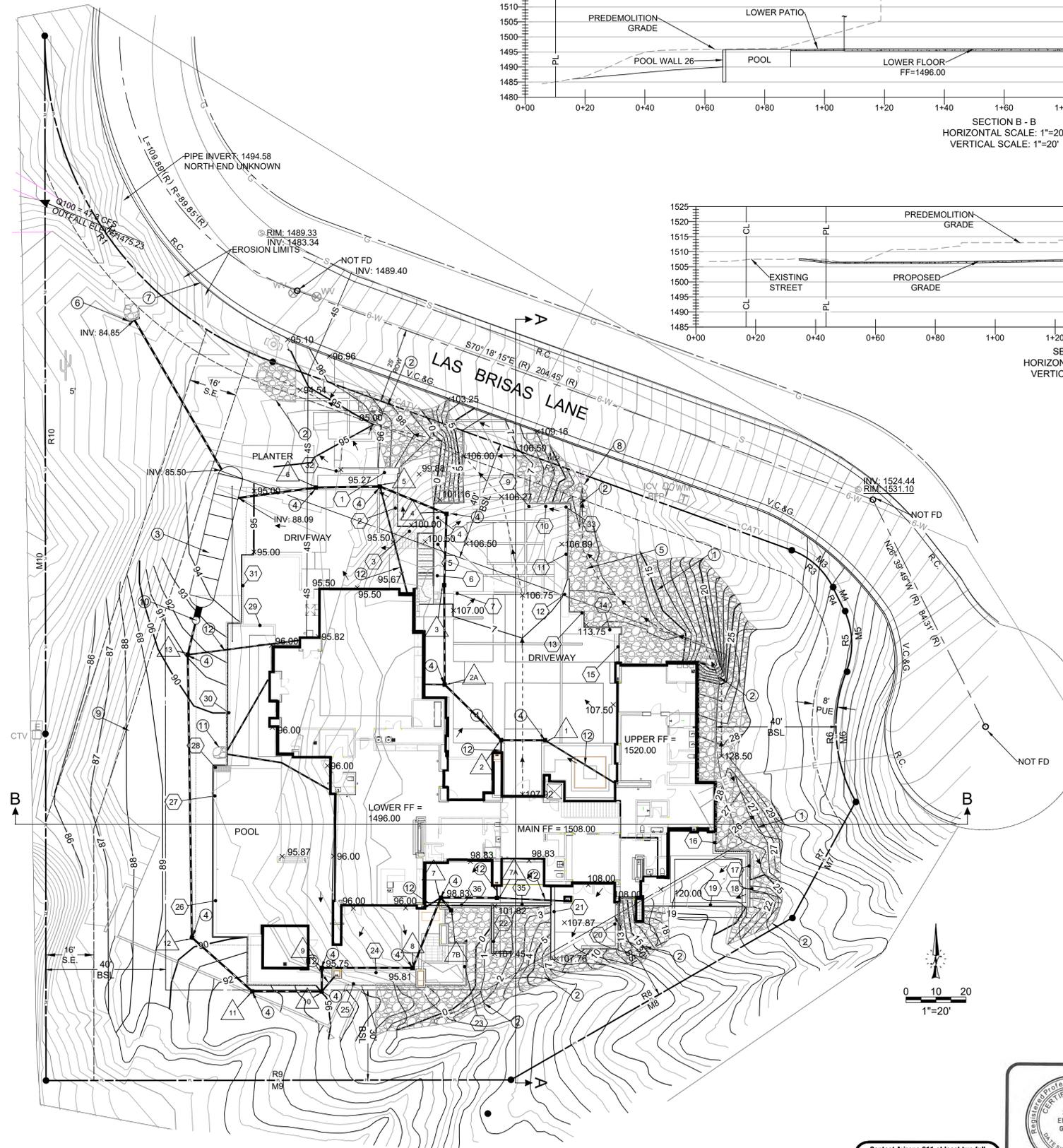
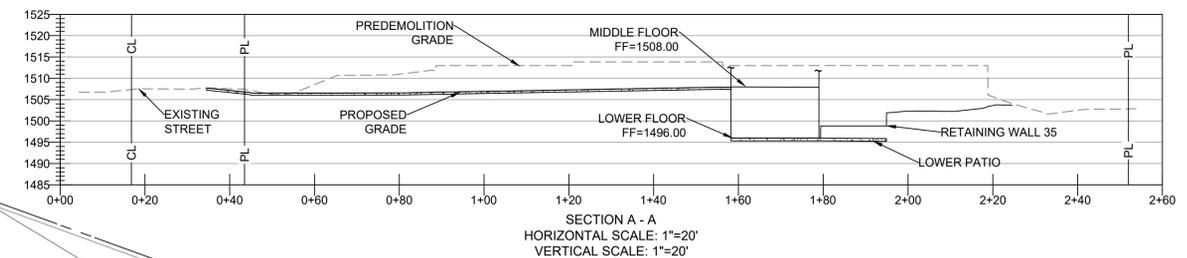
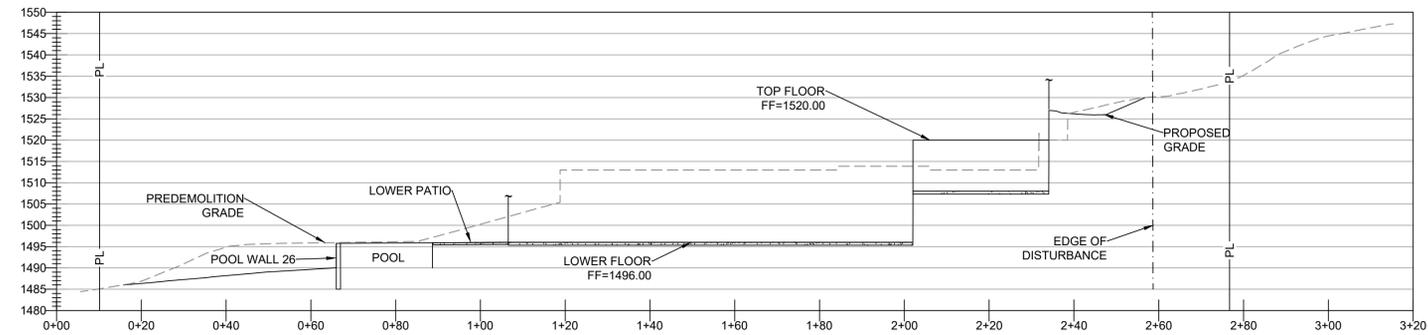
7404 N LAS BRISAS LANE

LEGEND

— H1440 —	HISTORIC CONTOUR	EM	ELECTRIC METER
— 1440 —	EXISTING CONTOUR	RC	ROLL CURB
35.83	EXISTING GRADE	FH	FIRE HYDRANT
— 39 —	PROPOSED CONTOUR	V.C. & G.	VERTICAL CURB & GUTTER
— G —	GASLINE	⊙	MANHOLE
— E —	UNDERGROUND ELECTRIC	⊠	TELEPHONE RISER
		⊡	ELECTRIC BOX
		WM	WATER METER
		⊗	WATER VALVE

CONSTRUCTION KEYNOTES

- ① GRADE SWALE 6" DEEP MINIMUM AS SHOWN. WATERPROOF STRUCTURES 1' ABOVE GRADE WHERE ADJACENT TO SWALE.
- ② INSTALL LANDSCAPE BOULDERS AND/OR 3" NATURAL ROCK COBBLE TO MATCH EXISTING HILLSIDE SURROUNDINGS TO PROVIDE SLOPE STABILITY AT SLOPES GREATER THAN 4:1. ALTERNATELY, CUTS MAY BE INSPECTED BY A GEOTECHNICAL ENGINEER TO ENSURE STABILITY.
- ③ INSTALL MC7200 STORMTECH CHAMBERS FOR CAPACITY SHOWN ON SHEET 1.
- ④ INSTALL 12" SQUARE GRATE AND CATCH BASIN. ALL PIPES TO BE 6" ADS N-12 OR EQUIVALENT. MAINTAIN MINIMUM 3' COVER AND 1% SLOPE ON ALL PIPES.
- ⑤ POOL EQUIPMENT VAULT TO USE CARTRIDGE STYLE FILTER.
- ⑥ DAYLIGHT 3" ADS N-12 OR EQUIVALENT DRAIN PIPE WITH FLARED END SECTION OR HEADWALL WITH 3 SY MINIMUM NATIVE STONE RIPRAP EROSION PROTECTION.
- ⑦ RESTORE ERODED AREA ADJACENT TO ROAD. USE 6" RIPRAP OR BOULDERS TO PREVENT FUTURE EROSION.
- ⑧ CONTRACTOR TO PROTECT OR RELOCATE UTILITIES AS REQUIRED.
- ⑨ EXISTING BASIN TO BE REMOVED.
- ⑩ INSTALL ACCESS POINT AS 24" DRAIN BASIN W/ 24" ADS N-12 PIPE FROM DRAIN BASIN TO RETENTION CHAMBERS. INSTALL SIGNAGE AT ACCESS POINT READING "NOTICE - UNDERGROUND STORMWATER STORAGE TANK".
- ⑪ DAYLIGHT ROOF DRAINS WITH 3 SY MINIMUM NATIVE STONE RIPRAP EROSION PROTECTION.
- ⑫ CONNECT ROOF DRAIN TO CATCH BASIN WITH WATERTIGHT CONNECTION



Structure Table		
	RIM	INVERT
1	1507.73	1503.98
2	1507.71	1503.73
2A	1507.30	1503.06
3	1506.85	1502.58
4 *	1506.56	1492.76
5	1496.79	1491.58
6	1496.46	1490.33
7	1498.83	1492.23
7A	1498.83	1492.42
7B	1499.00	1492.42
8	1495.81	1491.88
9	1495.75	1491.57
10	1495.03	1489.00
11	1492.55	1487.97
12	1489.80	1486.89
13	1491.12	1485.75

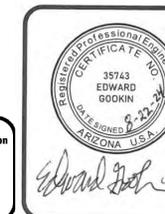
* DROP STRUCTURE

KEYNOTE	WALL HEIGHT				
	TW	TRW	G	TOF	EX. HT
1	100.50	99.50	95.25	94.58	5.25
2	100.00	99.75	95.30	94.63	4.70
3	100.50	100.00	95.91	95.24	4.59
4	106.50	106.50	100.00	99.33	6.50
5	106.50	106.50	97.66	96.99	8.84
6	106.50	106.50	102.33	101.66	4.17
7	113.00	107.00	107.00	106.33	6.00
8	NOT USED				
9	112.50	107.00	106.50	105.83	6.00
10	110.00	110.00	106.75	106.08	3.25
11	113.50	113.00	107.00	106.33	6.50
12	113.75	113.75	107.50	106.83	6.25
13	113.75	113.75	107.50	106.83	6.25
14	115.00	114.00	107.50	106.83	7.50
15	115.00	114.50	107.50	106.83	7.50
16	126.50	127.50	122.00	121.33	4.50
17	126.50	126.50	120.00	119.33	6.50
18	125.50	125.25	120.00	119.33	5.50
19	120.00	120.00	120.00	119.33	0.00
20	113.00	113.00	107.75	107.08	5.25
21	108.00	108.00	102.00	101.33	6.00
22	102.00	101.82	98.50	97.83	3.50
23	101.00	100.00	96.00	95.33	5.00
24	99.00	98.50	94.50	93.83	4.50
25	99.00	98.50	94.72	94.05	4.28
26	POOL WALL				
27	POOL WALL				
28	POOL WALL				
29	96.00	96.00	94.50	93.83	1.50
30	96.00	96.00	90.00	89.33	6.00
31	96.00	96.00	95.00	94.33	1.00
32	100.50	95.25	95.25	94.58	5.25
33	113.00	112.50	107.00	106.33	6.00
34	NOT USED				
35	102.00	101.73	96.00	95.33	6.00
36	99.00	100.00	96.00	95.33	3.00

DRAINAGE NOTE
CALCULATED FLOWS ARE POST CONSTRUCTION

FLOOD INSURANCE RATE MAP (FIRM) INFORMATION

COMMUNITY NUMBER	PANEL NUMBER (PANEL DATE)	SUFFIX	DATE OF FIRM (INDEX DATE)	FIRM ZONE	BASIN FLOOD ELEVATION (IN AO ZONE, USE DEPTH)
040049	1765 10-16-13	"L"	10-16-2013	"X"	N/A



Q.S. 23-40

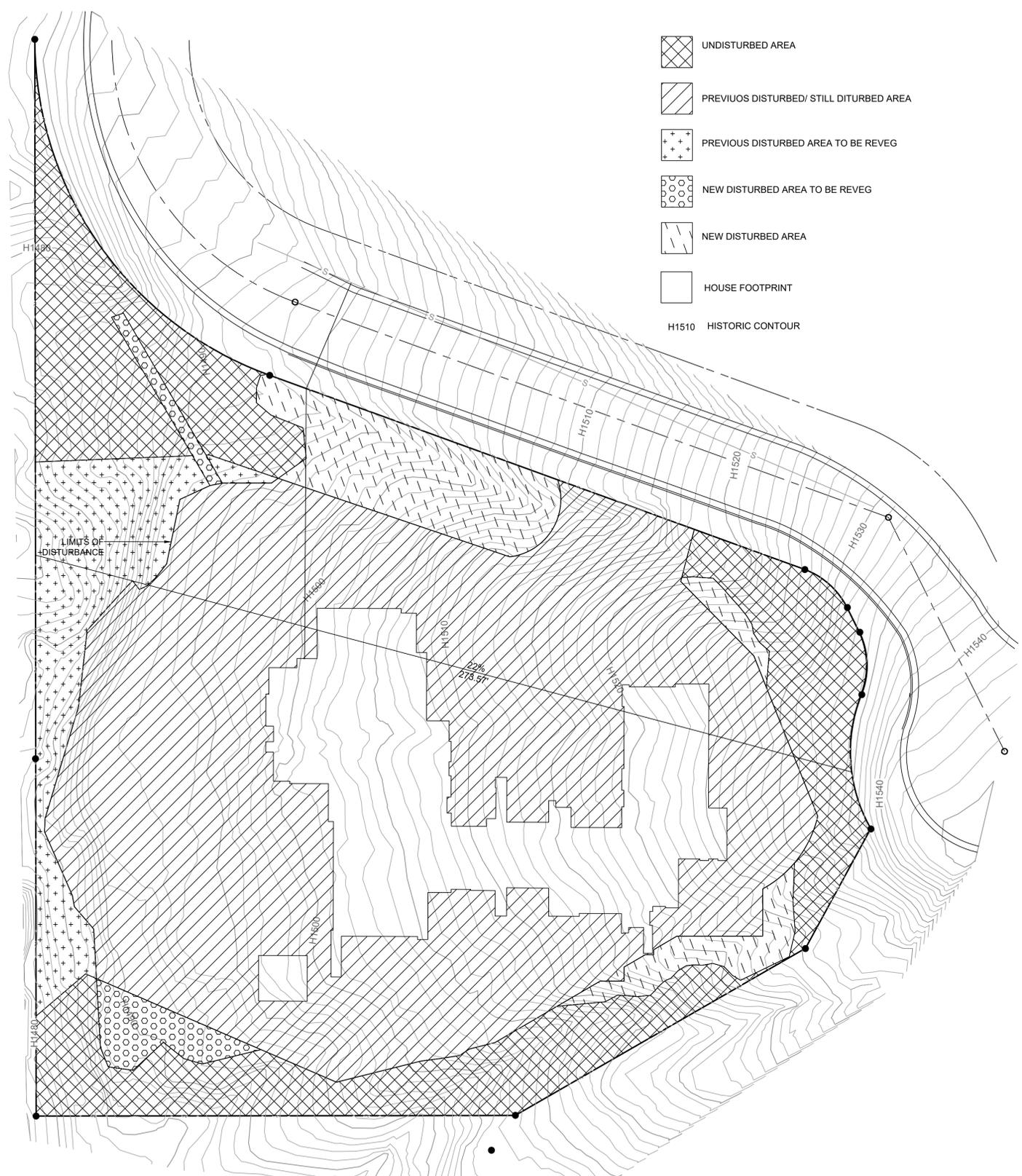
HILLSIDE GRADING & DRAINAGE

7404 N LAS BRISAS LANE
PARADISE VALLEY, ARIZONA 85253

GOOKIN ENGINEERS
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4333 NORTH BROWN AVENUE
SCOTTSDALE, ARIZONA 85251
480-947-3741
Civil@Gookin.biz

Scale 1"=20'
Date 08/12/2024
Rev
Designed EGG
Drawn EGG
File: 2091 las brisas 8-19-24.dwg

SHEET 2 of 3 SHEETS
JOB NO. 2691



-  UNDISTURBED AREA
-  PREVIOS DISTURBED/ STILL DITURBED AREA
-  PREVIOUS DISTURBED AREA TO BE REVEG
-  NEW DISTURBED AREA TO BE REVEG
-  NEW DISTURBED AREA
-  HOUSE FOOTPRINT
- H1510 HISTORIC CONTOUR

SITE DATA

AREA OF LOT	1.27 AC OR 55,539 S.F.
AREA UNDER ROOF (S.F.)	19,501 S.F.
FLOOR AREA RATIO (%)	25%
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GRADING PERMIT FEES	\$7,560
HILLSIDE ASSURANCE @ 35 X GRADING PERMIT FEES	\$264,600
SLOPE OF LOWER DRIVEWAY (30% MAX.)	1.0 % (AVG)
SLOPE OF UPPER DRIVEWAY (30% MAX.)	1.6 % (AVG)
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* EARTHWORK QUANTITIES ARE FOR ESTIMATING PURPOSES ONLY AND DO NOT INCLUDE POOL/SPA AREAS OR ADJUSTMENTS FOR SHRINK OR SWELL.

Q.S. 23-40



DISTURBED AREA & HISTORIC CONTOURS
7404 N LAS BRISAS LANE
 PARADISE VALLEY, ARIZONA 85253

<p>Scale 1"=20' Date 08/12/2024 Rev Designed EG Drawn AJ File: 2691 las brissas 8-19-24.dwg</p>	 GOOKIN ENGINEERS ENGINEERS • HYDROLOGISTS • PLANNERS • SURVEYORS 4203 NORTH BROWN AVENUE SCOTTSDALE, ARIZONA 85251 480-947-3741 Civil@Gookin.biz	SHEET 3 of 3 SHEETS JOB NO. 2691
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I:\92_168_0\200\Files-Drive\Land\Projects\2691 7404 LAS BRISAS LANE\DWG\2691 las brissas 8-19-24.dwg, Active Tab: GAD CONTOURS AND DISTURBANCE, Aug 22, 2024 - 2:50pm, malb

OPERATIONAL CONTROL

1. THE CONTRACTOR SHALL MAINTAIN OPERATIONAL CONTROL OF ENTIRE SITE
2. THE CONTRACTOR IS RESPONSIBLE FOR OPERATIONAL CONTROL OVER PROJECT SPECIFICATIONS.

PREVENTING DISCHARGE TO WATERS OF THE US

THE IMPLEMENTATION OF BMPs EC-5, ES-3 AND GH-4 WILL PREVENT DISCHARGE OF SOLID MATERIALS TO WATERS OF THE US.

WASHWATER AND WASHOUT MANAGEMENT

THE IMPLEMENTATION OF BMP GH-4 WILL CONTAIN AND MANAGE VEHICLE EQUIPMENT WASHWATER AND CONCRETE WASHOUT.

INTENDED SEQUENCE & ASSOCIATED BMPs

1. CLEARING AND GRUBBING (BMPs EC-5, EC-7, GH-6, ES3)
2. EXCAVATION AND GRADING (BMPs EC-5, EC-7, GH-6, ES3)
3. HOUSE AND DRIVEWAY CONSTRUCTION (BMPs EC-5, EC-7, GH-6, ES3, GH-1, GH-4)

NOTE: THE CONTRACTOR IS RESPONSIBLE FOR ALL ACTIVITIES IN THE INTENDED SEQUENCE. THE CONTRACTOR SHALL REFERENCE THE MOST CURRENT VERSION OF CHAPTER 5 OF THE DRAINAGE DESIGN MANUAL OF MARICOPA COUNTY FOR DETAILED INFORMATION RELATED TO THE REFERENCED BMPs.

REFERENCED BMPs
 EC-5 STABILIZED CONSTRUCTION ENTRANCE
 EC-7 DUST CONTROL
 GH-4 DESIGNATED WASHDOWN AREAS
 GH-6 ROAD SWEEPING/TRACKOUT CLEANING
 ES-3 SEDIMENT WATTLE
 GH-1 CHEMICAL MANAGEMENT
 GH-5 SPILL CONTAINMENT PLAN
 SPC-1 STORM DRAIN INLET PROTECTION

FINAL STABILIZATION

FINAL STABILIZATION WILL BE PROVIDED BY LANDSCAPING DESIGN BY OTHERS.

NATIVE PLANT INVENTORY

ALL NATIVE PLANTS IMPACTED BY CONSTRUCTION SHALL BE RELOCATED ON-SITE. SEE LANDSCAPE PLAN AND NATIVE PLANT INVENTORY AND SALVAGE PLAN.

STRUCTURAL BMP STATEMENT

STRUCTURAL BMPs SHALL NOT BE PLACED IN THE FLOODPLAIN TO THE EXTENT PRACTICABLE.

SWPPP REVISION

THERE ARE NO REASONS FOR ANY DELAY IN REVISING THE SWPPP.

SEED MIX & APPLICATION

THERE WILL BE NO SEED MIX REVEGETATION.

NON-VEGATATIVE STABILIZATION

THERE WILL BE NO AREAS AWAITING VEGETATIVE STABILIZATION. DURING THE TIME PRIOR TO PROJECT COMPLETION BMP ES-3 WILL MAINTAIN DISTURBANCE ON SITE.

NON-CONSTRUCTION POLLUTANT SOURCES

THERE ARE NO NON-CONSTRUCTION POLLUTANT SOURCES AFFECTING THIS SITE. NO BMPs FOR NON-CONSTRUCTION POLLUTANT SOURCES WILL BE NEEDED.

RUN-ON MANAGEMENT

FLOW DIRECTED ONTO THE CONSTRUCTION SITE FROM OFF SITE AREAS WILL BE CONTAINED BY BMP ES-3

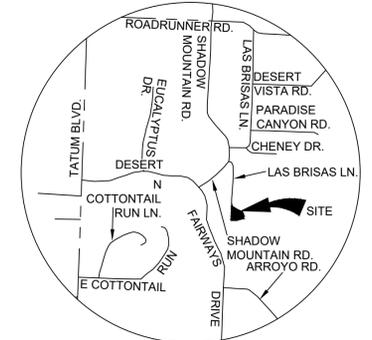
SEDIMENT CONTROL BMP

SEDIMENT CONTROL BMPs ARE TO BE PLACED AROUND NON-ACTIVE SOIL STOCKPILES.

STORMWATER POLLUTION PREVENTION PLAN

7404 N LAS BRISAS LANE

PARADISE VALLEY, ARIZONA 85253



VICINITY MAP

N.T.S.

OWNER

CANET PARTNERS LLC
 3750 LAS VEGAS BLVD S UNIT 3506
 LAS VEGAS, NEVADA 89158

SITE ADDRESS

7404 N LAS BRISAS LANE
 PARADISE VALLEY, ARIZONA 85253

LEGAL DESCRIPTION

LOT 1, REPLAT OF MONTANA DE BONITAS CASAS, ACCORDING TO BOOK 221 OF MAPS, PAGE 11 AND REPLAT RECORDED IN BOOK 266 OF MAPS, PAGE 25, RECORDS OF MARICOPA COUNTY, ARIZONA

AREA

55,539 S.F. OR 1.27 AC.± (M)

APN

169-06-090

ZONING

R-43

DISTURBED AREA

38688 S.F. OR 0.88 AC±

PROJECT DESCRIPTION

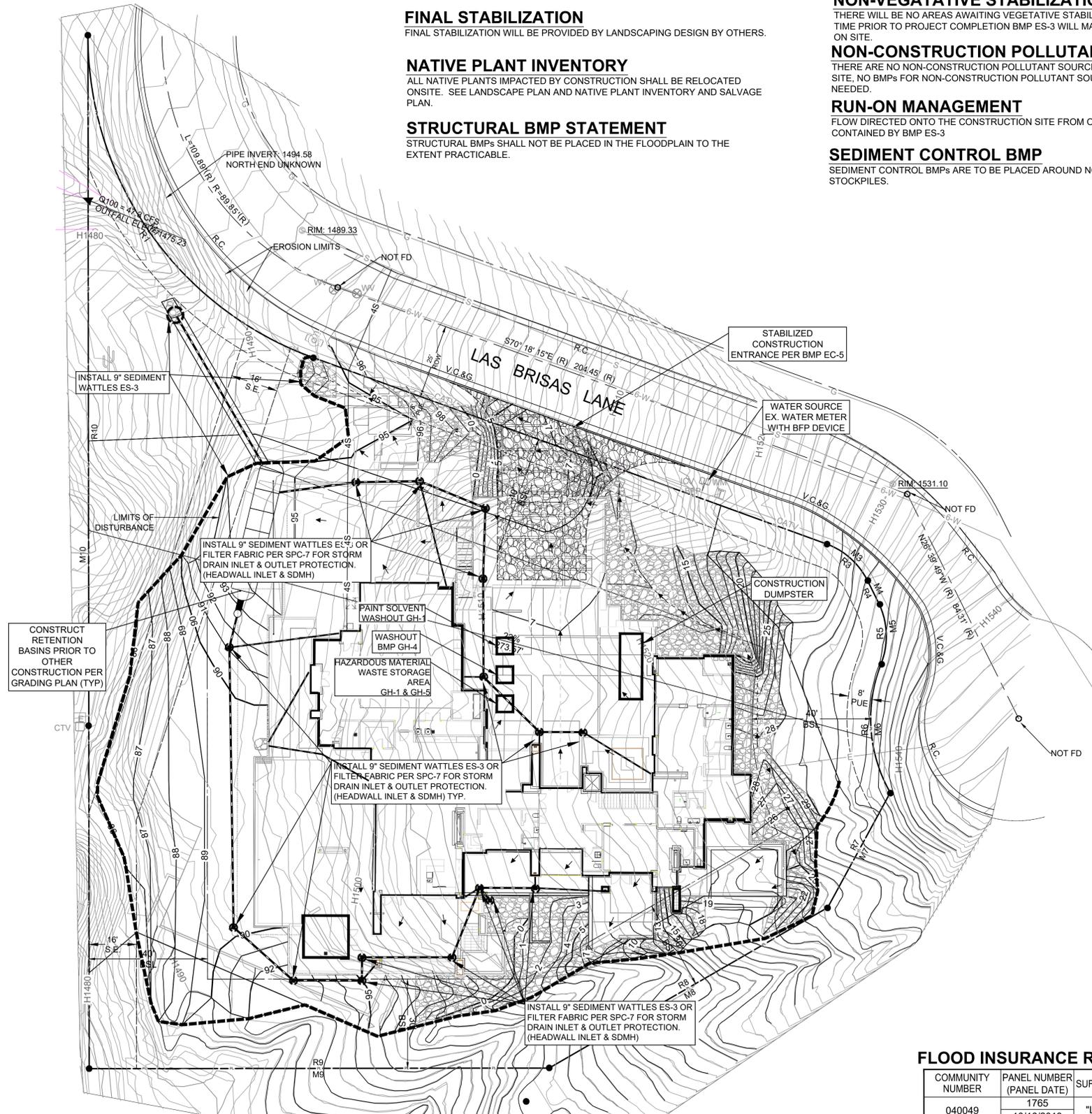
DEMOLITION OF EXISTING HOUSE, TENNIS COURT, POND, POOL, AND ASSOCIATED IMPROVEMENTS.

SHEET INDEX

- SHEET 1 COVER SHEET, NOTES & PLAN
- SHEET 2 BMP DETAILS
- SHEET 3 BMP DETAILS

LEGEND

- 1425 EXISTING CONTOUR
- BSL BUILDING SETBACK LINE
- FF FINISHED FLOOR
- F.H. FIRE HYDRANTS
- IB/IP IRON BAR/IRON PIPE
- PL PROPERTY LINE
- WM WATER METER
- W WATERLINE
- E UNDERGROUND ELECTRIC
- T UNDERGROUND TELCO
- G GASLINE
- SEDIMENT WATTLE PER BMP ES3



NOTES

1. THIS IS NOT AN ALTA SURVEY OR A BOUNDARY SURVEY. ALL TOPOGRAPHIC INFORMATION SHOWN ON THIS DRAWING OBTAINED BY GOOKIN ENGINEERS.
2. UTILITY LOCATIONS OBTAINED FROM THE SURVEY PROVIDED AND FROM QUARTER SECTION MAPS OF SERVING UTILITIES. THE CONTRACTOR SHALL CONTACT BLUE STAKE PRIOR TO CONSTRUCTION TO VERIFY EXACT LOCATION OF UTILITIES.

CONTRACTOR CERTIFICATION

ADEQ ALSO REQUIRES THAT THE CONTRACTORS AND SUBCONTRACTORS RESPONSIBLE FOR IMPLEMENTING MEASURES IN THE SWMP BE LISTED IN THE PLAN WITH THE MEASURES FOR WHICH THEY ARE RESPONSIBLE, AND THAT THEY SIGN A CERTIFICATION STATEMENT THAT THEY UNDERSTAND THE PERMIT REQUIREMENTS AS REFLECTED ON THE SWMP.

I, _____, ACTING AS _____ FOR THE _____,

AN AUTHORIZED REPRESENTATIVE, HAVING REVIEWED THIS STORM WATER MANAGEMENT PLAN (SWMP) AND ALL OF THE RELEVANT DOCUMENTS, DO HEREBY CERTIFY THAT I UNDERSTAND ALL COMPONENTS OF THIS PLAN AND WILL PERFORM ALL REQUIRED INSPECTIONS AND MAINTENANCE ACTIVITIES AS REQUIRED; AND THAT I WILL MAINTAIN ALL NECESSARY AND REQUIRED RECORDS AT THE JOB SITE AND KEEP UP TO DATE.

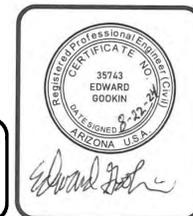
CONTRACTOR SIGNATURE _____	COMPANY NAME, ADDRESS, & PHONE _____
DATE _____	

GENERAL NOTES

1. STORM WATER POLLUTION PREVENTION PLAN (SWPPP) SHALL BE MAINTAINED ON THE SITE AND AVAILABLE FOR REVIEW.
2. THE TOWN OF PARADISE VALLEY ENGINEERING DEPARTMENT OFF-SITE INSPECTION DIVISION SHALL BE NOTIFIED 48 HOURS BEFORE ANY ON-SITE AND/OR OFF-SITE CONSTRUCTION BEGINS, TELEPHONE (480)948-7411.
3. THE NOTICE OF INTENT (NOI) SHALL BE COMPLETED AND SUBMITTED TO THE ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY (ADEQ) AND THE TOWN OF PARADISE VALLEY 48 HOURS PRIOR TO ANY CONSTRUCTION ACTIVITY.
4. THE SWPPP AND RELATED RECORDS MUST BE MADE AVAILABLE UPON REQUEST TO ADEQ AND THE TOWN OF PARADISE VALLEY.
5. THE PRIME CONTRACTOR OR OWNER SHALL OBTAIN A DUST CONTROL PERMIT FROM MARICOPA COUNTY ENVIRONMENTAL SERVICES AND PERFORM MEASURES AS REQUIRED BY THE PERMIT TO PREVENT EXCESS DUST (AND AS INCORPORATED IN THIS SWPPP).
6. THE PRIME CONTRACTOR OR OWNER SHALL PERFORM, AT A MINIMUM, A VISUAL INSPECTION OF THE CONSTRUCTION SITE ONCE EVERY SEVEN DAYS AND WITHIN 24 HOURS OF RAINFALL GREATER THAN OR EQUAL TO A HALF OF INCH (1/2 INCH). THE OPERATOR SHALL PREPARE A REPORT DOCUMENTING HIS/HER FINDINGS ON THE CONDITIONS OF THE SWPPP CONTROLS AND NOTE ANY EROSION PROBLEM AREAS. THE OPERATOR'S REPORT IS TO BE SUBMITTED TO THE TOWN'S CONSTRUCTION INSPECTOR FOR REVIEW AND APPROVAL AND SHALL BE MAINTAINED ON SITE BY THE OPERATOR. FACILITIES SHALL BE MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONING. IN ADDITION, ALL TEMPORARY SILTATION CONTROLS SHALL BE MAINTAINED IN A SATISFACTORY CONDITION UNTIL SUCH TIME THAT CONSTRUCTION IS COMPLETED, PERMANENT DRAINAGE FACILITIES ARE OPERATIONAL, AND THE POTENTIAL FOR EROSION HAS PASSED.
7. THE PRIME CONTRACTOR OR OWNER SHALL AMEND THIS PLAN AS NECESSARY DURING THE COURSE OF CONSTRUCTION TO RESOLVE ANY PROBLEM AREAS, WHICH BECOME EVIDENT DURING THE CONSTRUCTION AND/OR DURING RAINFALLS.
8. THE IMPLEMENTATION OF THESE PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE FACILITIES IS THE RESPONSIBILITY OF THE PERMITTEE/CONTRACTOR UNTIL ALL CONSTRUCTION IS APPROVED AND A NOTICE OF TERMINATION HAS BEEN SUBMITTED.
9. THE FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVES IN SUCH A MANNER AS TO INSURE THAT SEDIMENT-LADEN WATER DOES NOT ENTER THE DRAINAGE SYSTEM OR VIOLATE APPLICABLE WATER STANDARDS. ADDITIONALLY, THEY MUST BE INSTALLED AND IN OPERATION PRIOR TO ANY GRADING OR LAND CLEARING. WHEREVER POSSIBLE, MAINTAIN NATURAL VEGETATION FOR SILT CONTROL.
10. THE CONTRACTOR TO WHOM THE FINAL G&D PERMIT WILL BE ISSUED MUST HAVE THE APPROVED SWPPP ISSUED IN THEIR NAME.
11. ONCE THE CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED AND THE SITE HAS MET THE FINAL STABILIZATION REQUIREMENTS OF THE PERMIT, THE AUTHORIZED SITE REPRESENTATIVE MAY FILE A NOTICE OF TERMINATION (NOT) WITH ADEQ, WITH A COPY SUBMITTED TO THE TOWN OF PARADISE VALLEY ENGINEERING DIVISION, TO TERMINATE COVERAGE UNDER THE PERMIT.

FLOOD INSURANCE RATE MAP (FIRM) INFORMATION

COMMUNITY NUMBER	PANEL NUMBER (PANEL DATE)	SUFFIX	DATE OF FIRM (INDEX DATE)	FIRM ZONE	BASIN FLOOD ELEVATION (IN AO ZONE, USE DEPTH)
040049	1765 10/16/2013	"L"	10-16-2013	"X"	N/A



STORMWATER POLLUTION PREVENTION PLAN

7404 N LAS BRISAS LANE
 PARADISE VALLEY, ARIZONA 85253

GOOKIN ENGINEERS
 ENGINEERS • HYDROLOGISTS • PLANNERS • SURVEYORS
 4203 NORTH BROWN AVENUE
 SCOTTSDALE, ARIZONA 85251
 480-947-3741
 Civil@Gookin.biz

Scale 1"=20'
 Date 08/12/2024
 Rev _____
 Designed EG
 Drawn AJ

SHEET 1 of 4 SHEETS
 JOB NO. 2691

Q.S. 23-40

STORMWATER POLLUTION PREVENTION PLAN

7404 N LAS BRISAS LANE PARADISE VALLEY, ARIZONA 85253

GH-4 GH-4: DESIGNATED WASHDOWN AREAS

DEFINITION
PROCEDURES AND PRACTICES THAT ARE DESIGNED TO MINIMIZE OR ELIMINATE THE DISCHARGE OF CONCRETE WASTE MATERIALS TO THE STORM DRAIN SYSTEMS OF WATERCOURSES.

GENERAL INFORMATION

Applicability - Effectiveness
Inlet Drain Protection - high
Debris Management, Cleanup, and Washout - high

Most effective when used with:

- GH-1 Chemical Management
- GH-3 Equipment Maintenance Procedures
- GH-5 Spill Containment Plan

Alternative BMPs:

None

RATINGS

Associated Costs	H	M	L
Implementation		X	
Maintenance		X	
Training		X	
Target Pollutants Removal	H	M	L
Oil and Grease		X	
Nutrients			X
Sediment			X
Floatable Material			X
Metals		X	
Other Construction Waste	X		

FIGURES

- Photos/Sketches**
- GH-4 Designated Washdown Areas Photos
- CAD Drawings**
- None

PURPOSE

DESIGNATED WASHOUT AREAS AND ASSOCIATED PROCEDURES ENSURE THE PROPER WASHOUT OF CONCRETE TRUCKS, TOOLS, AND EQUIPMENT AND PREVENTS FRESH CONCRETE OR CEMENT LADEN MORTAR FROM ENTERING A STORM DRAINAGE SYSTEM.

APPROPRIATE APPLICATIONS

CONCRETE WASTE MANAGEMENT PROCEDURES AND PRACTICES ARE IMPLEMENTED ON CONSTRUCTION PROJECTS WHERE CONCRETE IS USED AS A CONSTRUCTION MATERIAL OR WHERE CONCRETE DUST AND DEBRIS RESULT FROM DEMOLITION ACTIVITIES.

- WHERE SLURRIES CONTAINING PORTLAND CEMENT CONCRETE (PCC) OR ASPHALT CONCRETE (AC) ARE GENERATED, SUCH AS FROM SAW CUTTING, CORING, GRINDING, GROOVING, AND HYDRO-CONCRETE DEMOLITION.
- WHERE MORTAR-MIXING STATIONS EXIST.
- WHERE CONCRETE TRUCKS AND OTHER CONCRETE-COATED EQUIPMENT ARE WASHED ON SITE. SEE ALSO EQUIPMENT MAINTENANCE PROCEDURES.

LIMITATIONS

NONE.

PLANNING CONSIDERATIONS

- EDUCATE EMPLOYEES, SUBCONTRACTORS, AND SUPPLIERS ON THE CONCRETE WASTE MANAGEMENT TECHNIQUES DESCRIBED HEREIN.
- THE SITE SUPERVISOR OR DESIGNATED PERSONNEL SHOULD OVERSEE AND ENFORCE CONCRETE WASTE.
- MANAGEMENT PROCEDURES.

THE EFFECTIVENESS OF WASHDOWN AREAS MAY BE ENHANCED WHEN THE FOLLOWING BMPs ARE ALSO IMPLEMENTED: CHEMICAL MANAGEMENT, EQUIPMENT MAINTENANCE PROCEDURES, AND SPILL CONTAINMENT PLAN.

RECOMMENDED STANDARDS AND SPECIFICATIONS

PCC AND AC WASTES

- PCC AND AC WASTE SHOULD NOT BE ALLOWED TO ENTER STORM DRAINS OR WATERCOURSES. INSTEAD, PCC AND AC WASTE SHOULD BE COLLECTED AND PROPERLY DISPOSED OF OUTSIDE THE HIGHWAY RIGHT-OF-WAY OR PLACED IN A TEMPORARY CONCRETE WASHOUT STRUCTURE.
- INSTALL A SIGN ADJACENT TO EACH TEMPORARY CONCRETE WASHOUT TO INFORM CONCRETE EQUIPMENT OPERATORS TO UTILIZE THE INSTALLED STRUCTURES.
- A FOREMAN AND/OR CONSTRUCTION SUPERVISOR SHOULD MONITOR ONSITE CONCRETE WORKING TASKS, SUCH AS SAW CUTTING, CORING, GRINDING AND GROOVING TO ENSURE PROPER METHODS ARE IMPLEMENTED.
- SAW CUTTING RESIDUE SHOULD NOT BE ALLOWED TO FLOW ACROSS THE PAVEMENT, AND SHOULD NOT BE LEFT ON THE SURFACE OF THE PAVEMENT. VACUUM SLURRY RESIDUE AND DISPOSE IN A TEMPORARY FACILITY AND ALLOW SLURRY TO DRY. DISPOSE OF DRY SLURRY RESIDUE IN ACCORDANCE WITH SOLID WASTE MANAGEMENT.
- SIMILARLY, RESIDUE FROM GRINDING OPERATIONS SHOULD BE PICKED UP BY MEANS OF A VACUUM ATTACHMENT TO THE GRINDING MACHINE.

ONSITE TEMPORARY CONCRETE WASHOUT FACILITY PROCEDURES

- TEMPORARY CONCRETE WASHOUT FACILITIES SHOULD BE LOCATED A MINIMUM OF 50 FEET FROM STORM DRAIN INLETS, OPEN DRAINAGE FACILITIES, AND WATERCOURSES, UNLESS DETERMINED INFEASIBLE BY THE SITE SUPERVISOR. EACH FACILITY SHOULD BE LOCATED AWAY FROM CONSTRUCTION TRAFFIC OR ACCESS AREAS TO PREVENT DISTURBANCE OR TRACKING.
- TEMPORARY CONCRETE WASHOUT FACILITIES SHOULD BE CONSTRUCTED ABOVE GRADE OR BELOW GRADE AT THE OPTION OF THE CONTRACTOR AND HAVE SUFFICIENT QUANTITY AND SIZE TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS.
- PERFORM WASHOUT OF CONCRETE MIXER TRUCKS IN DESIGNATED AREAS ONLY. A SIGN SHOULD BE INSTALLED ADJACENT TO EACH WASHOUT FACILITY TO INFORM CONCRETE EQUIPMENT OPERATORS TO UTILIZE THE PROPER FACILITIES.
- WASH CONCRETE ONLY FROM MIXER TRUCK CHUTES INTO APPROVED CONCRETE WASHOUT FACILITY. WASHOUT MAY BE COLLECTED IN AN IMPERMEABLE BAG FOR DISPOSAL.

ABOVE GRADE TEMPORARY CONCRETE WASHOUT STRUCTURE

- ABOVE GRADE TEMPORARY CONCRETE WASHOUT STRUCTURES SHOULD HAVE A MINIMUM LENGTH AND WIDTH OF 10 FEET OR LARGER TO PROVIDE SUFFICIENT VOLUME TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS. IF DEEMED NECESSARY, THE LENGTH AND WIDTH OF THE WASHOUT STRUCTURE MAY BE EXPANDED FOR MORE CAPACITY.

- STRAW BALES, WOOD STAKES, AND SANDBAG MATERIALS SHOULD CONFORM TO THE SPECIFICATIONS IN ORGANIC FILTER BARRIER AND SAND BAG BARRIER.
- PLASTIC LINING MATERIAL SHOULD BE A MINIMUM OF 10-MIL POLYETHYLENE SHEETING AND SHOULD BE FREE OF HOLES, TEARS OR OTHER DEFECTS THAT COMPROMISE THE IMPERMEABILITY OF THE MATERIAL.

BELOW GRADE TEMPORARY CONCRETE WASHOUT STRUCTURE

- BELOW GRADE TEMPORARY CONCRETE WASHOUT SHOULD HAVE A MINIMUM LENGTH AND WIDTH OF 10 FEET OR LARGER TO PROVIDE SUFFICIENT VOLUME TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS. IF DEEMED NECESSARY, THE LENGTH AND WIDTH OF THE WASHOUT STRUCTURE MAY BE EXPANDED FOR MORE CAPACITY.

- PLASTIC LINING MATERIAL SHOULD BE A MINIMUM OF 10-MIL POLYETHYLENE SHEETING AND SHOULD BE FREE OF HOLES, TEARS OR OTHER DEFECTS THAT COMPROMISE THE IMPERMEABILITY OF THE MATERIAL.
- ENSURE THAT THE SOIL BASE IS FREE OF ROCKS OR OTHER DEBRIS THAT MAY CAUSE TEARS OR HOLES IN THE PLASTIC LINING MATERIAL.

REMOVAL OF TEMPORARY CONCRETE WASHOUT FACILITIES

- WHEN TEMPORARY CONCRETE WASHOUT FACILITIES ARE NO LONGER REQUIRED FOR THE WORK, AS DETERMINED BY THE SITE SUPERVISOR, HARDENED CONCRETE SHOULD BE BROKEN UP, REMOVED, AND DISPOSED OF IN ACCORDANCE WITH SOLID WASTE MANAGEMENT.
- HOLES, DEPRESSIONS OR OTHER GROUND DISTURBANCE CAUSED BY THE REMOVAL OF THE TEMPORARY CONCRETE WASHOUT FACILITIES SHOULD BE BACKFILLED.

RECOMMENDED MAINTENANCE AND INSPECTION

- MONITOR ON SITE CONCRETE WASTE STORAGE AND DISPOSAL PROCEDURES AT LEAST WEEKLY.
- MONITOR CONCRETE WORKING TASKS, SUCH AS SAW CUTTING, CORING, GRINDING AND GROOVING TO ENSURE PROPER METHODS ARE EMPLOYED.

POST CONSTRUCTION METHODS

NONE.



Concrete washout container.

Courtesy of Concrete Washout Systems, Inc.



Concrete washout area.

Courtesy of Douglas County

REFERENCES

- THE ABOVE NOTES WERE TAKEN FROM THE DRAINAGE DESIGN MANUAL FOR MARICOPA COUNTY, EROSION CONTROL - BEST MANAGEMENT PRACTICES, GENERAL HOUSEKEEPING GH-4, SEPTEMBER 2004 (DRAFT)
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- NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS, DECEMBER 2003, INTEGRATED STORM WATER MANAGEMENT (ISWM) DESIGN MANUAL FOR CONSTRUCTION.
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EC-5 EC-5: STABILIZED CONSTRUCTION ENTRANCE

DEFINITION
A STABILIZED PAD OF AGGREGATE UNDERLAIN WITH FILTER CLOTH LOCATED AT ANY POINT WHERE TRAFFIC WILL BE ENTERING OR EXITING A CONSTRUCTION SITE TO OR FROM A PUBLIC RIGHT-OF-WAY, STREET, ALLEY, SIDEWALK OR PARKING AREA. FOR ADDED EFFECTIVENESS, A WHEEL WASH OR WASH RACK AREA CAN BE INCORPORATED INTO THE DESIGN TO FURTHER REDUCE SEDIMENT TRACKING.

GENERAL INFORMATION

Applicability - Effectiveness
Perimeter and Access Controls - high

Most effective when used with:

- EC-6 Construction Road Stabilization
- EC-7 Dust Control
- GH-6 Road Sweeping/Trackout Cleaning

Alternative BMPs:

- GH-4 Designated Washdown Areas - wheel wash is especially useful with clay soils

RATINGS

Associated Costs	H	M	L
Implementation		X	
Maintenance		X	
Training			X
Target Pollutants Removal	H	M	L
Oil and Grease			X
Nutrients			X
Sediment		X	
Floatable Material			X
Metals		X	
Other Construction Waste			X

FIGURES

- Photos/Sketches**
- Stabilized Construction Entrance Photos
- CAD Drawings**
- Stabilized Construction Entrance Drawing

PURPOSE

STABILIZED CONSTRUCTION ENTRANCES REDUCE OR ELIMINATE THE TRACKING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAYS OR STREETS. REDUCING TRACKOUT OF SEDIMENTS AND OTHER POLLUTANTS ONTO PAVED ROADS HELPS PREVENT DEPOSITION OF SEDIMENTS INTO LOCAL STORM DRAIN AND PRODUCTION OF AIRBORNE DUST. IT ALSO CAN DIRECT TRAFFIC TO A SINGLE LOCATION, REDUCING THE NUMBER OF DISTURBED AREAS ON THE SITE AND PROVIDING TRAFFIC CONTROL.

APPROPRIATE APPLICATIONS

- A STABILIZED CONSTRUCTION ENTRANCE SHOULD BE USED AT ALL POINTS OF CONSTRUCTION INGRESS AND EGRESS. USE AT CONSTRUCTION SITES:
- WHERE DIRT OF MUD CAN BE TRACKED ONTO PUBLIC ROADS.
 - ADJACENT TO WATER BODIES.
 - WHERE CLAYEY OR SILTY SOILS ARE ENCOUNTERED.
 - WHERE DUST IS A PROBLEM DURING DRY WEATHER CONDITIONS.

AZPDEN/NDPES PERMITS AND MARICOPA COUNTY DUST CONTROL REGULATIONS REQUIRE THAT APPROPRIATE MEASURES ARE IMPLEMENTED TO PREVENT TRACKOUT OF SEDIMENTS ONTO PAVED ROADWAYS.

LIMITATIONS

STABILIZED CONSTRUCTION ENTRANCES MAY NOT BE COMPLETELY EFFECTIVE AGAINST PREVENTING THE DEPOSITION OF SEDIMENTS ONTO PAVED SURFACES. TO FURTHER REDUCE THE CHANCE OF THESE SEDIMENTS POLLUTING STORMWATER RUNOFF, SWEEPING OF THE PAVED AREA ADJACENT TO THE STABILIZED SITE ENTRANCE IS RECOMMENDED.

PLANNING CONSIDERATIONS

LIMIT POINTS OF ENTRANCE/EXIT TO ONLY STABILIZED LOCATIONS.

STABILIZED CONSTRUCTION ENTRANCES ARE MOST EFFECT WHEN USED IN CONJUNCTION WITH EC-6: CONSTRUCTION ROAD STABILIZATION, EC-7: DUST CONTROL, AND GH-6: ROAD SWEEPING/TRACKOUT CLEANING.

RECOMMENDED STANDARDS AND SPECIFICATIONS

STABILIZED CONSTRUCTION ENTRANCES ALONE ARE NOT VERY EFFECTIVE IN REMOVING SEDIMENT FROM EQUIPMENT LEAVING A CONSTRUCTION SITE. EFFICIENCY IS GREATLY INCREASED, THOUGH, WHEN A WASHING RACK IS INCLUDED AT THE POINT OF EGRESS.

DESIGN AND SIZING CONSIDERATIONS

THE AGGREGATE FOR STABILIZED CONSTRUCTION ENTRANCE APRONS SHOULD HAVE A NOMINAL DIAMETER OF 1 TO 3 INCHES IN SIZE, WASHED, WELL-GRADED GRAVEL OR CRUSHED ROCK. THE APRON DIMENSIONS RECOMMENDED ARE 30 FEET BY 50 FEET AND 6 INCHES DEEP.

- THE ENTRANCE MUST BE PROPERLY GRADED TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.
- INSTALL A WASHRACK AT GROUND ELEVATION.
- WHEN WASH AREAS ARE PROVIDED, WASHING SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO A PROPERLY CONSTRUCTED SEDIMENT TRAP OR BASIN (POND).

RECOMMENDED MAINTENANCE AND INSPECTION

- INSPECT MONTHLY AND AFTER EACH RAINFALL.
- REPLACE GRAVEL MAT WHEN SURFACE VOIDS ARE NO LONGER VISIBLE. PERIODIC TOP DRESSING WITH ADDITIONAL STONE WILL BE REQUIRED.
- ALL SEDIMENTS DEPOSITED ON PAVED ROADWAYS MUST BE REMOVED WITHIN 24 HOURS.
- REMOVE GRAVEL AND FILTER FABRIC UPON COMPLETION OF CONSTRUCTION.

NOTE: IF WORKING ON A PROJECT THAT IS SUBJECT TO A MARICOPA COUNTY DUST CONTROL PERMIT UNDER RULE 310, FOLLOW THE PERMIT REQUIREMENTS FOR STABILIZED CONSTRUCTION ENTRANCE DESIGN AND SIZING.

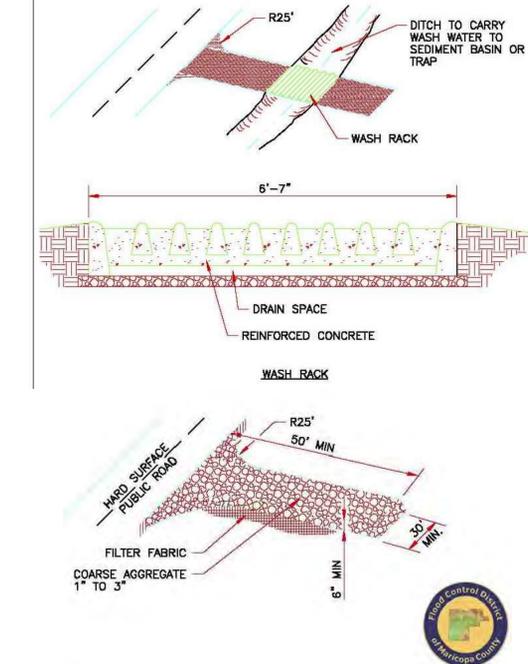
POST CONSTRUCTION METHODS

NONE.

REFERENCES

- THE ABOVE NOTES WERE TAKEN FROM THE DRAINAGE DESIGN MANUAL FOR MARICOPA COUNTY, EROSION CONTROL - BEST MANAGEMENT PRACTICES, GENERAL HOUSEKEEPING GH-6: ROAD SWEEPING/TRACKOUT CLEANING, AUGUST 15, 2013
- TACOMA PUBLIC WORKS ENVIRONMENTAL SERVICES, JANUARY 1993, CITY OF TACOMA SURFACE WATER MANAGEMENT MANUAL VOLUME II, CONSTRUCTION STORMWATER POLLUTION PREVENTION. [HTTP://WWW.CITYOFTACOMA.ORG/PAGE.ASPX?HID=951#MANUAL](http://www.cityoftacoma.org/page.aspx?hid=951#MANUAL)
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- CENTER FOR WATERSHED PROTECTION, INC., STORMWATER MANAGER'S RESOURCE CENTER (SMRC). [HTTP://WWW.STORMWATERCENTER.NET/](http://www.stormwatercenter.net/)
- KAMBER ENGINEERING GAITHERSBERG, MARYLAND, APRIL, 1991, SEDIMENTATION AND EROSION CONTROL, AN INVENTORY OF CURRENT PRACTICES, USEPA,
- CITY OF AUSTIN, TEXAS, MARCH, 2004, ENVIRONMENTAL CRITERIA MANUAL.

EC-5 STABILIZED CONSTRUCTION ENTRANCE DRAWING



EC-5 STABILIZED CONSTRUCTION ENTRANCE PHOTOS



Stabilized construction entrances reduce trackout to public right-of-ways or streets

A stabilized entrances should consist of well-graded, washed gravel up to 3 inches in diameter

STABILIZED CONSTRUCTION ENTRANCES REDUCE TRACKOUT TO PUBLIC RIGHT-OF-WAYS OR STREETS.

Call at least two full working days before you begin excavation.

ARIZONA 811

Arizona Blue Stake, Inc.

Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

Professional Engineer

CERTIFICATE NO. 35743

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EXPIRES 8-22-24

ARIZONA U.S.A.

STORMWATER POLLUTION PREVENTION PLAN

7404 N LAS BRISAS LANE
PARADISE VALLEY, ARIZONA 85253

Scale NA
Date 08/12/2024
Rev
Designed EG
Drawn AJ

File: 2891 las brisas 8-19-24.dwg

STORMWATER POLLUTION PREVENTION PLAN

7404 N LAS BRISAS LANE
PARADISE VALLEY, ARIZONA 85253

GOOKIN ENGINEERS
ENGINEERS • HYDROLOGISTS • PLANNERS • SURVEYORS
4203 NORTH BROWN AVENUE
SCOTTSDALE, ARIZONA 85251
480-947-3741
Civil@Gookin.biz

SHEET 2 of 4 SHEETS
JOB NO. 2691

STORMWATER POLLUTION PREVENTION PLAN

7404 N LAS BRISAS LANE PARADISE VALLEY, ARIZONA 85253

EC-7 EC-7: DUST CONTROL

DEFINITION
A COMPREHENSIVE PLAN TO LIMIT OFFSITE SEDIMENT DEPRESSION BY MINIMIZING OR CONTROLLING AIRBORNE FUGITIVE DUST.

GENERAL INFORMATION			
Applicability - Effectiveness	Perimeter and Access Controls - high		
Most effective when used with:	EC-5 Stabilized Construction Entrance EC-6 Construction Road Stabilization GH-6 Road Sweeping/Trackout Cleaning		
Alternative BMPs:	For long term dust control, consider SPC-6 Revegetation		

RATINGS			
Associated Costs	H	M	L
Implementation			X
Maintenance	X		
Training			X
Target Pollutants Removal	H	M	L
Oil and Grease			X
Nutrients			X
Sediment	X		
Floatable Material			X
Metals	X		
Other Construction Waste			X

FIGURES	
Photos/Sketches	EC-7 Dust Control Photos
Tables	Commonly Used Dust Suppressants

PURPOSE
SEDIMENTS WHICH ARE TRANSPORTED FROM CONSTRUCTION SITES BY STORMWATER RUNOFF, WIND, EROSION AND VEHICLE TRACKOUT ARE OFTEN RE-DISPERSED TO THE AIR BY SUBSEQUENT VEHICULAR TRAFFIC AND HIGH WINDS. LIKEWISE, THESE SEDIMENTS MAY BE TRANSPORTED BY THE NEXT RAINFALL INTO PUBLIC STORM SEWER SYSTEMS. IMPLEMENTATION OF CONTROL MEASURES TO MINIMIZE THE GENERATION OF FUGITIVE DUST FROM CONSTRUCTION SITES WILL REDUCE PARTICULATE MATTER IN THE AIR, WHICH HAS SIGNIFICANT HEALTH EFFECTS TO WORKERS AND ANY NEARBY RESIDENTS. THERE ARE THREE METHODS OF DUST CONTROL: (1) GEOTEXTILES, MATS, PLASTIC COVERS, AND OTHER MECHANICAL METHODS (2) DUST PALLIATIVES (SOIL BINDERS), AND (3) REVEGETATION.

APPROPRIATE APPLICATIONS
DUST CONTROL MEASURES SHOULD BE APPLIED AT THE FOLLOWING LOCATIONS AND ACTIVITIES:

- GRADING OPERATIONS (LAND CLEARING AND EARTHMOVING)
- DRILLING AND BLASTING
- BATCH DROP OPERATIONS (LOADER OPERATION)
- EXPOSED AREAS, CLEARED UNSTABILIZED AREA
- VEHICLE TRAFFIC ON UNPAVED SURFACES
- SEDIMENT TRACKING ON PAVED SURFACES
- BLASTING AND WRECKING BALL OPERATIONS
- SOIL AND DEBRIS STORAGE PILES

THE CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH THE MARICOPA COUNTY AIR QUALITY REGULATIONS. A SUMMARY OF THE BASIC REQUIREMENTS ARE AS FOLLOWS:

- PERMITS REQUIRE THE USE OF REASONABLY AVAILABLE DUST CONTROL MEASURES.
- ENFORCE VISIBLE OPACITY EMISSION LIMITS TO DETERMINE COMPLIANCE.
- REQUIRE DUST CONTROL PLANS FOR CONSTRUCTION OR LAND CLEARING PROJECTS.
- ENFORCEMENT ACTIVITIES WITH PRIORITY GIVEN TO CITIZEN COMPLAINTS.
- REQUIRE CONTRACTORS TO MAINTAIN RECORDS.

LIMITATIONS
DUST SUPPRESSANTS HAVE A RANGE OF LIMITATIONS AND PRECAUTIONS. REFER TO COMMONLY USED DUST SUPPRESSANTS TABLE FOR LIMITATIONS OF EACH TYPE OF DUST SUPPRESSANT.

- ALL DUST SUPPRESSANTS ARE TEMPORARY IN NATURE AND MAY NEED REAPPLICATION(S) THROUGHOUT THE LIFE OF A PROJECT.
- DUST SUPPRESSANTS REQUIRE A MINIMUM CURING TIME UNTIL FULLY EFFECTIVE, AS PRESCRIBED BY THE MANUFACTURER, WHICH MAY BE 24 HOURS OR LONGER. REAPPLICATION MAY BE NECESSARY AFTER A STORM EVENT.
- DUST SUPPRESSANTS WILL GENERALLY EXPERIENCE SPOT FAILURES DURING HEAVY RAINFALL EVENTS. IF RUNOFF PENETRATES THE SOIL AT THE TOP OF A SLOPE TREATED WITH A SOIL BINDER, THE RUNOFF MAY COMPLETELY UNDERCUT THE STABILIZED SOIL LAYER AND DISCHARGE AT A POINT FURTHER DOWN THE SLOPE.
- DUST SUPPRESSANTS MAY NOT PENETRATE SOIL SURFACES MADE UP PRIMARILY OF SILT AND CLAY, PARTICULARLY WHEN COMPACTED.
- SOME DUST SUPPRESSANTS CAN BE ENVIRONMENTALLY HAZARDOUS, ESPECIALLY IF THE DUST SUPPRESSANT DISSOLVES IN WATER. DISSOLVED CHEMICALS CAN MIGRATE WITH THE RUNOFF OR PERCOLATE FURTHER BELOW THE GROUND SURFACE. FOR ADDITIONAL INFORMATION, REFER TO THE EPA DOCUMENT, "POTENTIAL ENVIRONMENTAL IMPACTS OF DUST SUPPRESSANTS: AVOIDING ANOTHER TIMES BEACH", REFERENCED AT THE END OF THIS BMP.
- SOME DUST SUPPRESSANTS DO NOT PERFORM WELL WITH LOW RELATIVE HUMIDITY, WHILE OTHERS BECOME SLIPPERY OR LEACH OUT OF THE SOIL UNDER HEAVY PRECIPITATION.

PLANNING CONSIDERATIONS
MANY OF THE REASONABLY AVAILABLE CONTROL MEASURES FOR CONTROLLING FUGITIVE DUST FROM CONSTRUCTION SITES CAN ALSO BE IMPLEMENTED AS BEST MANAGEMENT PRACTICES FOR STORMWATER POLLUTION PREVENTION. THOSE BEST MANAGEMENT PRACTICES INCLUDE:

- PAVE, VEGETATE, OR CHEMICALLY STABILIZE ACCESS POINTS TO PAVED ROADS.
- PROVIDE COVERS FOR TRUCKS TRANSPORTING MATERIALS THAT CONTRIBUTE DUST.
- PROVIDE FOR WET SUPPRESSION OR CHEMICAL STABILIZATION OF EXPOSED SOILS.
- PROVIDE FOR RAPID CLEANUP OF SEDIMENTS DEPOSITED ON PAVED ROADS.
- FURNISH STABILIZED CONSTRUCTION ROAD ENTRANCES AND VEHICLE WASH DOWN AREAS.
- STABILIZE UNPAVED HAUL ROADS, PARKING AND STAGING AREAS.
- IMPLEMENT DUST CONTROL MEASURES FOR MATERIAL STOCKPILES.
- PREVENT DRAINAGE OF SEDIMENT-LADEN STORMWATER ONTO PAVED SURFACES.
- STABILIZE ABANDONED CONSTRUCTION SITES USING VEGETATION OR CHEMICAL STABILIZATION METHODS.
- LIMIT THE AMOUNT OF AREAS DISTURBED BY CLEARING AND EARTH MOVING OPERATIONS BY SCHEDULING THESE ACTIVITIES IN PHASES.

EC-7 DUST CONTROL TABLE

Types	Functional Mechanism	Advantages	Limitations
Freshwater	Moisture wets particles, thereby increasing their mass and binding them together.	Usually readily available, low material cost, and easy to apply.	Frequent light applications may be necessary during hot dry weather and can be labor intensive. Cover application may result in loss of traction, erosion, or points of road failure.
Calcium Chloride	At a relative humidity greater than approximately 30% (77°F), the salts within the soil will pull moisture from the air above and retain it in the soil.	Reduces evaporation rate of surface moisture, lowers the freezing point of water, which reduces frost heave and freeze-thaw cycles, thereby reducing required road maintenance. Calcium Chloride also increases the compacted density of existing road base material more than Calcium Chloride. Effectiveness is retained after regrading.	Effectiveness in arid and semi-arid regions may be limited due to low relative humidity. It is very corrosive to aluminum alloys and slightly corrosive to steel. Solubility of calcium chloride results in leaching during heavy precipitation. Releases heat when mixed with water.
Magnesium Chloride	At a relative humidity greater than approximately 30% (77°F), the salts within the soil will pull moisture from the air above and retain it in the soil.	Reduces evaporation rate of surface moisture, lowers the freezing point of water, which reduces frost heave and freeze-thaw cycles, thereby reducing required road maintenance. Magnesium Chloride increases the compacted density of existing road base material more than Calcium Chloride. Effectiveness is retained after regrading.	Effectiveness in arid and semi-arid regions may be limited due to low relative humidity. It is very corrosive to aluminum alloys and slightly corrosive to steel. Solubility of calcium chloride results in leaching during heavy precipitation.
Lignin Derivatives	Act as adhesives by binding soil particles together and curing.	Greatly increases dry strength of soil, not humidity-dependent, imparts some plasticity to road surfaces, and lowers freezing point of road surface and base. Effectiveness is retained after regrading.	High solubility results in leaching during heavy precipitation. It is corrosive to aluminum alloys due to acidity (CaCO ₃ can neutralize the acidity). Proper aggregate mix is important to performance. Becomes slippery when wet and brittle when dry.
Tree Resin Emulsions (fall oil)	Act as adhesives by binding soil particles together and curing.	Low solubility after curing minimizes leaching and provides degree of surface waterproofing. Imparts some plasticity to road surfaces, has a high bonding strength, and is non-corrosive.	Requires proper weather and time to cure. No residual effectiveness after regrading. Equipment requires prompt cleanup to avoid curing of resin in hoses and pipes.
Synthetic Polymer	Bind soil particles together by forming a polymerizing matrix, a function similar to adhesives.	Applicable to a range of emission sources and function well in sandy soil conditions. Some types allow seedbed vegetation to grow through the polymer matrix.	Requires proper weather and time to cure. Water repellent. May be subject to UV (light) degradation. Application equipment requires timely cleaning. There is no residual effectiveness after regrading.
Bitumens, Tars, and Resins	Asphalt and resinous products are adhesive binding soil particles together. Petroleum oil products coat soil particles, increasing their mass and binding them together.	Water insoluble when dry; provide a degree of surface waterproofing. Good residual effectiveness.	Surface cracking fracturing and potholing may develop. Long-term application may cause road to become too hard for regrading. Bitumens lower freezing point and petroleum oil products lack adhesive characteristics.
Cementitious Based Binders	High-purity gypsum mixes with water and much to form a thin cement-like crust on the soil surface.	Flexible, durable, water permeable, and resists soil chemicals. Reduces amount of aggregate required during initial construction and has lower maintenance costs than other dust suppressants.	Cementitious based binders are only effective for dust control in non-traffic areas. Instead, consider mixing cementitious based binders with sub-base soils for greater soil strength.

RECOMMENDED STANDARDS AND SPECIFICATIONS
THERE ARE MANY PRODUCTS AVAILABLE AS DUST SUPPRESSANTS FOR CHEMICALS AVAILABLE AND RECOMMENDATIONS FOR THEIR USE ARE SUMMARIZED IN COMMONLY USED DUST SUPPRESSANTS TABLE.

RECOMMENDED MAINTENANCE AND INSPECTION
DUST CONTROL IS AN ONGOING PROCESS DURING SITE CONSTRUCTION. RE-APPLICATION OF DUST CONTROL MEASURE MAY BE NECESSARY UNTIL CONSTRUCTION IS COMPLETE.

POST CONSTRUCTION METHODS
CONSIDER REVEGETATION OR EMULSION CHIP SEALS FOR MORE PERMANENT DUST CONTROL AFTER THE CONSTRUCTION PROJECT HAS BEEN COMPLETED.

REFERENCES
THE ABOVE NOTES WERE TAKEN FROM THE DRAINAGE DESIGN MANUAL FOR MARICOPA COUNTY, EROSION CONTROL: BEST MANAGEMENT PRACTICES, GENERAL HOUSEKEEPING GH-6: ROAD SWEEPING/TRACKOUT CLEANING, AUGUST 15, 2013

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U.S. ENVIRONMENTAL PROTECTION AGENCY, DECEMBER 1999. CONSTRUCTION SITE STORM WATER RUNOFF CONTROL, NATIONAL MENU OF BEST MANAGEMENT PRACTICES FOR STORM WATER PHASE II. [HTTP://CFPUB.EPA.GOV/NPDES/STORMWATER/MENUOFBMP/CON_SITE.CFM](http://cfpub.epa.gov/npdes/stormwater/menuofbmps/con_site.cfm)

NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS, DECEMBER 2003, INTEGRATED STORM WATER MANAGEMENT (ISWM) DESIGN MANUAL FOR CONSTRUCTION.

U.S. ENVIRONMENTAL PROTECTION AGENCY, NEVADA MAY 30-31, 2002, POTENTIAL ENVIRONMENTAL IMPACTS OF DUST SUPPRESSANTS: "AVOIDING ANOTHER TIMES BEACH" AN EXPERT PANEL SUMMARY, LAS VEGAS.

EC-7 DUST CONTROL PHOTOS



Wind blown dust.

EC-7 DUST CONTROL TABLE

Types	Ideal Soil Characteristics	Relative Cost Comparison (average life expectancy)	Environmental Considerations
Freshwater	None	Low initial cost, high long-term maintenance cost (0 months)	Minimal environmental hazard. If applied excessively may result in erosion and sediment runoff. Supply may be limited in some areas and, depending on the source, may require a water right permit.
Calcium Chloride	Plasticity index < 8 10-20 percent fines passing the No. 200 sieve (by weight)	Low initial cost, medium long-term maintenance cost (1-6 months)	Repeated applications and long term use may harm adjacent vegetation (See the manufacturer's product information).
Magnesium Chloride	Plasticity index < 8 10-20 percent fines passing the No. 200 sieve (by weight)	Low initial cost, medium long-term maintenance cost (1-6 months)	Repeated applications and long term use may harm adjacent and nearby vegetation (See the manufacturer's product information).
Lignin Derivatives	Plasticity index < 8 10-30 percent fines passing the No. 200 sieve (by weight)	Medium initial cost, low long-term maintenance cost (3-12 months)	Lignin products have high BOD (biological oxygen demand) in aquatic systems. Spills or runoff into surface or groundwaters may create low dissolved oxygen conditions resulting in fish kills or increases in ground water concentrations of iron, sulfur compounds and other pollutants. (See the product MSDS for specific information).
Tree Resin Emulsions (fall oil)	Plasticity index < 3 10-20 percent fines passing the No. 200 sieve (by weight)	Medium initial cost, low long-term maintenance cost (1-6 months)	(See the manufacturer's product information)
Synthetic Polymer	Plasticity index < 3 5-20 percent fines passing the No. 200 sieve (by weight)	High initial cost, low long-term maintenance cost (1-3 months)	(See the manufacturer's product information)
Bitumens, Tars, and Resins	Plasticity index < 3 20 percent fines passing the No. 200 sieve (by weight)	High initial cost, high long-term maintenance cost (1-3 months)	Use of used oils prohibited. Some petroleum based products may contain carcinogenic polycyclic aromatic hydrocarbons (PAHs). (See the manufacturer's product information)
Cementitious Based Binders	Depending on the type of cementitious based binder, will work with both high and low plasticity index soils.	Low initial cost, medium long-term maintenance cost (3-6 months)	None

GH-6 GH-6: ROAD SWEEPING/TRACKOUT CLEANING

DEFINITION
ROAD TRACKOUT CLEANING PROCEDURES REFER TO METHODS TO REMOVE TRACKED SEDIMENT AROUND CONSTRUCTION SITE POINTS OF EGRESS.

GENERAL INFORMATION			
Applicability - Effectiveness	Perimeter and Access Controls - high Debris Management, Cleanup, and Washout - high		
Most effective when used with:	EC-5 Stabilized Construction Entrance EC-6 Construction Road Stabilization EC-7 Dust Control		
Alternative BMPs:	None		

RATINGS			
Associated Costs	H	M	L
Implementation			X
Maintenance	X		
Training			X
Target Pollutants Removal	H	M	L
Oil and Grease			X
Nutrients			X
Sediment	X		
Floatable Material	X		
Metals			X
Other Construction Waste	X		

FIGURES	
Photos/Sketches	GH-6 Road Sweeping/Trackout Cleaning Photos
CAD Drawings	None

LIMITATIONS

- SWEEPING AND VACUUMING MAY NOT BE EFFECTIVE WHEN SOIL IS WET OR MUDDY.
- MECHANICAL BRUSH SWEEPERS MAY ONLY REMOVE COARSER PARTICLES.

RECOMMENDED STANDARDS AND SPECIFICATIONS

- VISIBLE SEDIMENT TRACKING SHOULD BE SWEEPED AND/OR VACUUMED DAILY. FOR SMALLER AREAS OF TRACKOUT, KICK BROOMS CAN BE USED. FOR LARGER AREAS, CONSIDER MECHANICAL BRUSH OR VACUUM SWEEPERS. SOME MECHANICAL SWEEPERS CAN REMOVE DEBRIS AND DUST PARTICLES DOWN TO 2.5 MICRONS.

- CONDUCT SWEEPINGS AT LEAST ONCE PER WEEK DURING THE PROJECT OPERATIONS. DURING RAINY SEASONS, IMPLEMENT SWEEPINGS ON A MORE FREQUENT BASIS.
- CONSIDER INCORPORATING THE REMOVED SEDIMENT BACK INTO THE PROJECT, RATHER THAN HAULING OFFSITE TO DISPOSAL.

RECOMMENDED MAINTENANCE AND INSPECTION

- INSPECT INGRESS/EGRESS ACCESS POINTS DAILY AND SWEEP TRACKED SEDIMENT AS NEEDED.

- PROPERLY DISPOSE OF ANY UNKNOWN SUBSTANCES OR OBJECTS THAT MAY BE POTENTIALLY HAZARDOUS.

- ADJUST BROOMS FREQUENTLY; MAXIMIZE EFFICIENCY OF SWEEPING OPERATIONS.
- AFTER SWEEPING IS FINISHED, SWEEPER WATER CAN BE REUSED OR DISPOSED OF AT AN APPROVED DUMP-SITE.

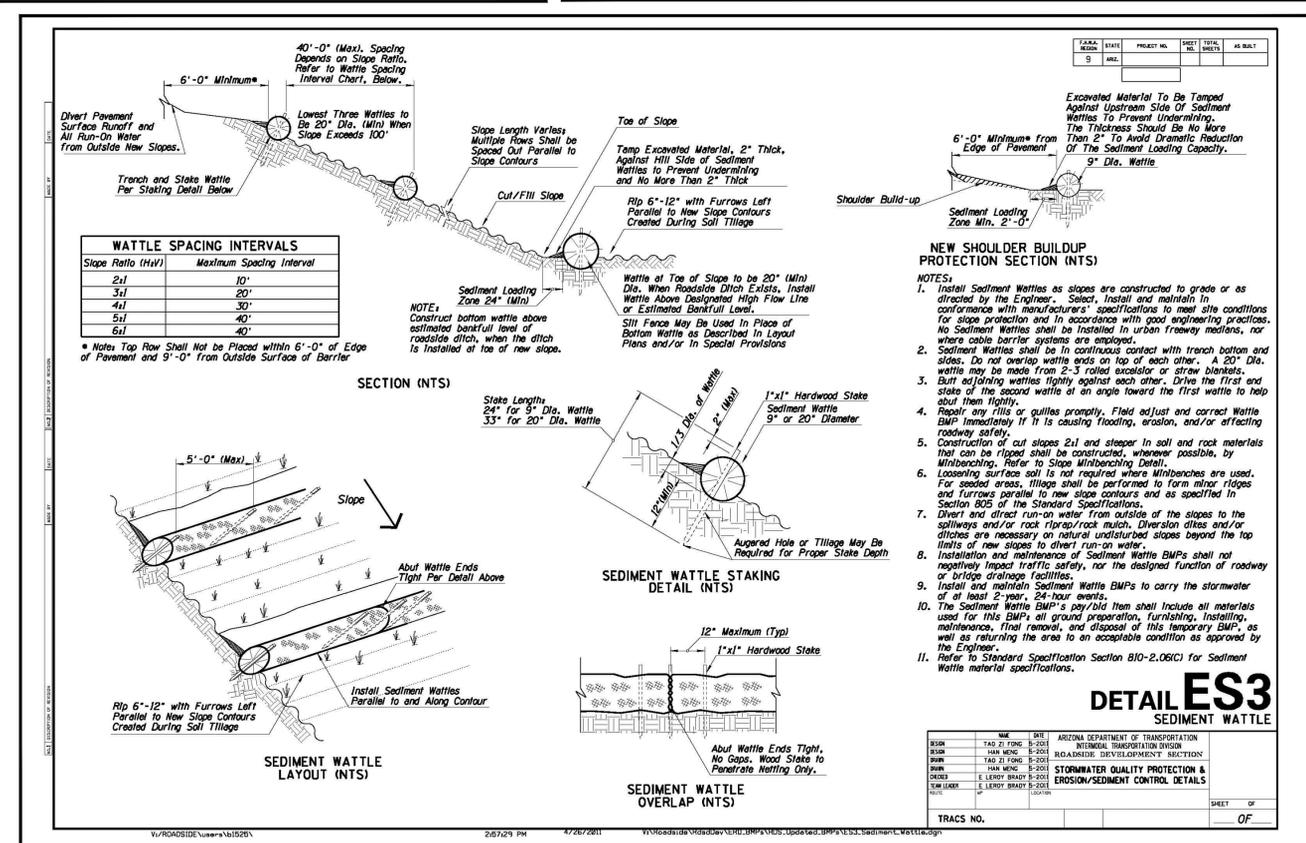
- THE OPERATOR IS RESPONSIBLE FOR COMPLIANCE WITH MARICOPA COUNTY DUST CONTROL RULES FOR TRACKOUT CONTROL.

POST CONSTRUCTION METHODS
IN MOST CASES, THE MUNICIPALITY WILL CONTINUE WITH ROAD SWEEPING OPERATIONS AFTER CONSTRUCTION IS COMPLETE.

REFERENCES
THE ABOVE NOTES WERE TAKEN FROM THE DRAINAGE DESIGN MANUAL FOR MARICOPA COUNTY, EROSION CONTROL: BEST MANAGEMENT PRACTICES, GENERAL HOUSEKEEPING GH-6: ROAD SWEEPING/TRACKOUT CLEANING, AUGUST 15, 2013

CALTRANS, STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION, MARCH 2003, CONSTRUCTION SITE BEST MANAGEMENT PRACTICES (BMP) MANUAL. [HTTP://WWW.DOT.CA.GOV/HQ/CONSTRUC/STORMWATER/MANUALS.HTM](http://www.dot.ca.gov/hq/construc/stormwater/manuals.htm)

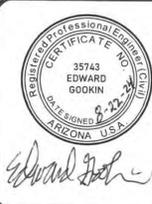
KAMBER ENGINEERING GAITHERSBERG, MARYLAND, APRIL, 1991, SEDIMENTATION AND EROSION CONTROL, AN INVENTORY OF CURRENT PRACTICES, USEPA.



Call at least two full working days before you begin excavation.

ARIZONA 811
Arizona Blue Stake, Inc.

Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100



STORMWATER POLLUTION PREVENTION PLAN

7404 N LAS BRISAS LANE
PARADISE VALLEY, ARIZONA 85253

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ENGINEERS • HYDROLOGISTS • PLANNERS • SURVEYORS
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SCOTTSDALE, ARIZONA 85251
480-947-3741
Civil@Gookin.biz

Scale: NA
Date: 08/12/2024
Rev: _____
Designed: EG
Drawn: AJ

SHEET 3 of 4 SHEETS
JOB NO. 2691

File: 2691 las brisas 8-19-24.dwg

STORMWATER POLLUTION PREVENTION PLAN

7404 N LAS BRISAS LANE PARADISE VALLEY, ARIZONA 85253

Drainage Design Manual for Maricopa County Erosion Control: Best Management Practices

SPC-7 Storm Drain Inlet Protection Photos



Coarse gravel and cinder blocks are often used to keep sediment and other pollutants out of storm drains.

Courtesy of EPA



Gravel bag inlet drain protection.

Courtesy of California Regional Water Quality Board.

August 15, 2013
Sediment and Pollutant Control - 7
Page 5 of 7
5-139

GH-1
GH-1: Chemical Management

DEFINITION

Chemical management includes the proper labeling, handling, storage and disposal of chemical products.

GENERAL INFORMATION		RATINGS			
Applicability - Effectiveness		Associated Costs	H	M	L
Inlet Drain Protection - high		Implementation		X	
Debris Management, Cleanup, and Washout - moderate		Maintenance		X	
Equipment Storage/Maintenance - high		Training		X	
Most effective when used with:		Target Pollutants Removal	H	M	L
Protect excavated areas before runoff enters by using:		Oil and Grease	X		
GH-2 Solid Waste Management		Nutrients	X		
GH-3 Equipment Maintenance Procedures		Sediment			X
GH-5 Spill Containment Plan		Floatable Material			X
Alternative BMPs:		Metals	X		
None		Other Construction Waste	X		
FIGURES					
Photos/Sketches					
GH-1 Chemical Management Photos					
CAD Drawings					
None					

GH-5
GH-5: Spill Containment Plan

DEFINITION

An emergency plan to contain spills of dangerous, hazardous, or toxic wastes which mitigates environmental damage and provides prompt notice to proper authorities.

GENERAL INFORMATION		RATINGS			
Applicability - Effectiveness		Associated Costs	H	M	L
Inlet Drain Protection - high		Implementation		X	
Debris Management, Cleanup, and Washout - high		Maintenance			X
Most effective when used with:		Training		X	
GH-1: Chemical Management		Target Pollutants Removal	H	M	L
GH-3: Equipment Maintenance Procedures		Oil and Grease	X		
GH-4: Designated Washdown Areas		Nutrients			X
Alternative BMPs:		Sediment			X
None		Floatable Material			X
		Metals		X	
		Other Construction Waste		X	
FIGURES					
Photos/Sketches					
GH-5 Spill Containment Plan Photos					
CAD Drawings					
None					

Call at least two full working days before you begin excavation.

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STORMWATER POLLUTION PREVENTION PLAN

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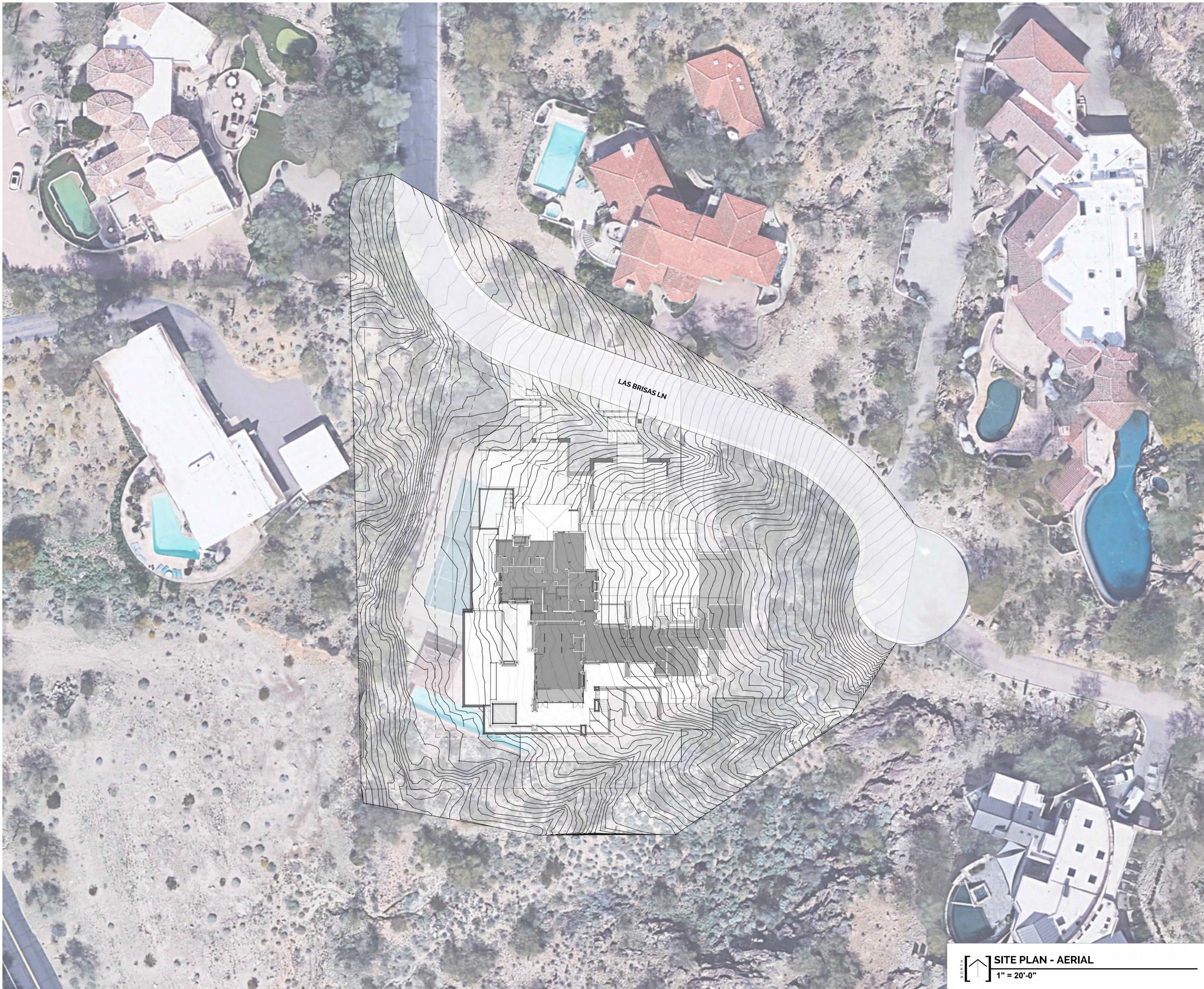
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DRB201

SITE PLAN - AERIAL
1" = 20'-0"



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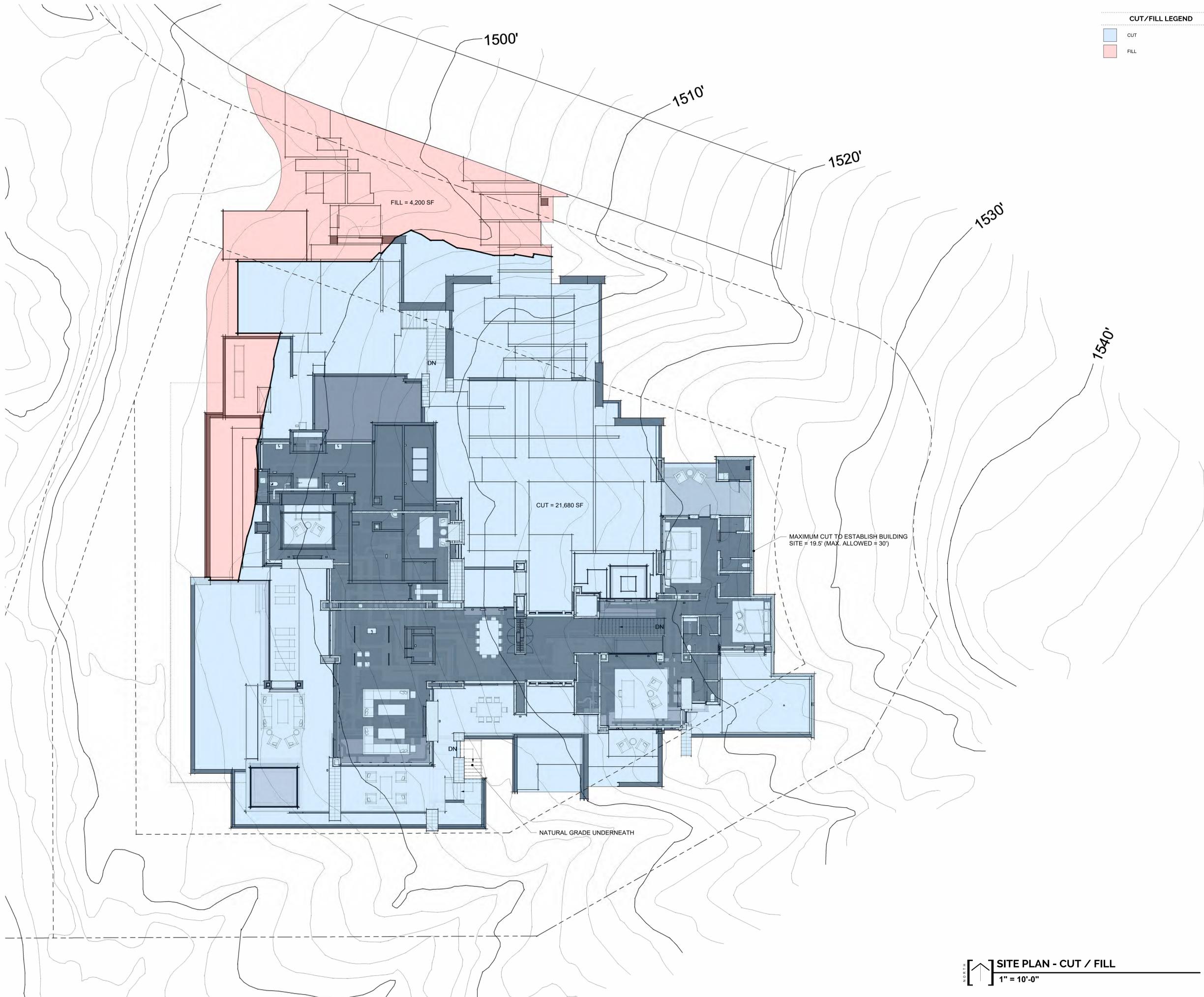
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 No. 00826
 Signed 08-26-2024
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 ARIZONA U.S.

NO.	DESCRIPTION	DATE
1	DESIGN REVIEW	08-26-2024
2		
3		
4		

Scale: 1" = 10'-0"

DRB202

SITE PLAN - CONCEPTUAL HILLSIDE
1" = 10'-0"



CUT/FILL LEGEND
 [Blue Box] CUT
 [Red Box] FILL



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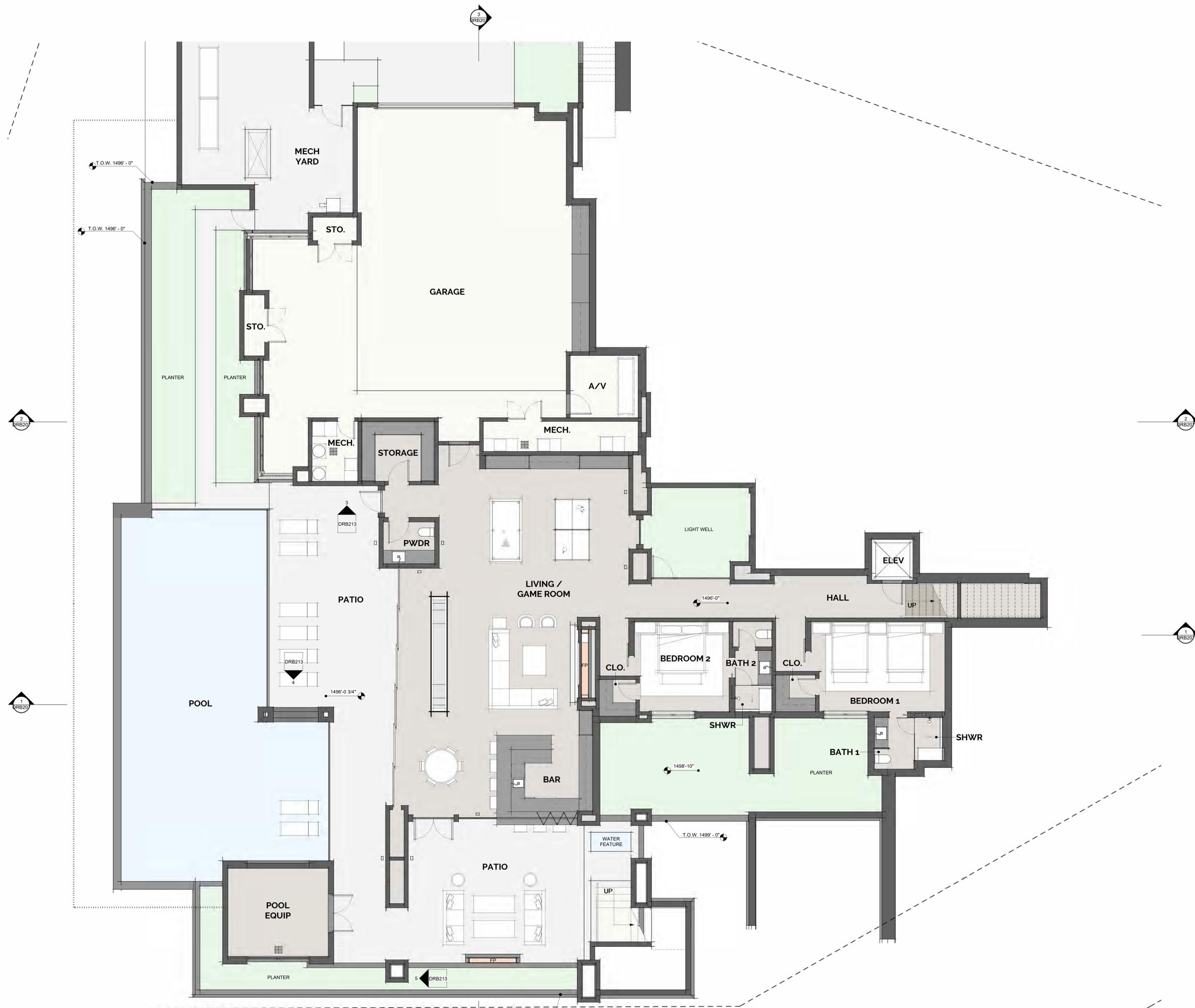
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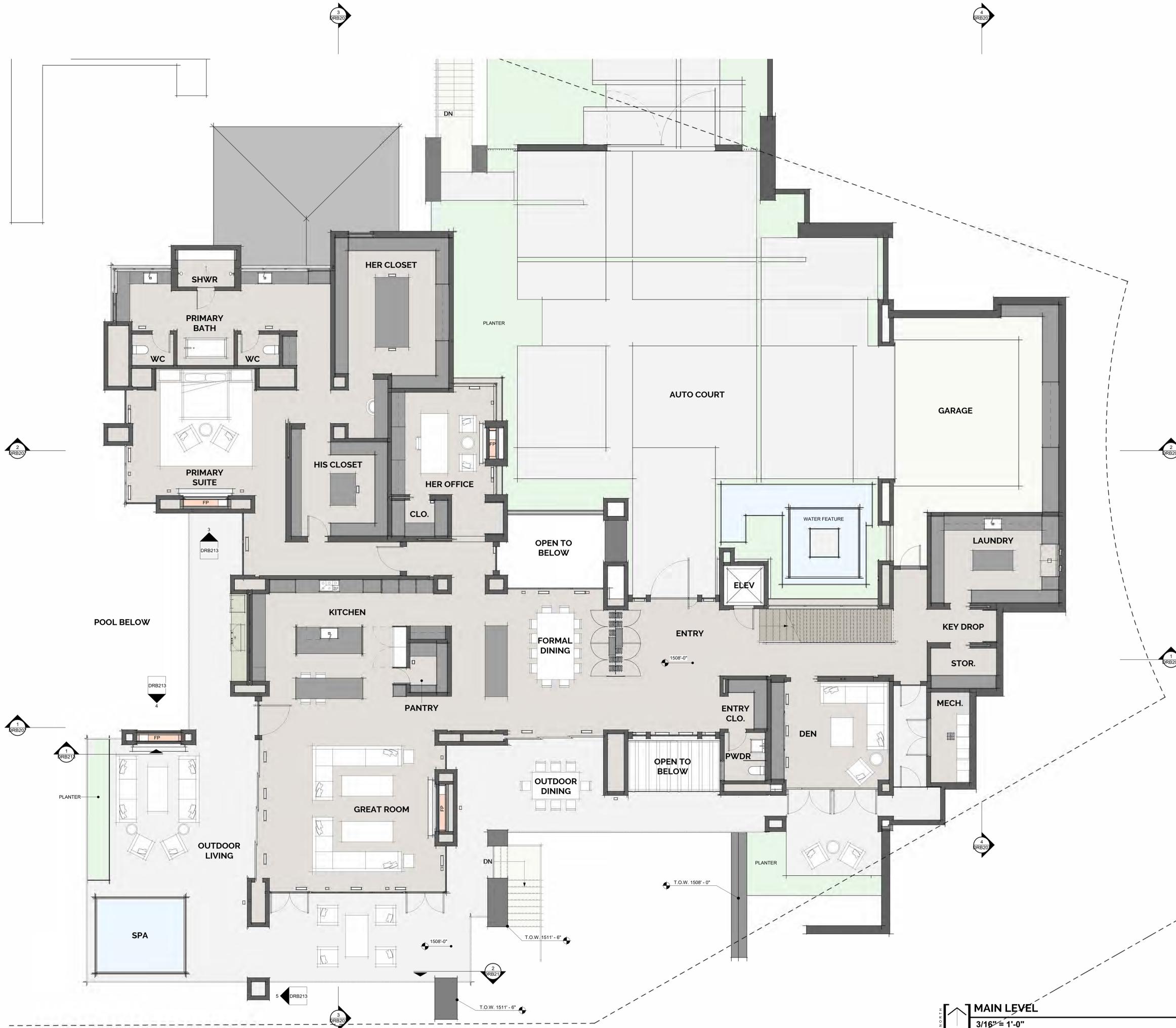
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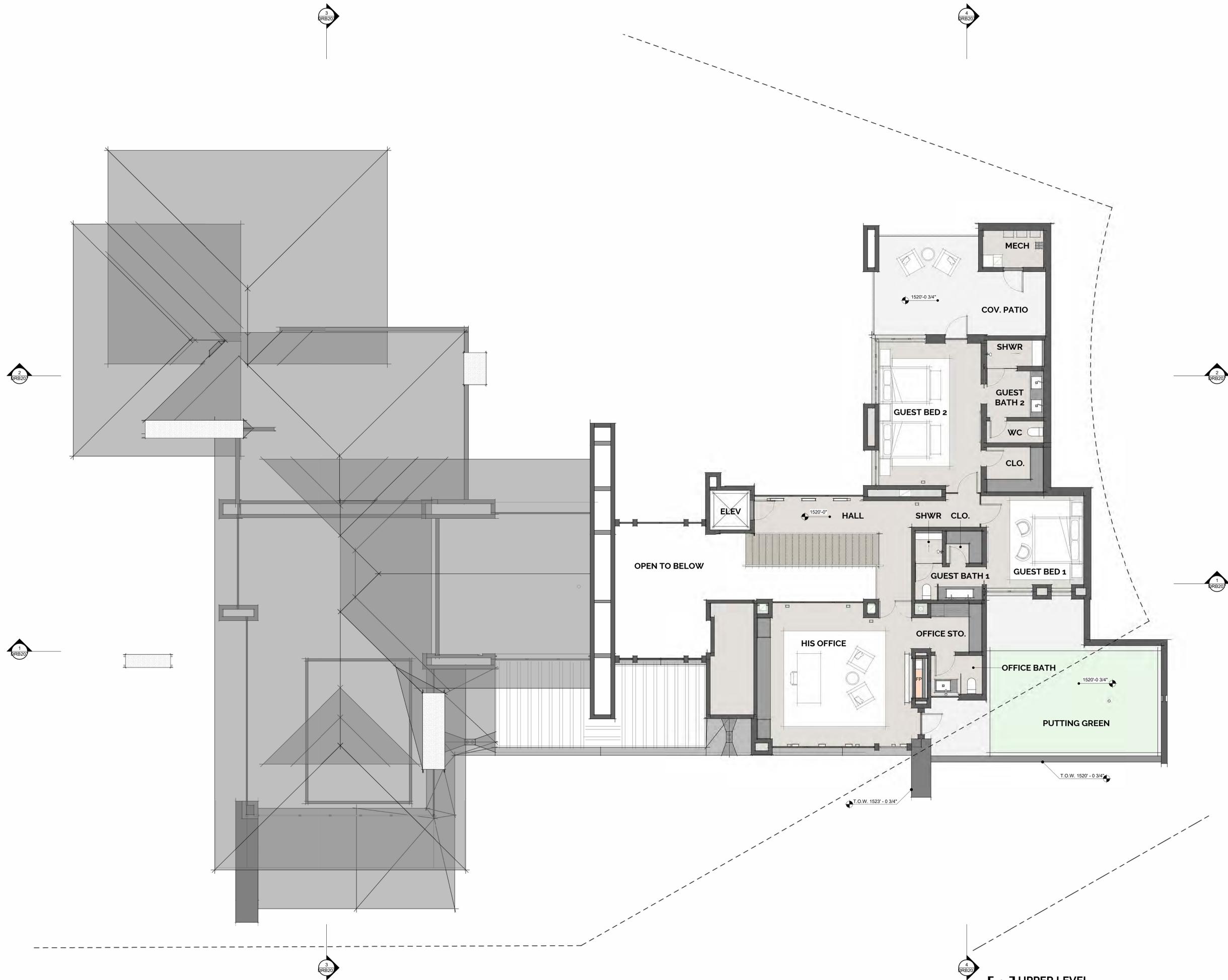
SITE PLAN - CUT / FILL
 1" = 10'-0"



LOWER LEVEL
3/16" = 1'-0"



MAIN LEVEL
3/16" = 1'-0"



2
RB200

1
RB200

3
RB200

4
RB200

2
RB200

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RB200

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RB200

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UPPER LEVEL
3/16" = 1'-0"



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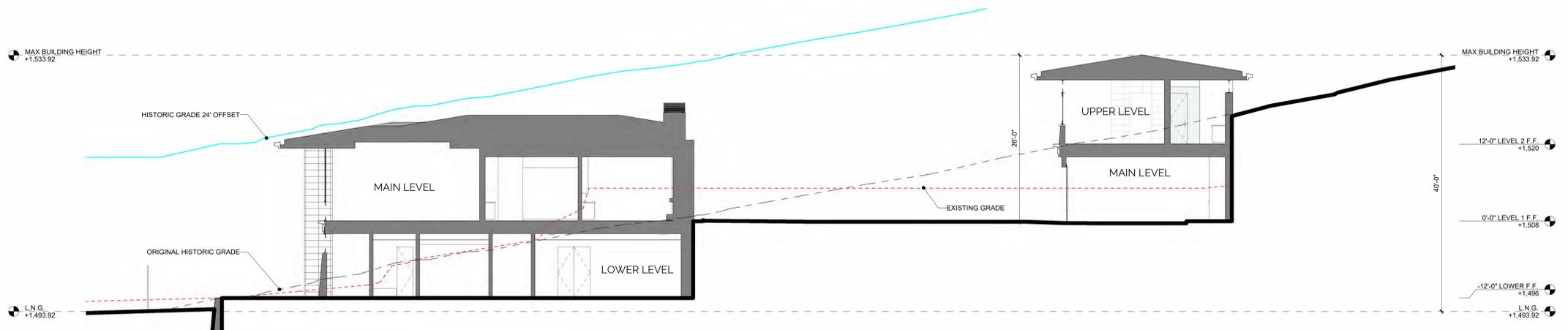
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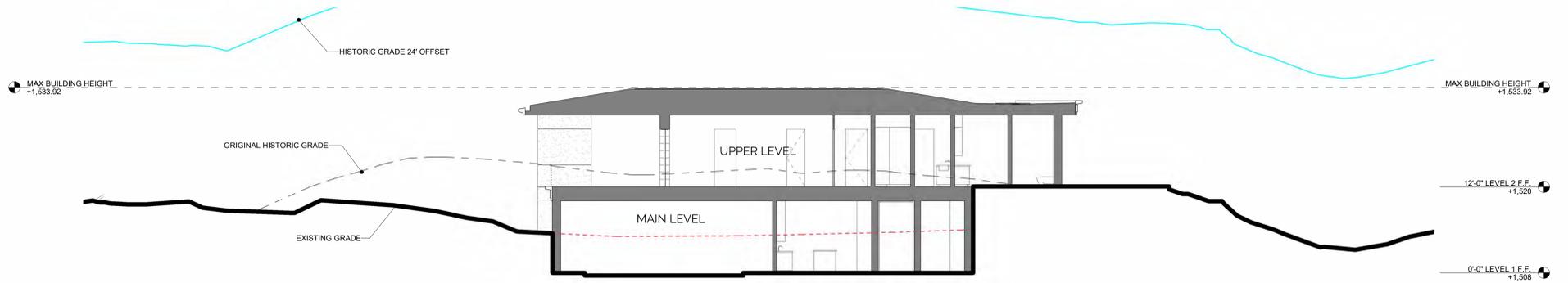
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[2] BUILDING SECTION 2
1/8" = 1'-0"



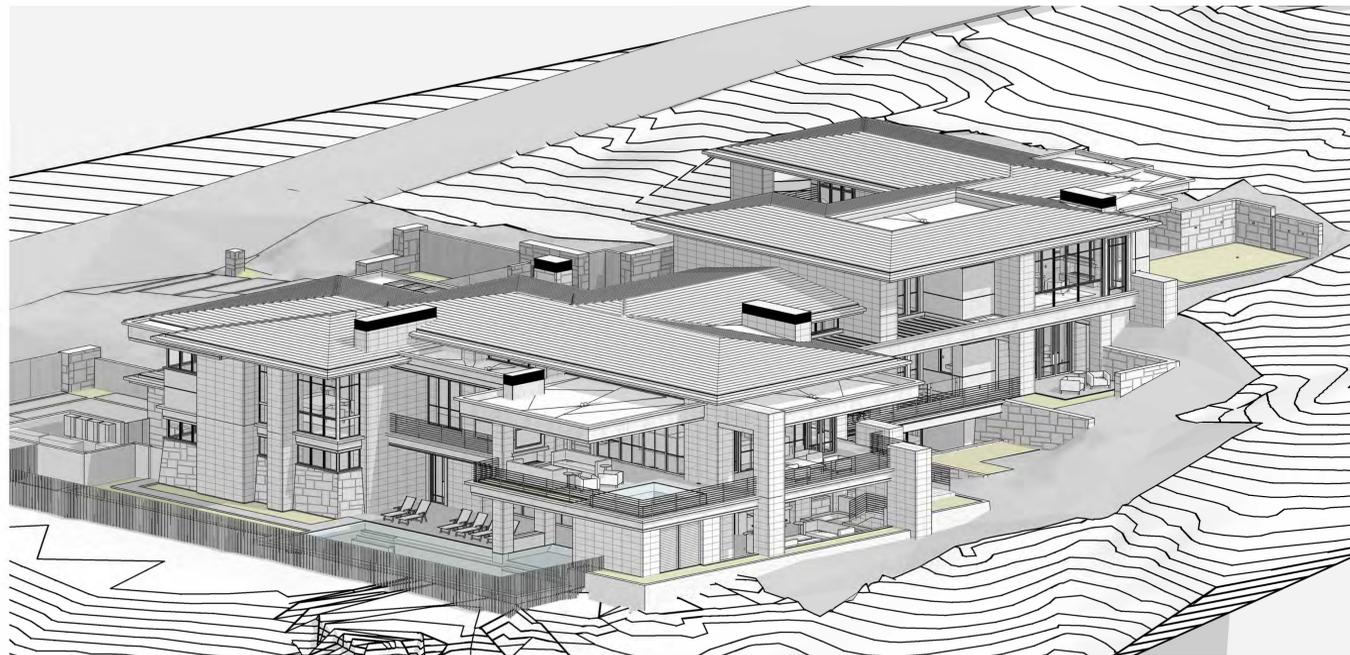
[3] BUILDING SECTION 3
1/8" = 1'-0"



[4] BUILDING SECTION 4
1/8" = 1'-0"



[1] 3D MASSING 01



[2] 3D MASSING 02



[3] 3D MASSING 03



[4] 3D MASSING 04

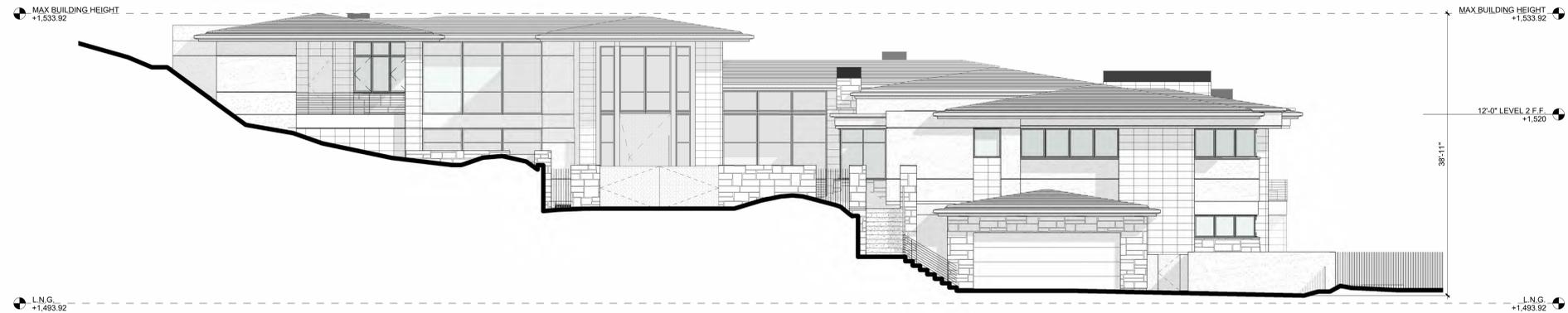
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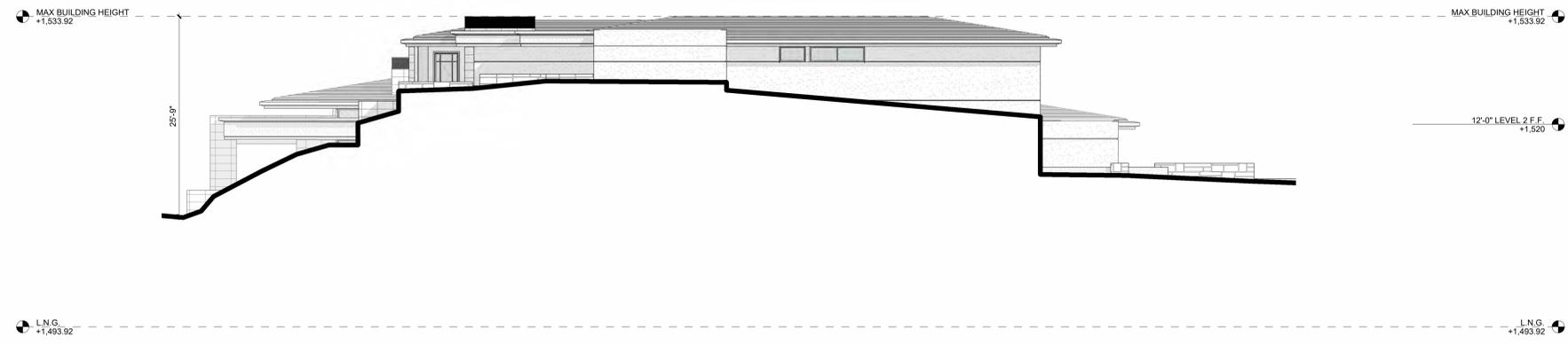


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No. DRB208



[1] NORTH
1/8" = 1'-0"



[2] EAST
1/8" = 1'-0"



[3] SOUTH
1/8" = 1'-0"



[4] WEST
1/8" = 1'-0"

MATERIAL LEGEND

	STUCCO TO COMPLY WITH G1 SW7031 MEGA GREIGE, LRV 97
	METAL FASCIA / ROLLED STEEL CHARCOAL GRAY, LRV 15
	STEEL FRAME BLACK FLAT, LRV 7
	WOOD FINISH WALNUT VENEER, LRV 15
	SOLSTICE STONE SPALTED OAK TAILORED FIELDLEDGE LRV 16.08
	SOLSTICE STONE HONEY VEIN CUT, LRV 35.27
	GLASS SOLARBAN 70 XL
	LUDOWICI ROOF SLATE TILE VERMONT GRAY BLACK BLEND

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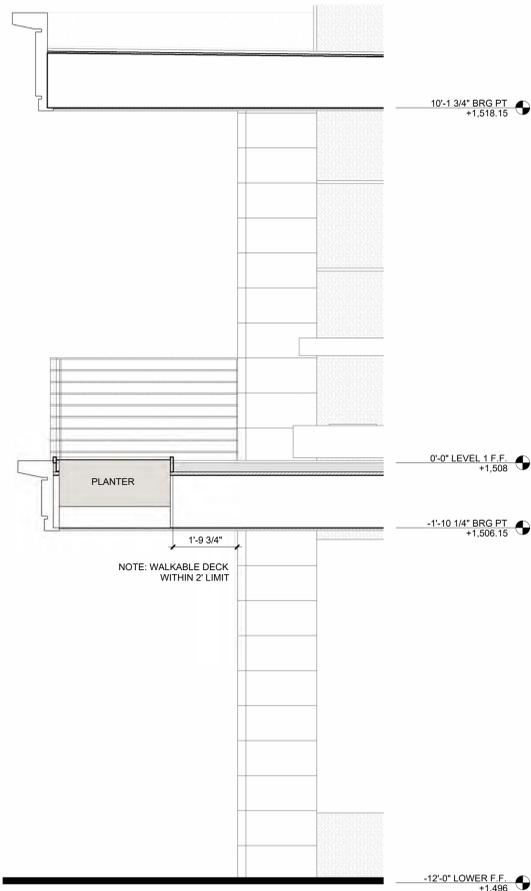
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YEARS

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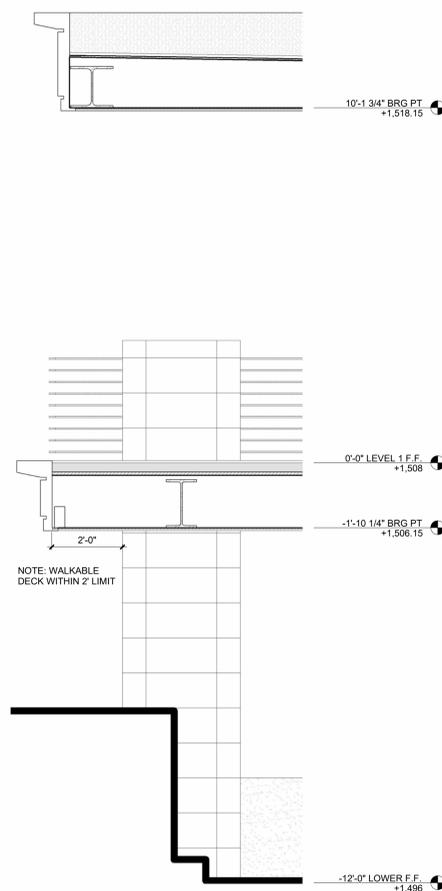
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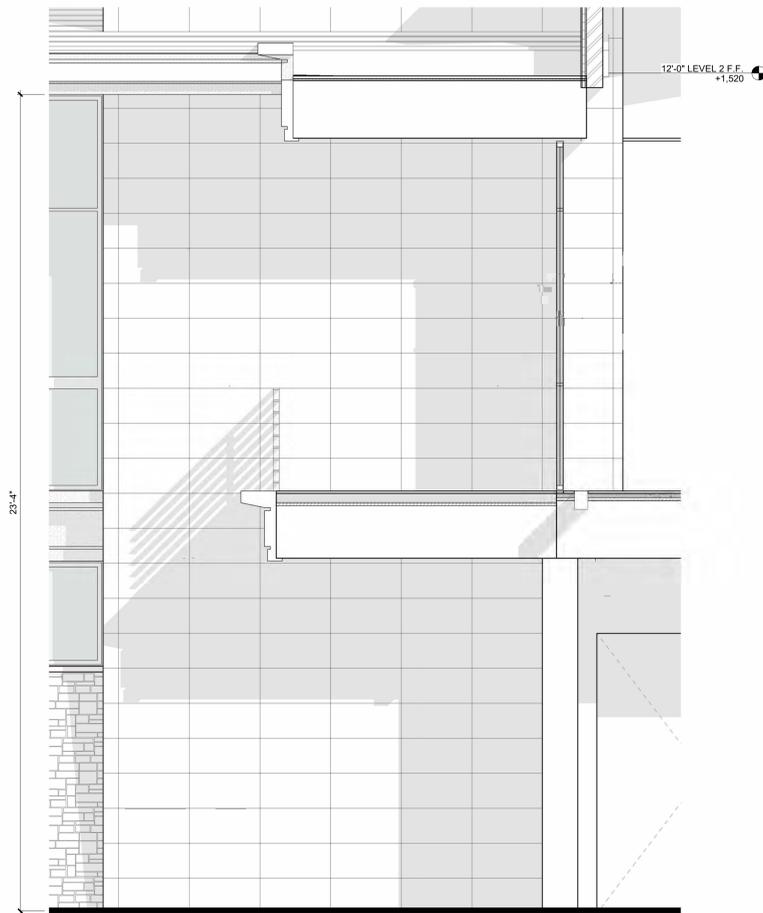
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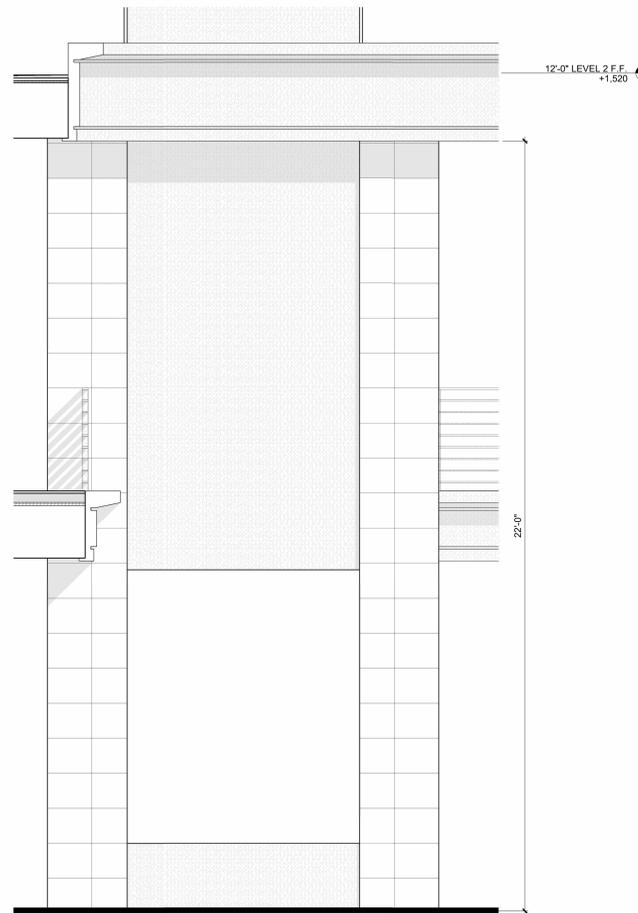
[1] MAIN PATIO - CANTILEVER 1
1/2" = 1'-0"



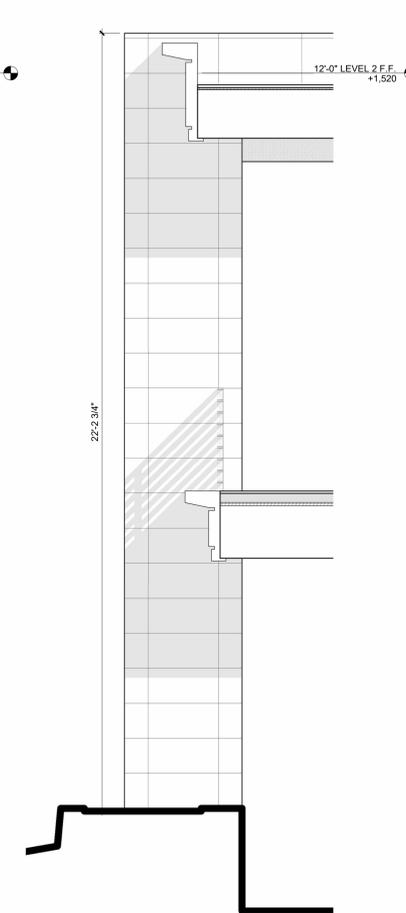
[2] MAIN PATIO - CANTILEVER 2
1/2" = 1'-0"



[3] UNBROKEN PLANE 1
1/2" = 1'-0"



[4] UNBROKEN PLANE 2
1/2" = 1'-0"



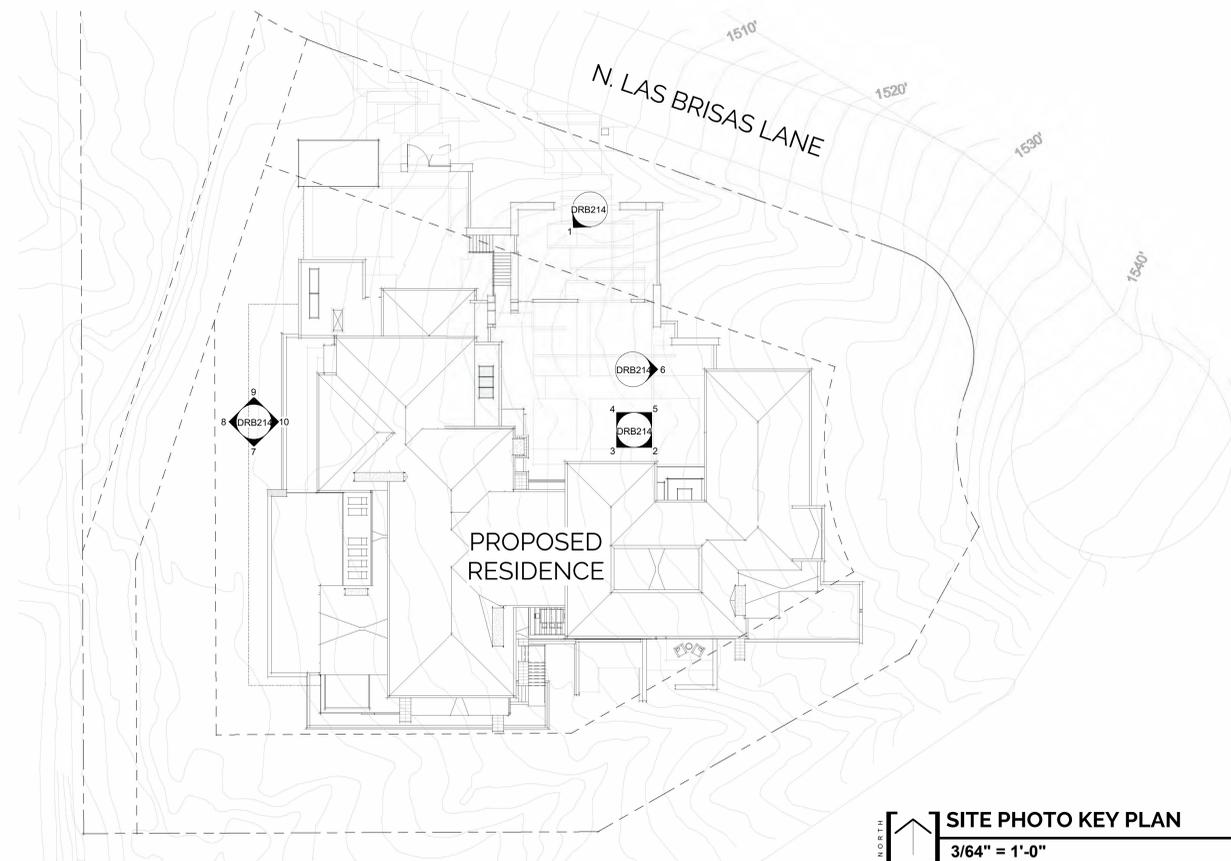
[5] UNBROKEN PLANE 3
1/2" = 1'-0"

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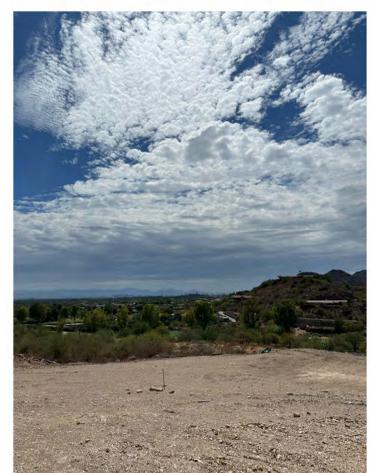
SITE PHOTO KEY PLAN
3/64" = 1'-0"



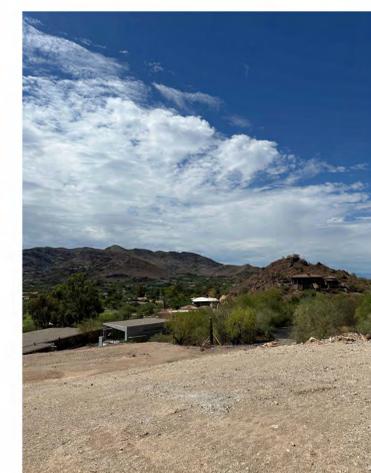
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N.T.S.



[2] SITE PHOTO 2
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[3] SITE PHOTO 3
N.T.S.



[4] SITE PHOTO 4
N.T.S.



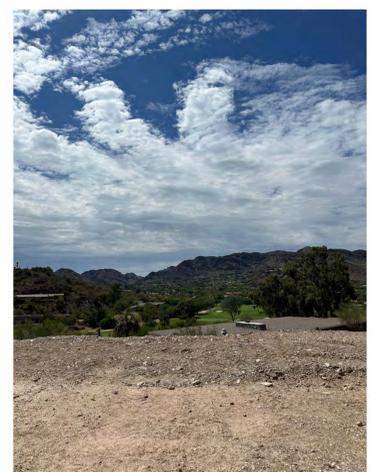
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[6] SITE PHOTO 6
N.T.S.



[7] SITE PHOTO 7
N.T.S.



[8] SITE PHOTO 8
N.T.S.



[9] SITE PHOTO 9
N.T.S.



[10] SITE PHOTO 10
N.T.S.

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CREATIVE DESIGNS IN LIGHTING



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Scottsdale, Arizona 85260

602.248.7822
design@cdtg.com
www.cdtg.com

1978.46.2024
years of architectural
lighting design

CHESNEY RESIDENCE
7404 North Las Brisas Lane / Paradise Valley, AZ 85253

CREATIVE DESIGNS IN LIGHTING AND SCHEDULES

Table with columns: FixtureType, Fixture Specification, Lamp Specification, Fixture Wattage, Lead Type, Fixture Voltage, Est Qty or LF, Accessories, Mounting. Includes fixtures like PX, SS, TW4, TW5, VP, V#P, V#B, V#R, V#S, V#Z, V#A, V#C, V#D, V#E, V#F, V#G, V#H, V#I, V#J, V#K, V#L, V#M, V#N, V#O, V#P, V#Q, V#R, V#S, V#T, V#U, V#V, V#W, V#X, V#Y, V#Z.

General Specification Notes
1) Electrical Contractor to determine fixture housing rating (IC, Non-IC or Remodel) unless otherwise noted.
2) No substitutions permitted without prior approval from Creative Designs in Lighting.
3) All recessed trims and/or trim rings shall be painted to match color of ceiling.
4) Electrical Contractor to field measure all linear lighting prior to order.
5) All fixture finish colors to be verified with Architect / Interior Designer prior to order.
6) All Kelvin (color) temperatures to be verified with Architect / Interior Designer prior to order.

Table with columns: FixtureType, Fixture Specification, Lamp Specification, Fixture Wattage, Lead Type, Fixture Voltage, Est Qty or LF, Accessories, Mounting. Includes fixtures like AW, AX, BF, BW, CD, CG, CP, FA, FD, FO, FL, M1, M2, M3, NR.

KEYPLAN - LOWER LEVEL
KEYPLAN - UPPER LEVEL
KEYPLAN - MAIN LEVEL

AL1, AL2, AL3, AL4, AL5

Table with columns: DATE, SCALE, PROJECT NUMBER, DRAWN BY, CHECKED BY, SHEET NAME, SHEET NUMBER. Includes values like DATE 2024.10.18, SCALE N.T.S., PROJECT NUMBER 105428, DRAWN BY BBS, CHECKED BY WKS, SHEET NAME, SHEET NUMBER.



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IN LIGHTING



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CHESNEY RESIDENCE
7404 North Las Brisas Lane / Paradise Valley, AZ 85253

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DATE	2024.10.18
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PROJECT NUMBER	103428-24
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LOWER LEVEL
LIGHTING PLAN

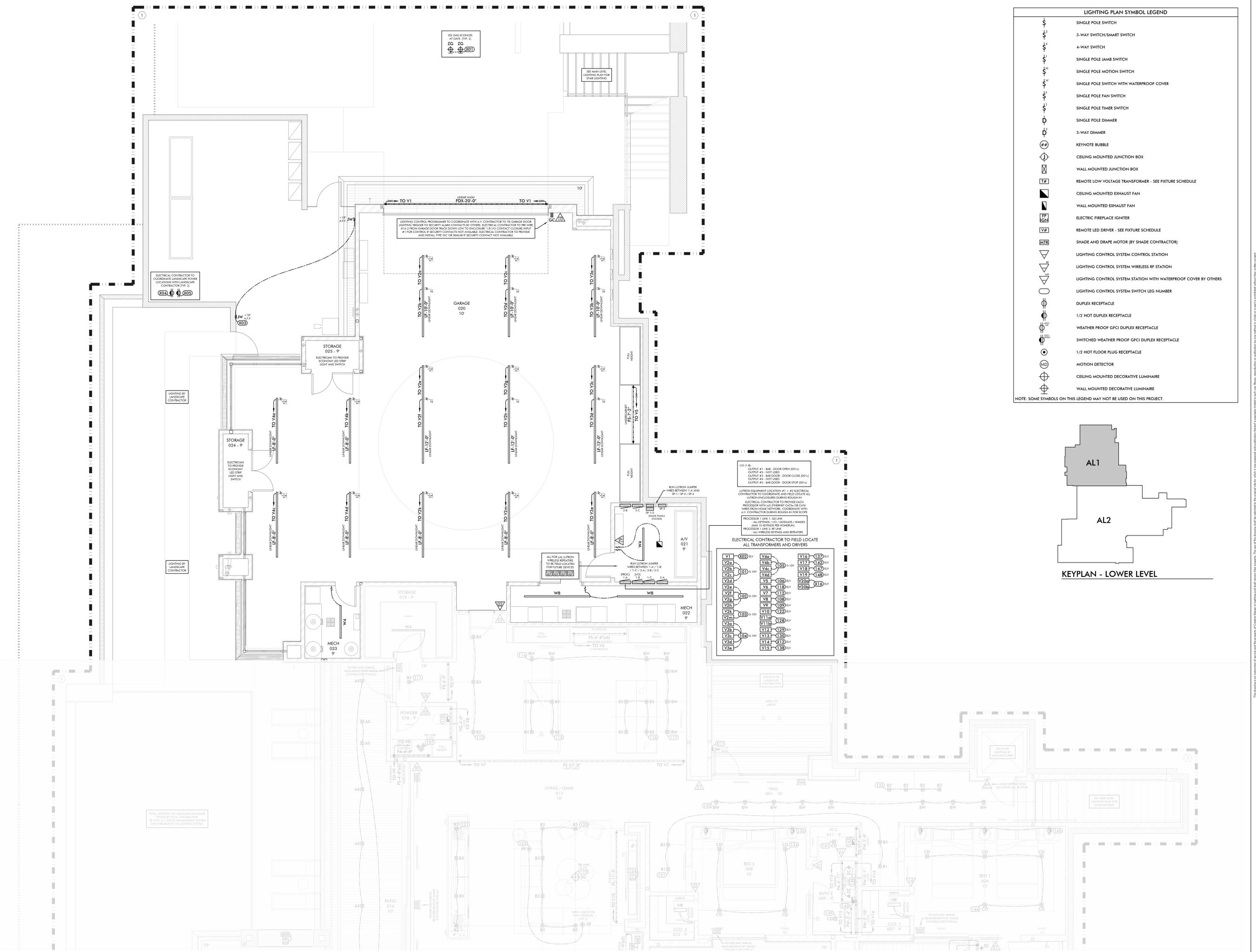
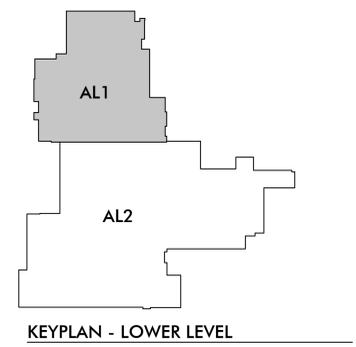
SHEET NUMBER

AL1

LIGHTING PLAN SYMBOL LEGEND

- SINGLE POLE SWITCH
- 3-WAY SWITCH/SMART SWITCH
- 4-WAY SWITCH
- SINGLE POLE JAMB SWITCH
- SINGLE POLE MOTION SWITCH
- SINGLE POLE SWITCH WITH WATERPROOF COVER
- SINGLE POLE FAN SWITCH
- SINGLE POLE TIMER SWITCH
- SINGLE POLE DIMMER
- 3-WAY DIMMER
- KEYNOTE BUBBLE
- CEILING MOUNTED JUNCTION BOX
- WALL MOUNTED JUNCTION BOX
- REMOTE LOW VOLTAGE TRANSFORMER - SEE FIXTURE SCHEDULE
- CEILING MOUNTED EXHAUST FAN
- WALL MOUNTED EXHAUST FAN
- ELECTRIC FIREPLACE IGNITER
- REMOTE LED DRIVER - SEE FIXTURE SCHEDULE
- SHADE AND DRAPE MOTOR (BY SHADE CONTRACTOR)
- LIGHTING CONTROL SYSTEM CONTROL STATION
- LIGHTING CONTROL SYSTEM WIRELESS RF STATION
- LIGHTING CONTROL SYSTEM STATION WITH WATERPROOF COVER BY OTHERS
- LIGHTING CONTROL SYSTEM SWITCH LEG NUMBER
- DUPLEX RECEPTACLE
- 1/2 HOT DUPLEX RECEPTACLE
- WEATHER PROOF GFCI DUPLEX RECEPTACLE
- SWITCHED WEATHER PROOF GFCI DUPLEX RECEPTACLE
- 1/2 HOT FLOOR PLUG RECEPTACLE
- MOTION DETECTOR
- CEILING MOUNTED DECORATIVE LUMINAIRE
- WALL MOUNTED DECORATIVE LUMINAIRE

NOTE: SOME SYMBOLS ON THIS LEGEND MAY NOT BE USED ON THIS PROJECT.





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IN LIGHTING



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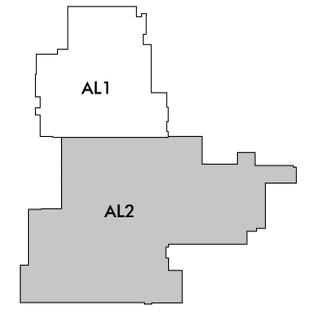
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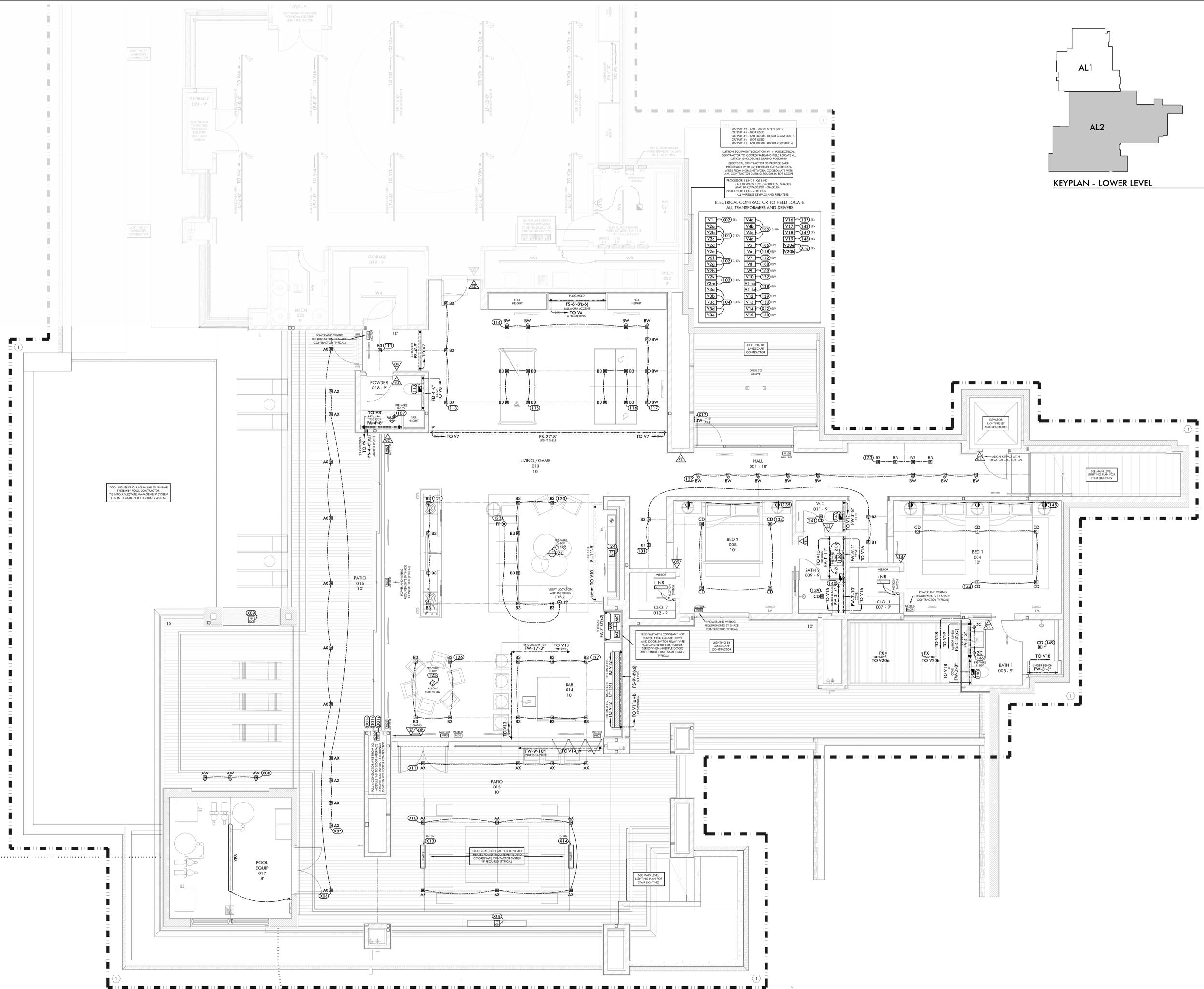
LOWER LEVEL
LIGHTING PLAN

SHEET NUMBER

AL2



KEYPLAN - LOWER LEVEL



POOL LIGHTING ON AQUALINK OR SIMILAR SYSTEM BY POOL CONTRACTOR. THE POOL AND STATE MANAGEMENT SYSTEMS FOR INTEGRATION TO LIGHTING SYSTEM.

OUTPUT #1 - 8W - DOOR OPEN (D14)
OUTPUT #2 - NOT USED
OUTPUT #3 - 8W DOOR - DOOR CLOSE (D14)
OUTPUT #4 - NOT USED
OUTPUT #5 - 8W DOOR - DOOR STOP (D14)

UPPER EQUIPMENT LOCATION #1 - #2 ELECTRICAL CONTRACTOR TO COORDINATE AND FIELD LOCATE ALL UPPER DEVICES DURING RUSH-IN.
ELECTRICAL CONTRACTOR TO PROVIDE EACH PROCESSOR WITH 24" ETHERNET CABLE OR SAFE WIRES FROM HOME NETWORK. COORDINATE WITH A/V CONTRACTOR DURING RUSH-IN FOR SCORING.

PROCESSOR 1 LINE 1 - QS LINK
- ALL KEYPADS, I/O / MODULES / SHADERS
- MAIN 14 KEYPAD FOR HOMEOWNER
PROCESSOR 1 LINE 2 - 8W LINK
- ALL WIRELESS KEYPADS AND REPEATERS

ELECTRICAL CONTRACTOR TO FIELD LOCATE ALL TRANSFORMERS AND DRIVERS

V1	(002) 1W	V4a	(105) 1W	V16	(137) 1W
V2a	(003) 1W	V4b	(106) 1W	V17	(140) 1W
V2b	(004) 1W	V4c	(107) 1W	V18	(147) 1W
V2c	(005) 1W	V4d	(108) 1W	V19	(148) 1W
V2d	(006) 1W	V5	(109) 1W	V20a	(119) 1W
V2e	(007) 1W	V6	(110) 1W	V20b	(119) 1W
V2f	(008) 1W	V7	(112) 1W		
V2g	(009) 1W	V8	(108) 1W		
V2h	(010) 1W	V9	(109) 1W		
V2i	(011) 1W	V10	(122) 1W		
V2j	(012) 1W	V11	(128) 1W		
V2k	(013) 1W	V12	(129) 1W		
V3	(014) 1W	V13	(130) 1W		
V3a	(015) 1W	V14	(131) 1W		
V3b	(016) 1W	V15	(138) 1W		

ELECTRICAL CONTRACTOR TO VERIFY TREATER POWER REQUIREMENTS AND COORDINATE CONTRACTOR SYSTEM IF REQUIRED (TYPICAL)

SEE MAIN LEVEL LIGHTING PLAN FOR STAR LIGHTING



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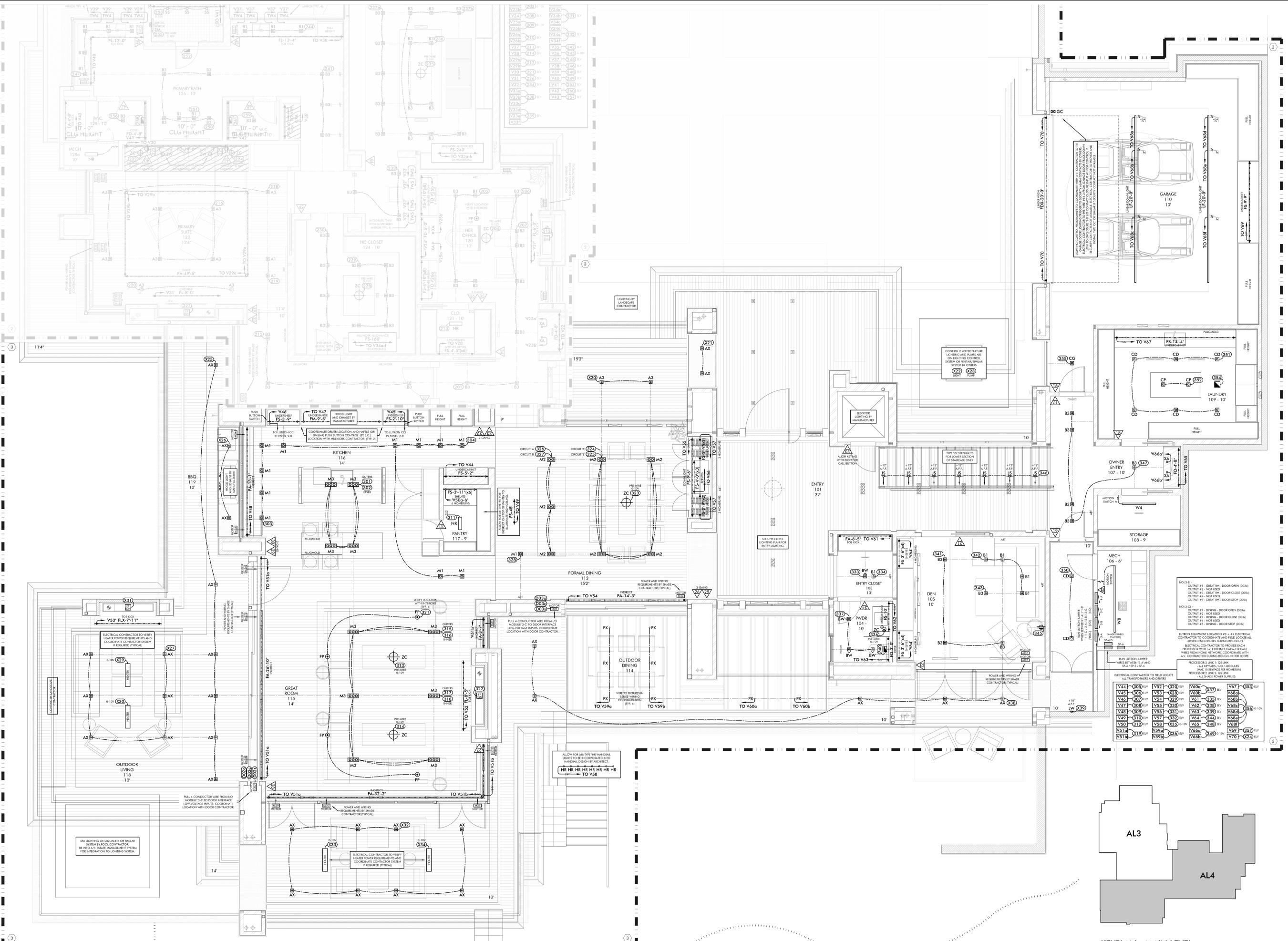
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Wiring Schedule:

V44	005	ELV	V52	020	ELV	V60a	010	ELV	V67	053	ELV
V45	006	ELV	V53	021	ELV	V60b	011	ELV	V68	054	ELV
V46	007	ELV	V54	022	ELV	V61	012	ELV	V69	055	ELV
V47	008	ELV	V55	023	ELV	V62	013	ELV	V70	056	ELV
V48	009	ELV	V56	024	ELV	V63	014	ELV	V71	057	ELV
V49	010	ELV	V57	025	ELV	V64	015	ELV	V72	058	ELV
V50	011	ELV	V58	026	ELV	V65	016	ELV	V73	059	ELV
V51a	012	ELV	V59a	027	ELV	V66a	017	ELV	V74	060	ELV
V51b	013	ELV	V59b	028	ELV	V66b	018	ELV	V75	061	ELV

Notes:

- VO (B) - OUTPUT #1 - GREAT RM. - DOOR OPEN (DO2)
- OUTPUT #2 - NOT USED
- OUTPUT #3 - GREAT RM. - DOOR CLOSE (DO2)
- OUTPUT #4 - NOT USED
- OUTPUT #5 - GREAT RM. - DOOR STOP (DO2)

Notes:

- VO (D) - OUTPUT #1 - DINING - DOOR OPEN (DO3)
- OUTPUT #2 - NOT USED
- OUTPUT #3 - DINING - DOOR CLOSE (DO3)
- OUTPUT #4 - NOT USED
- OUTPUT #5 - DINING - DOOR STOP (DO3)

Notes:

- LITRON EQUIPMENT LOCATION #1 - #4 ELECTRICAL CONTRACTOR TO LOCATE AND FIELD LOCATE ALL EQUIPMENT ENCLOSURES (PARKING #1-4)
- ELECTRICAL CONTRACTOR TO PROVIDE EACH PROCESSOR WITH 100' OF 12 AWG CAT5E OR CAT6 WIRING FROM HOME NETWORK, COORDINATE WITH A/C CONTRACTOR DURING ROUGH-IN FOR SCORE
- PROCESSOR 2 (LINK 1) - GS LINK
- ALL WIRING 100' MINIMUMS
- AX TO EXCEEDS PER HOMERUN
- PROCESSOR 2 (LINK 2) - GS LINK
- ALL SHADE POWER SUPPLIES



KEYPLAN - MAIN LEVEL

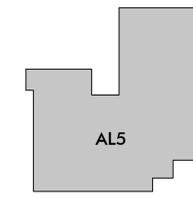
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PROJECT NUMBER: 103428-24
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SHEET NAME

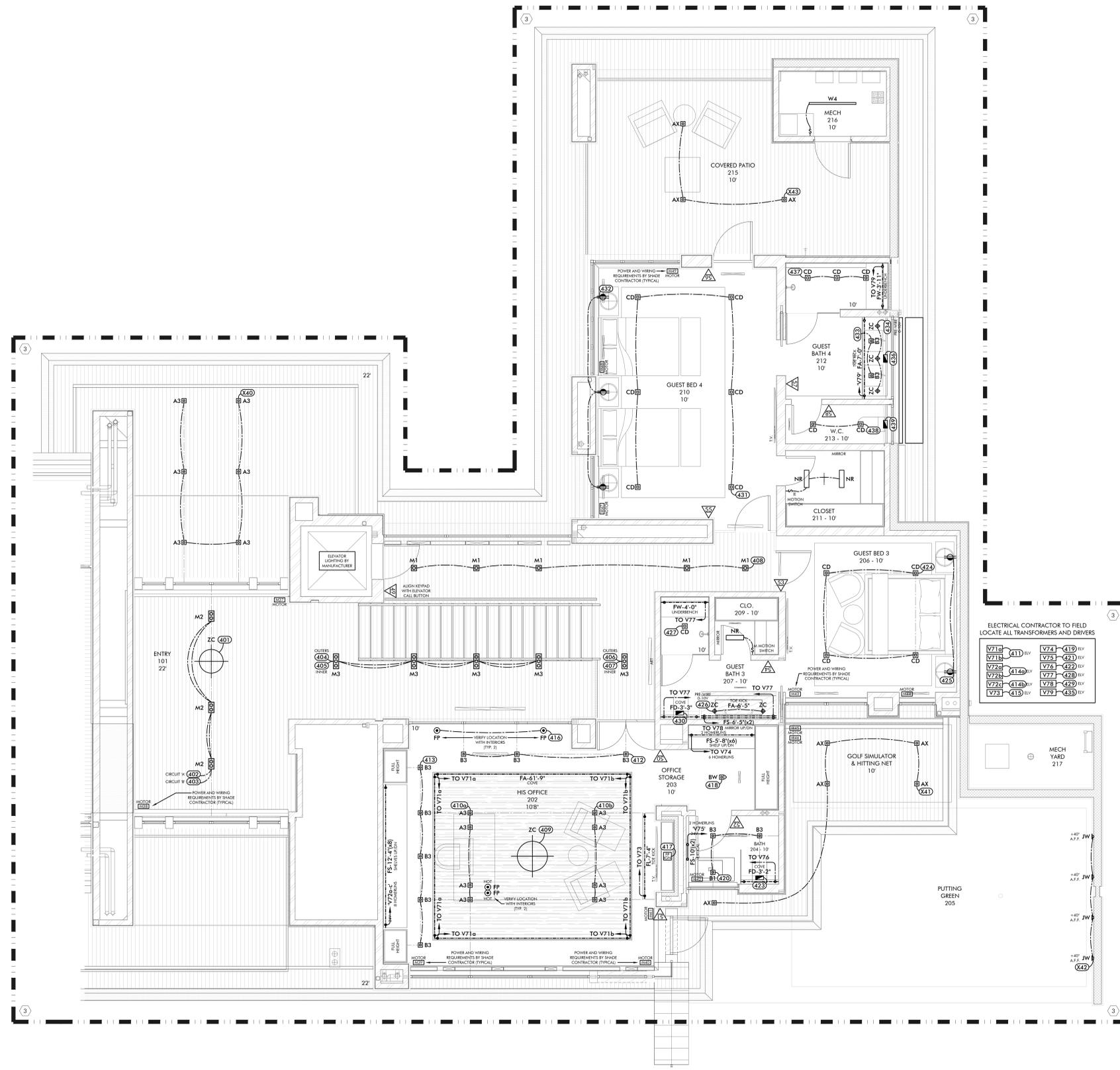
MAIN LEVEL LIGHTING PLAN

SHEET NUMBER

AL4



KEYPLAN - UPPER LEVEL



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UPPER LEVEL
LIGHTING PLAN

SHEET NUMBER
AL5



CREATIVE DESIGNS IN LIGHTING

CHESNEY RESIDENCE

Paradise Valley, Arizona

Lighting Fixture Specification Manual

October 18, 2024

Project #103428-24



VISUAL COMFORT & Co. | ARCHITECTURAL COLLECTION
FORMERLY KNOWN AS TECH LIGHTING

ELEMENT™ 3" LED

WALL WASH

PROJECT INFORMATION

JOB NAME AND INFORMATION

FIXTURE TYPE AND QUANTITY

NOTES

VISUAL COMFORT & Co.

ARCHITECTURAL COLLECTION
FORMERLY KNOWN AS TECH LIGHTING

7400 Linder Avenue, Skokie, Illinois 60077
T 847.410.4400 | visualcomfort.com





Estimated Quantity:

adjustable recessed fixture with 4.3" flanged square beveled trim for wood ceilings -- damp location rated

Manufacturer: ELEMENT

Fixture Wattage: 8w

Fixture Line: 3" LED

Fixture Voltage: 120v

Fixture: RD/SQ F/FL Adjustable - Custom Low Output

Load Type: ELV

Catalog #: E3SFF-LO9306-AI-MOD (AA3720) | E3SFB-OB / E3TREFS1B / LVR

Mounting: Ceiling Recessed

Accessories: Glare Louver

Driver: Integral

Addl. Requirements: Finish: Black [not approved as of 10.18.24]

Lamp Spec: LED: 3000K | 90+ CRI
(INTEGRAL TO FIXTURE)

Fixture Specification Notes

- 1) Electrical Contractor shall supply and install lenses and accessories during lamp installation per fixture specification.
- 2) Electrical Contractor to verify fixture housing will fit within structural constraints prior to ordering.
- 3) Electrical Contractor to remove zip-ties from product housing prior to drywall. Manufacturer includes zip-ties for shipping purposes only.
- 4) Accommodates ceilings up to 1" thick. Change model number for 1.1"-2.5" thick ceilings. Electrical Contractor to confirm ceiling thickness prior to ordering.
- 5) Lumen Output = 750

General Specification Notes

- 1) Electrical Contractor to determine fixture housing rating (IC, Non-IC or Remodel) unless otherwise noted.
- 2) No substitutions permitted without prior approval from Creative Designs in Lighting.
- 3) All recessed trims and/or trim rings shall be painted to match color of ceiling.
- 4) Electrical Contractor to field measure all linear lighting prior to order.
- 5) All fixture finish colors to be verified with Architect / Interior Designer prior to order.
- 6) All Kelvin (color) temperatures to be verified with Architect / Interior Designer prior to order.





VISUAL COMFORT & Co. | ARCHITECTURAL COLLECTION
FORMERLY KNOWN AS TECH LIGHTING

ELEMENT™ 3" LED ADJUSTABLE DOWNLIGHT

The ELEMENT 3" Next Generation Adjustable recessed downlight features full adjustability with lockable, tool-free, hot aiming. ELEMENT's patented high/low lamp positioning allows the LED to be positioned closer to the aperture for maximum light output and efficiency or higher in the ceiling to minimize glare and flash on the trim. Options include premium warm dimming, tunable white, Xicato and Xicato Artist Series LED modules. Trim options include flanged or flangeless and flangeless in wood ceiling.

- Housing reduced by 60%
- Tool-free aiming/locking: 0-40° tilt, 361° rotation
- Patented high/low lamp positioning
- 1-step static white, 2-step warm dim and tunable white
- Standard dimming down to 1%
- Trims reflector options
- Solite Soft Focus lens option



SHOWN IN FLANGELESS REVEL SQUARE

LUMEN/CBCP MULTIPLIERS

CCT	80 CRI MULTIPLIER	90 CRI MULTIPLIER
2700K	1.12	0.98
3000K	1.18	1.00
3500K	1.22	1.01

Lumen output will vary by CCT and CRI. See photometric charts for output information.

SPECIFICATIONS

	STATIC WHITE		XICATO		WARM DIM		TUNABLE WHITE	
	HIGH OUTPUT	LOW OUTPUT	STANDARD SERIES	ARTIST SERIES	HIGH OUTPUT	LOW OUTPUT	5000K-2700K (3000K)	4000K-1800K (3000K)
DELIVERED LUMENS	1697/1440	850/750	1129	945	1225	941	1174	1209
WATTS	16	12	15	15	16	12	15	15
EFFICACY	106/90	109/92	75	63	77	78	78	81
CRI	80+/90+		80+	95+	90+		90+	
CBCP	10° - 24.575 18° - 5.639 25° - 5.033 40° - 2.739 60° - 1.699		21° - 3.184 43° - 2.733 60° - 1.014 (Values at 80 CRI)		18° - 4.793 25° - 4.221 40° - 2.328 60° - 1.444		18° - 5.018 25° - 4.220 40° - 2.438 60° - 1.512	
CCT	2700K, 3000K, or 3500K		2700K, 3000K, or 3500K ¹		3000K - 1800K		5000K - 2700K	4000K - 1800K
COLOR CONSISTENCY	1-step		1 X 2-step		2-step		2-step	
VOLTAGE	120V or 277V							
DIMMING	Standard reverse-phase, forward-phase, TRIAC, and 0-10V dimming down to 1% eLdLED 0-10V or DALI-2 down to 0.1% Lutron Hi-Lume EcoSystem down to 0.1%						eLdLED 0-10V or DALI-2 down to 0.1%	
POWER SUPPLY	Constant current driver with +.9 power factor and +80% efficiency							
OPTICS	Field changeable: 10°, 18°, 25°, 40°, or 60° TIR		Field changeable: 21°, 43°, or 60° reflector		Field changeable: 18°, 25°, 40°, or 60° TIR			
ADJUSTABILITY	Lockable, hot-aiming 0-40° tilt, 361° rotation, high/low lamp positioning, 45° collar rotation							
CEILING APPEARANCE	Flanged, Flangeless or Flangeless in Wood Ceiling							
CEILING THICKNESS	Flanged: Up to 2-1/2" Flangeless: No ceiling thickness limitations Flangeless in Wood Ceiling: 1/2" to 1-1/2" Note: Thicker ceilings impact light cutoff							
CEILING APERTURE	3-7/8" ceiling cutout							
HOUSING	IC Airtight, Non-IC Airtight, Chicago Plenum, IC suitable up to R60 spray foam insulation. Sauna/steam-room use available only with combination of H shower trim, LD low output housing, and IC housing rating.							
CONSTRUCTION	Housing: Heavy-gauge, cold-rolled steel Trim: Die-cast aluminum							
FINISH	Housing: Black Powder Coat Trim: Antique Bronze, Black, Satin Nickel, or White (paintable)							
GENERAL LISTINGS	ETL Listed, damp location; Shower version Wet Listed							
CALIFORNIA TITLE 24	Registered CEC Appliance Database. Can be used to comply with CEC 2019 Title 24 Part 6 (JAB-2016, JAB-2019) (for 90 CRI versions).							
L70	50,000 hours min							
WARRANTY ²	5 years							

Data in chart reflect 3000K/90 CRI values unless noted.
 Custom output/Custom RAL/custom CCT available, contact Quotes Department.
¹Ordering grids available on page 2.
²See VisualComfort.com for dimmer compatibility.
³Visit VisualComfort.com for specific warranty limitations and details.
⁴3500K Xicato module not available for Artist series.



Visual Comfort & Co. | ARCHITECTURAL COLLECTION
FORMERLY KNOWN AS TECH LIGHTING

ELEMENT™ 3" LED ADJUSTABLE DOWNLIGHT

ORDERING GRIDS

HOUSING

PRODUCT	CEILING APPEARANCE	OUTPUT	CRI/CCT	BEAM SPREAD	FUNCTION	HOUSING RATING	DRIVER	
E3R ELEMENT 3" ROUND	LF FLANGELESS	-LH HIGH OUTPUT	827 80 CRI 2700K, 1-STEP 830 80 CRI 3000K, 1-STEP	0 10° ¹ 1 18° ¹ 2 25° ¹ 4 40° ¹ 6 60° ¹	A ADJUSTABLE	I IC AIRTIGHT N NON-IC AIRTIGHT C CHICAGO PLENUM E EMERGENCY BATTERY (NON-IC / CHICAGO PLENUM)	INTEGRATED DRIVERS 120V/277V UNIVERSAL PHASE 0-10V PH LEAVE BLANK ELDOA ELDOLED 0.1% 0-10V LINEAR ELDDA ELDDLED 0.1% 0-10V LOGARITHMIC ELDD ELDDLED 0.1% DALI-2 ELTO ELDDLED TUNABLE WHITE 0.1% 0-10V LINEAR ^{4,7} ELTO ELDDLED TUNABLE WHITE 0.1% DALI-2 ^{4,7} HLECO LUTRON HI-LUME 0.1% ECOSYSTEM AA3270 LOW OUTPUT DRIVER	
	FF FLANGED	-RW2 OUTPUT	835 80 CRI 2700K, 1-STEP 930 90 CRI 3000K, 1-STEP 935 90 CRI 3500K, 1-STEP WD 90 CRI 3000-1800K, WARM DIM, 2-STEP ⁸ TW52 90 CRI 5000K-2700K, TUNABLE WHITE, 2-STEP ⁸ TW41 90 CRI 4000K-1800K, TUNABLE WHITE, 2-STEP ⁸					
E3S ELEMENT 3" SQUARE	WC WOOD CEILING	-LO LOW OUTPUT	927 90 CRI 2700K, 1-STEP 930 90 CRI 3000K, 1-STEP 935 90 CRI 3500K, 1-STEP WD 90 CRI 3000-1800K, WARM DIM, 2-STEP ⁸ TW52 90 CRI 5000K-2700K, TUNABLE WHITE, 2-STEP ⁸ TW41 90 CRI 4000K-1800K, TUNABLE WHITE, 2-STEP ⁸	21 2° XICATO 43 43° XICATO 60 60° XICATO				
		-X XICATO HIGH OUTPUT	I27 80 CRI 2700K, 1/2-STEP XICATO I30 80 CRI 3000K, 1/2-STEP XICATO I35 80 CRI 3500K, 1/2-STEP XICATO A27 95 CRI 2700K, 1/2-STEP XICATO ARTIST A30 95 CRI 3000K, 1/2-STEP XICATO ARTIST					
		-4W4						

Trims are required and must be ordered separately.

For dimming details, refer to dimmer compatibility chart.

1WC - Wood ceiling option accommodates flangeless trims only.

2LH - High output available for wet applications. Not rated for Sauna/Steam room.

3I.D - Sauna/Steam-room use available only with combination of H (lower trim, LD low output housing, and IC housing rating).

4TW52/TW41/ELTO/ELTD - Tunable white only available in high output, only available with ELTO (0-10V, linear), or ELTD (DALI-2). For 0-10V logarithmic dimming consult Quotes Department.

50 - 10° optic has a unique LED module not available with warm dim, or tunable white. Changing optics to 18°, 25°, 40° or 60°, will require a new LED module.

6Universal dimming is reverse-phase, forward-phase, TRIAC and 0-10V 277V is only compatible with 0-10V dimming.

7ELTD/ELTD - eldoLED tunable white drivers are not compatible with round flangeless (E3RLF) or round wood ceiling (E3RWC) housings.

8X - Xicato housings utilize dedicated standard phase, 0-10V 120V and 277V drivers. If ordering Xicato with standard drivers (non-Lutron or eldoLED), at the end of the part number please specify:

-010 for 0-10V 120V -277 for Phase 277V or -010-277 for 0-10V 277V. For example: E3RLF-XA2743D-010 or E3RLF-XA2743D-277 or E3RLF-XA2743D-010-277. Due to the size of some of the Xicato Reflectors, it may not be feasible to fit the fixture in the 'low' position. It is still fittable in the 'high' position.

Round flangeless (E3RLF) and round wood ceiling (E3RWC) housings will be available March 2024 with the addition of smaller ELDO, ELDOA, and ELDD drivers.

TRIM

PRODUCT	CEILING APPEARANCE	STYLE	APERTURE	FINISH
E3R ELEMENT 3" ROUND	L FLANGELESS	B BEVEL	-O NO LENS	Z ANTIQUE BRONZE
E3S ELEMENT 3" SQUARE	F FLANGED UP TO CEILING THICKNESS	F FLAT	-H SHOWER ¹	B BLACK
	F15 FLANGED 1 1/4" CEILING THICKNESS		-L LENSED ²	S SATIN NICKEL
	F20 FLANGED 1 1/2" CEILING THICKNESS			W WHITE
	F25 FLANGED 1 3/4" CEILING THICKNESS			

Wood ceiling option accommodates flangeless trims only.

1H - Sauna/Steam-room use available only with combination of H (lower trim, LD output housing, and IC housing rating). Shower lens includes a gasket.

2H, L - Lensed products come with Solite Soft Focus lens.

LENSES/LOUVERS

PRODUCT ¹	DESCRIPTION
140MR16SF	SOLITE SOFT FOCUS LENS
140MR16SB	SANDBLASTED LENS
140MR16LL	LINEAR SPREAD LENS
140MR16DF	DIFFUSER SPREAD LENS
EL2RHCBK	EGGCRATE/HEXCELL LOUVER

¹For additional lenses, louvers, optical controls and accessories, refer to visualcomfort.com. Lenses/louvers mounted to lamp assembly only (max 2).

WALL WASH TRIM

PRODUCT ¹	CEILING APPEARANCE	STYLE	FINISH	LED
E3R ELEMENT 3" ROUND	L FLANGELESS	W WALL WASH	-Z ANTIQUE BRONZE	-LED
E3S ELEMENT 3" SQUARE	F FLANGED		-B BLACK	
			-S SATIN NICKEL	
			-W WHITE	
		W		-LED

¹Wall wash trims may be used to convert the ELEMENT Adjustable housing to a wall wash. For dedicated wall wash housings, refer to the ELEMENT 3" Wall Wash specification sheet.

FROSTED BOROSILICATE LENS KIT

PRODUCT	DESCRIPTION
240E3SBLSP-B	BOROSILICATE LENS KIT ELEMENT 3" SQUARE BEVEL TRIM
240E3SQLSP-B	BOROSILICATE LENS KIT ELEMENT 3" SQUARE FLAT TRIM
240E3RBLSP-B	BOROSILICATE LENS KIT ELEMENT 3" ROUND BEVEL TRIM
240E3RDLSP-B	BOROSILICATE LENS KIT ELEMENT 3" ROUND FLAT TRIM

Includes: frosted borosilicate lens, lens spring, and screws to mount to ELEMENT 3" trim.

REPLACEMENT OPTICS

PRODUCT	BEAM SPREAD
353E4LEDCOPT	18 18° 25 25° 40 40° 60 60°
353E4LEDCOPT	

REPLACEMENT REFLECTORS

PRODUCT ¹	BEAM SPREAD
352LEDXREF	21 21° 43 43° 60 60°
352LEDXREF	

¹For use with Xicato modules only.

PREMIUM LENS HOLDER

PRODUCT	LENSES
240E3LENSHLDR	1 ONE LENS 2 TWO LENSES
240E3LENSHLDR	

Provides more secure mounting of additional lenses than the lens holder that ships with each fixture.
Not compatible with the 10° beam spread.

PLASTER PLATES

PRODUCT ¹	DESCRIPTION
ISOE3RPPLT-A	3" PLASTER PLATE ROUND DIE-CAST METAL
ISOE3SPPLT-A	3" PLASTER PLATE SQUARE DIE-CAST METAL
ISOE3RPPLT-W	3" PLASTER PLATE ROUND SHEET METAL ²
ISOE3SPPLT-W	3" PLASTER PLATE SQUARE SHEET METAL ²

Used to convert flanged housings into flangeless housings.
¹Ships standard with flangeless housings. Round not compatible with Lutron Hi-Lume or eldoLED drivers.
²Optional, thinner, meshed sheet-metal mud plates available for minimized plaster feathering to meet installer preference. Round not compatible with Lutron Hi-Lume or eldoLED drivers. Square not compatible with eldoLED drivers.



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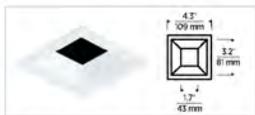
ELEMENT™ 3" LED ADJUSTABLE DOWNLIGHT

TRIMS

FLANGED



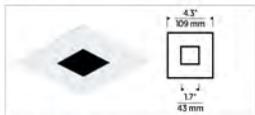
ROUND BEVEL



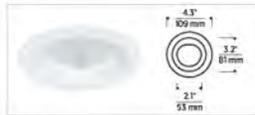
SQUARE BEVEL



ROUND FLAT



SQUARE FLAT



ROUND WALL WASH



SQUARE WALL WASH

FLANGELESS



ROUND BEVEL



SQUARE BEVEL



ROUND FLAT



SQUARE FLAT



ROUND WALL WASH



SQUARE WALL WASH

FINISH



ANTIQUE BRONZE



BLACK



SATIN NICKEL



WHITE (PAINTABLE)

FLANGELESS IN WOOD CEILING



ROUND BEVEL (ANTIQUE BRONZE)



SQUARE BEVEL (SATIN NICKEL)



ROUND FLAT (ANTIQUE BRONZE)



SQUARE FLAT (SATIN NICKEL)



ROUND WALL WASH (ANTIQUE BRONZE)



SQUARE WALL WASH (SATIN NICKEL)

LENS OPTION



SHOWN WITH AND WITHOUT A LENS (SQUARE FLANGED BEVEL)



SHOWN WITH AND WITHOUT A LENS (ROUND FLANGELESS BEVEL)



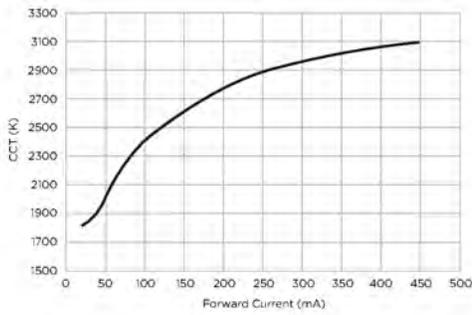
VISUAL COMFORT & Co. | ARCHITECTURAL COLLECTION
FORMERLY KNOWN AS TECH LIGHTING

ELEMENT™ 3" LED

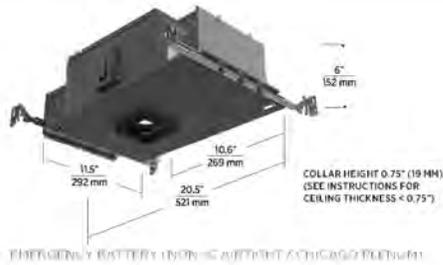
ADJUSTABLE DOWNLIGHT

WARM DIM CURVE

CCT vs. Forward Current, T_c=25°C



HOUSING



AIRTRIM / NOM-IC AIRTRIM / CHICAGO FLEMM

TRUSSELY BATTERY / NOM-IC AIRTRIM / CHICAGO FLEMM

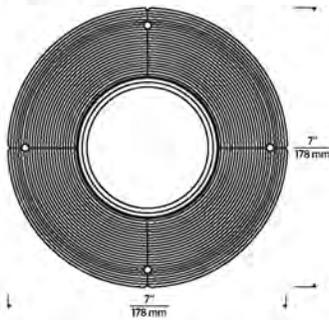


VISUAL COMFORT & Co. | ARCHITECTURAL COLLECTION
FORMERLY KNOWN AS TECH LIGHTING

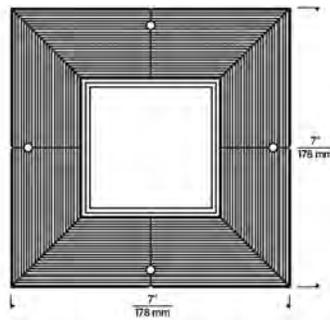
ELEMENT™ 3" LED ADJUSTABLE DOWNLIGHT

PLASTER PLATES

INCLUDED DIE-CAST

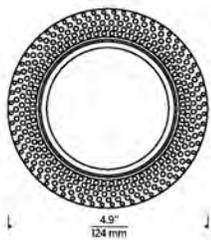


ROUND DIE-CAST INCLUDED FOR FLANGELESS INSTALLATION

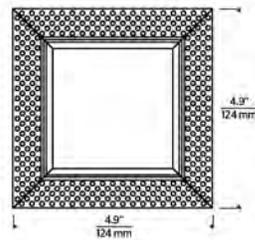


SQUARE DIE-CAST INCLUDED FOR FLANGELESS INSTALLATION

OPTIONAL SHEET METAL

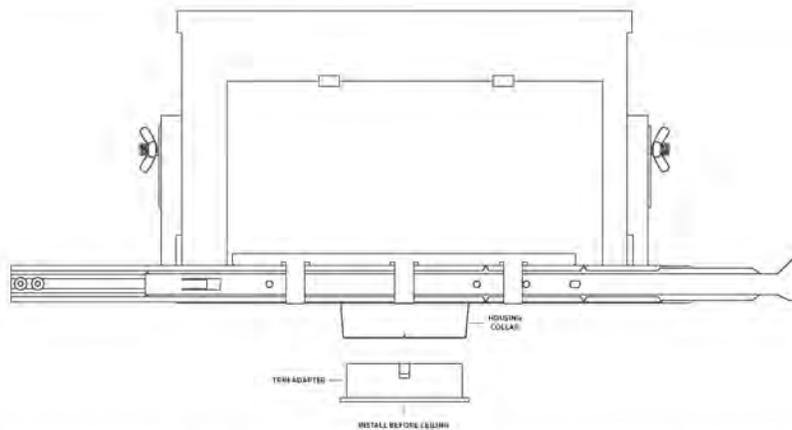


ROUND SHEET METAL OPTIONAL FOR FLANGELESS INSTALLATION

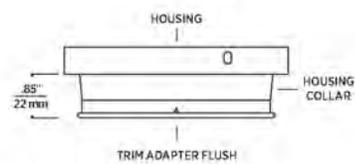


SQUARE SHEET METAL OPTIONAL FOR FLANGELESS INSTALLATION

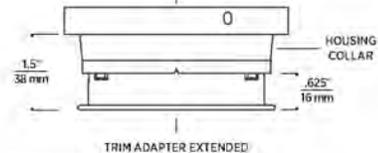
FLANGELESS IN WOOD CEILING TRIM ADAPTER



TRIM ADAPTER INSTALLED



TRIM ADAPTER EXTENDED



Wood ceiling housings ("WC" designation in the ordering grid) ship with an adjustable trim adapter that inserts into the housing aperture and allows standard ELEMENT 3" flangeless trims to achieve a truly flangeless, flush ceiling appearance in special applications such as wood or stone installation. For use in new construction. Consult installation instructions regarding plenum requirements and ceiling thickness ratios.



VISUAL COMFORT & CO. | ARCHITECTURAL COLLECTION
FORMERLY KNOWN AS TECH LIGHTING

ELEMENT™ 3" LED ADJUSTABLE DOWNLIGHT

TRIM-MOUNTED REFLECTORS

ELEMENT Specular Reflectors reduce glare while creating a clean, quiet ceiling appearance. Available finishes include Anodized Gold and Silver for a decorative accent or Anodized Black for an ultimate quiet ceiling aesthetic. These beautiful trim accessories have been specifically designed to minimize any effect on light performance, color, and output. Specular Reflectors are available for both Adjustable and Fixed downlights, and are compatible with ELEMENT 3" trims and housings.

- Can be easily installed or removed
- Assembles to existing trim
- Compatible with Fixed and Adjustable Housings
- Finish Options: Anodized Black (B) or Anodized Silver (S)

SPECIFICATIONS

COMPATIBLE TRIMS	NON-SLOTTED (FOR FIXED*)	SLOTTED (FOR ADJUSTABLE)
3" round, flanged, bevel	ESTREFNS1 (B OR S)	ESTREFS4 (B OR S)
3" square, flanged, bevel	ESTREFNS5 (B OR S)	ESTREFS1 (B OR S)
3" round, flanged, flat	ESTREFNS1 (B OR S)	ESTREFS4 (B OR S)
3" square, flanged, flat	ESTREFNS3 (B OR S)	ESTREFS2 (B OR S)
3" round, flangeless, bevel	ESTREFNS2 (B OR S)	ESTREFS6 (B OR S)
3" square, flangeless, bevel	ESTREFNS6 (B OR S)	ESTREFS5 (B OR S)
3" round, flangeless, flat	ESTREFNS4 (B OR S)	ESTREFS3 (B OR S)
3" square, flangeless, flat	ESTREFNS3 (B OR S)	ESTREFS2 (B OR S)

*May require jambs in the piece in high position.
Not compatible with small trims.

Non-slotted reflectors may be used in adjustable housings with the trim assembly placed in the 0° tilt position.

ORDERING GRID

E3 TRIM-MOUNTED REFLECTORS

PRODUCT	STYLE	FINISH
ESTREF	NS1 NON-SLOTTED	B ANODIZED BLACK
	NS2 NON-SLOTTED	S ANODIZED SILVER
	NS3 NON-SLOTTED	
	NS4 NON-SLOTTED	
	NS5 NON-SLOTTED	
	NS6 NON-SLOTTED	
ESTREF	S1 SLOTTED	
	S2 SLOTTED	
	S3 SLOTTED	
	S4 SLOTTED	
	S5 SLOTTED	
	S6 SLOTTED	

E3TRIF

Reflectors are placed on top of the inside of the trim and affixed via screws (only if provided).

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SHOWN IN ANODIZED BLACK
(BELOW CEILING VIEW)



SHOWN IN ANODIZED SILVER
(BELOW CEILING VIEW)



SHOWN IN ANODIZED SILVER
(BELOW CEILING VIEW)



SHOWN IN ANODIZED BLACK
(TRIM MOUNTED)



SHOWN IN ANODIZED BLACK AND
SILVER (REFLECTOR ONLY)



VISUAL COMFORT & Co. | ARCHITECTURAL COLLECTION
FORMERLY KNOWN AS TECH LIGHTING

ELEMENT™ 3" LED ADJUSTABLE DOWNLIGHT

PHOTOMETRICS

Description: 3" LED Module
10° Beam, 0° Tilt
90 CRI, 3000K

Input Power: 18.2W
Input Power Factor: 0.99
Absolute Luminous Flux (Lumens): 987
Lumen Efficacy (Lumens per Watt): 54.2

Description: 3" LED Module
18° Beam, 0° Tilt
90 CRI, 3000K

Input Power: 15.8W
Input Power Factor: 0.98
Absolute Luminous Flux (Lumens): 1278
Lumen Efficacy (Lumens per Watt): 80.9

Description: 3" LED Module
25° Beam, 0° Tilt
90 CRI, 3000K

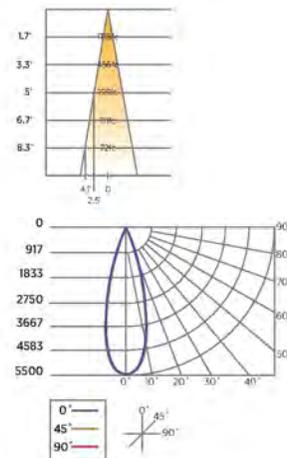
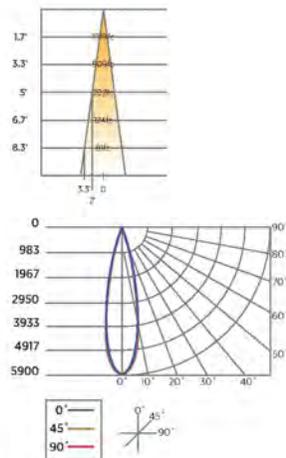
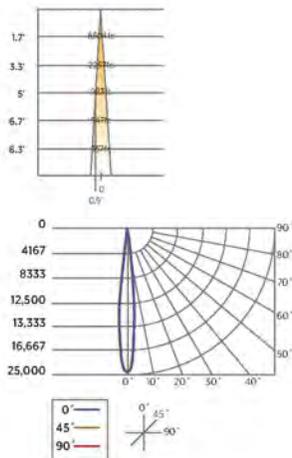
Input Power: 15.8W
Input Power Factor: 0.98
Absolute Luminous Flux (Lumens): 1421
Lumen Efficacy (Lumens per Watt): 89.9

Output difference between CCTs - 5%, CRIs - 15%.

ANGLE	0°	45°	90°
0°	24575	24575	24575
5°	12004	10898	12296
10°	1418	1275	1517
15°	385	332	340
20°	171	165	154
25°	90	85	87
30°	52	48	49
35°	33	31	32
40°	21	19	19
45°	10	11	8
50°	3	6	3
55°	2	2	2
60°	1	1	1
65°	0	0	0
70°	0	0	0
75°	0	0	0
80°	0	0	0
85°	0	0	0
90°	0	0	0

ANGLE	0°	45°	90°
0°	5546	5546	5546
5°	4951	5044	4838
10°	3206	3326	3167
15°	1748	1859	1721
20°	882	1028	871
25°	395	485	380
30°	171	195	167
35°	83	84	81
40°	49	52	50
45°	29	34	30
50°	14	22	13
55°	12	15	11
60°	11	12	9
65°	7	10	6
70°	6	6	6
75°	5	6	5
80°	5	5	5
85°	5	5	5
90°	4	5	5

ANGLE	0°	45°	90°
0°	4966	4966	4966
5°	4647	4710	4525
10°	3677	3750	3542
15°	2292	2346	2143
20°	1103	1088	986
25°	465	559	417
30°	211	240	197
35°	98	100	89
40°	53	56	50
45°	30	35	29
50°	16	22	14
55°	11	13	10
60°	9	9	8
65°	8	7	7
70°	7	6	6
75°	6	6	6
80°	6	5	5
85°	5	5	5
90°	5	5	5





VISUAL COMFORT & Co. | ARCHITECTURAL COLLECTION
FORMERLY KNOWN AS TECH LIGHTING

ELEMENT™ 3" LED

ADJUSTABLE DOWNLIGHT

PHOTOMETRICS

Description: 3" LED Module
40° Beam, 0° Tilt
90 CRI, 3000K

Input Power: 15.8W
Input Power Factor: 0.98
Absolute Luminous Flux (Lumens): 1440
Lumen Efficacy (Lumens per Watt): 911

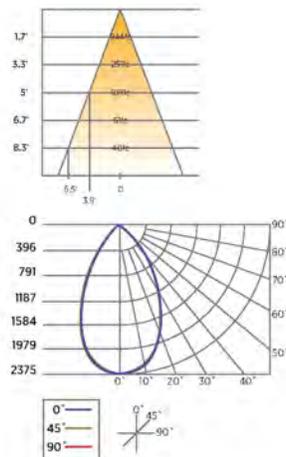
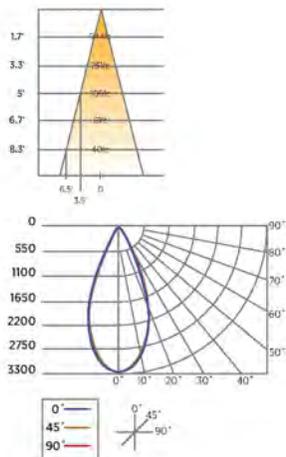
Description: 3" LED Module
60° Beam, 0° Tilt
90 CRI, 3000K

Input Power: 15.7W
Input Power Factor: 0.98
Absolute Luminous Flux (Lumens): 1343
Lumen Efficacy (Lumens per Watt): 85.5

Output difference between CCTs - 5%, CRIs - 15%

ANGLE	0°	45°	90°
0°	2729	2729	2729
5°	2696	2706	2649
10°	2503	2536	2439
15°	2147	2183	2100
20°	1617	1683	1572
25°	915	1000	904
30°	388	434	376
35°	153	162	157
40°	70	77	71
45°	31	41	32
50°	10	21	11
55°	7	10	7
60°	4	6	4
65°	3	4	3
70°	3	3	3
75°	2	3	2
80°	2	2	2
85°	2	2	2
90°	1	2	2

ANGLE	0°	45°	90°
0°	1699	1699	1699
5°	1654	1654	1654
10°	1548	1548	1548
15°	1403	1403	1403
20°	1163	1163	1163
25°	854	854	854
30°	580	580	580
35°	374	374	374
40°	219	219	219
45°	112	112	112
50°	48	48	48
55°	23	23	23
60°	9	9	9
65°	7	7	7
70°	6	6	6
75°	6	6	6
80°	5	5	5
85°	5	5	5
90°	5	5	5





Estimated Quantity:

<i>Manufacturer:</i>	KLUS DESIGN	<i>Fixture Wattage:</i>	6w
<i>Fixture Line:</i>	PDS-ZMG	<i>Fixture Voltage:</i>	24vDC
<i>Fixture:</i>	WP 3000K [continuous COB] 90+ CRI 24V Tape	<i>Load Type:</i>	ELV
<i>Catalog #:</i>	LINEAR LED LIGHTING WITH DEEP REGRESSED CHANNEL + DIFFUSE LENS		
<i>Mounting:</i>	Surface Mount		
<i>Driver</i>	Remote (see schedule)		
<i>Addl. Requirements:</i>	* [# = Fixture Length]		
<i>Lamp Spec:</i>	LED: 3000K 90+CRI (INTEGRAL TO FIXTURE)		

Fixture Specification Notes

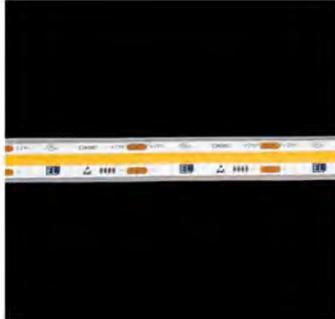
- 1) Refer to fixture schedule for part numbers. Refer to plans for lengths.
- 2) Electrical Contractor to solder power wire leads onto led tape ribbon as necessary.
- 3) Electrical Contractor to cut and piece together channel / lens as necessary.
- 4) Electrical Contractor to determine quantity + size of low voltage home-runs between fixtures and remote driver/s.
- 5) Electrical Contractor to size all secondary wiring for remote transformers / drivers to prevent a voltage drop of more than 1 volt.
- 6) Linear Wattage: 5.5 watts/foot

General Specification Notes

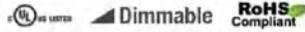
- 1) Electrical Contractor to determine fixture housing rating (IC, Non-IC or Remodel) unless otherwise noted.
- 2) No substitutions permitted without prior approval from Creative Designs in Lighting.
- 3) All recessed trims and/or trim rings shall be painted to match color of ceiling.
- 4) Electrical Contractor to field measure all linear lighting prior to order.
- 5) All fixture finish colors to be verified with Architect / Interior Designer prior to order.
- 6) All Kelvin (color) temperatures to be verified with Architect / Interior Designer prior to order.

Description:

- CONTRACTOR TO DETERMINE BILL OF MATERIALS USING:
- wp-3000K-CL-10-5m -- 16.4' waterproof led ribbon
 - C1418K7_2 -- 78.75" deep channel in black finish
 - 17040 -- diffuse "black" lens
 - 24320 -- end cap in black finish
 - 42717 - channel connector / joiner bar
 - refer to "V#" driver schedule for driver specification
 - wet location rated



Waterproof Continuous LED Strip Light - 3,000K - 5m Reel



Product Number *wp-3000K-CL-10-5m*

Product Features ▾

Waterproof Continuous LED Strip Light is a new style of strip light that utilizes chip on board LEDs to create one diffused line of light. It is ideal for use around reflective surfaces, such as marble floors and countertops, because it eliminates the dots seen with standard SMD LED strip light. With the LEDs integrated into the circuit board, Waterproof Continuous LED Strip Light creates the appearance of an uninterrupted line of hotspot-free LEDs. It also enables designers to use diffused light in tight spaces where standard channel systems wouldn't be ideal.

Waterproof Continuous LED Strip Light has been engineered to be UL Listed and can be used in run lengths up to 5 meters when powered from one end. It features a CCT of 3,000K and is easy to control utilizing any of our compatible controllers and dimmers. Waterproof Continuous LED Strip Light is powered by 24 VDC.

Features List:

- Waterproof - IP65 Rated
- Hotspot-free appearance
- Durable, flexible and low profile
- 3,000K
- Fully dimmable
- UL Listed and RoHS
- 90 watts per reel | 18 watts per meter
- 1470 lumens per meter
- Cutable every 1.52 in | 38.5 mm

Specifications ▾

Ambient Temperature	-20°C to 40°C
Brightness	1470 lumens/meter
Brightness 2	5130mW/meter
CRI	90+
Efficacy	81.7 lumens/watt
Efficacy 2	285 mWatt/watt
Height (English)	0.33 in
Height (Metric)	8.5 mm
Input Current	3750 mA
IP Rating	IP65
LED Density	COB
LED Node Size	COB
Length (English)	16.4 ft
Length (Metric)	5 m
Manufacturer	
Min. Cutting Increment (English)	1.51 in
Min. Cutting Increment (Metric)	38.46 mm
Rating	UL Listed, RoHS
Beam Angle	120°
Input Voltage	24 DC
Warranty	5 years limited
Power (Watts)	90
Power (Watts/ft)	5.5
Power (Watts/m)	18
Width (English)	0.57 in
Width (Metric)	14.5 mm



Estimated Quantity:

Manufacturer: WAGNER
Fixture Line: Handrail
Fixture: Bantam SQ
Catalog #: LULF-30K-70-5-XTS
Mounting: Handrail Post

Fixture Wattage: 2w
Fixture Voltage: 24vDC
Load Type: 0-10vDC

Driver Remote (see schedule)

Addl. Requirements: Finish: Stainless Steel

Lamp Spec: LED: 3000K | 80+ CRI
 (INTEGRAL TO FIXTURE)

Fixture Specification Notes

- 1) 0-10vDC dimming requires BOTH (1) #12-2 high voltage and (1) #16AWG 2-conductor stranded low-voltage wires.
- 2) Contractor to use low voltage 16 guage wire from remote driver to fixtures. Maximum of 21 fixtures per driver, split homeruns into maximum of 10 fixtures. Maximum distance from driver to first fixture is 130'. Maximum distance from driver to last fixture is 320'.
- 3) Unit Wattage: 1.5 watts
- 4) Lumen Output = 175

Description:

- refer to "V#" driver schedule for driver specification
- wet location rated

General Specification Notes

- 1) Electrical Contractor to determine fixture housing rating (IC, Non-IC or Remodel) unless otherwise noted.
- 2) No substitutions permitted without prior approval from Creative Designs in Lighting.
- 3) All recessed trims and/or trim rings shall be painted to match color of ceiling.
- 4) Electrical Contractor to field measure all linear lighting prior to order.
- 5) All fixture finish colors to be verified with Architect / Interior Designer prior to order.
- 6) All Kelvin (color) temperatures to be verified with Architect / Interior Designer prior to order.



BANTAM™ SQ

Another Lumenrail®
Component for Life
Safety and Light

©2021 Korom Photography

POST SURFACE LUMINAIRE

This post-mount luminaire is designed for wall grazing and pathway illumination with mounting options for railings, walls, decks and entry structures. Superior harsh environment protection and vandal resistance are combined with a simple field or factory prepared installation using included 316 stainless steel hardware.

The Bantam™ SQ's purposful, rectilinear housing design provides an inconspicuous architectural solution for new or retrofit applications and egress compliance opportunities.



- Solid machined 316 stainless steel
- 116 lumens per watt LED (500 mA)
- 70° beam spread @ +10° nadir
- 5 IES file supported optic distributions
- IK10 impact rating
- 24VDC operation
- ETL wet location listed
- IP67 ingress protection
- Standard in 2700 K, 3000 K and 4000 K
- Static color outputs available
- Flat post or surface mounting

Specifications subject to change without notice. Verify data at time of order.

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WagnerCompanies.com
LUBS SUBM R3



BANTAM™ SQ

Another Lumenrail® Component
for Life Safety and Light

PROJECT NAME: _____

REP AGENCY: _____

APPROX. LINEAR FT: _____

SERVICE OPTIONS: Field Measure Job Site Support System Installation



SCAN QR CODE
for technical information,
downloads and instructions.

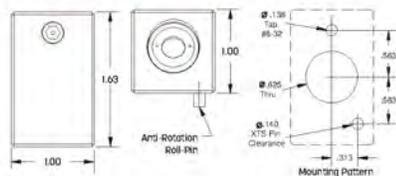
PART NUMBER BUILDER

LULF30K705XTS	LULF				XTS
EXAMPLE	FIXTURE TYPE	COLOR TEMP	OPTIC	DRIVE CURRENT	BANTAM
<i>* Indicates stock, other options may require additional leadtime</i>	LULF - Lumenpod 16 Light Engine	*27K- 2700 K *30K- 3000 K *40K- 4000 K 50K- 5000 K	BLU- Blue GRN- Green RED- Red AMB- Amber	16- 16° beam 23- 23° beam 46- 46° beam *70- 70° beam 94- 94° beam	*5- 2.2W @ 500 mA *3- 1.7W @ 350 mA Extended life 100,000HR version requires 350 mA

ELECTRICAL SPECIFICATIONS

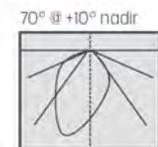
 Intertek <i>All electrical connections to be made by a qualified electrician in accordance with all national, state and local electrical codes.</i>	24VDC	ETL LISTED WET, IK10, IP67, CE	0-10V INPUT	-40°F TO +120°F
	INPUT VOLTAGE	CERTIFICATIONS	DIMMING	OPERATING TEMP
	CLASS 2 REQUIRED	5 YEARS	UP TO 116 LM/W LED	80+
	DRIVER	WARRANTY	EFFICIENCY	8"
				WIRE LENGTH

CONSTRUCTION



Bantam SQ is solid machined 316 stainless steel with security hardware and is designed for flat surface mounting.

PHOTOMETRICS



Bantam SQ is designed with an inherent 10° bias above nadir. This asymmetric feature projects the output from the mounting surface towards the path. Scan QR code or visit our website to view or download available IES reports.

LUMENGEAR™ LED DRIVER & NEMA ENCLOSURE OPTIONS

Wagner offers multiple ETL listed options for both 24VDC power supplies and NEMA enclosures. Quantities and types will be configured based on your specifications and design. Additional specification options are available by request. Not all options apply to all products—please verify compatibility with the factory.

- CLASS II DRIVERS:**
- STD 100W
 - Dali, DMX, 0-10V Dimming Protocols
 - Multiple Wattages
 - Made in USA Units Available

- NEMA ENCLOSURES:**
- 4X - Polycarbonate
 - 4X - Painted Steel
 - 4X - Stainless Steel

Specifications subject to change without notice. Verify data at time of order.

@wagnercompanies



Estimated Quantity:

fixed LED horizontal rectangular flanged steplight -- wet location rated

Manufacturer: WAC

Fixture Line: Steplight

Fixture: WL-LED100

Catalog #: WL-LED100-C-BK

Mounting: Wall Recessed

Fixture Wattage: 4w

Fixture Voltage: 120v

Load Type: ELV

Driver Integral

Addl. Finish: Black [not approved as of 10.18.24]

Requirements:

Lamp Spec: LED: 3000K | 90+ CRI
(INTEGRAL TO FIXTURE)

Fixture Specification Notes

- 1) Mount horizontally + 15" A.F.F. unless otherwise indicated on plan.
- 2) Fits into 2" x 4" j-box with minimum inside dimensions of 3"L x 2"W x 2"D.
- 3) Unit Wattage: 3.5 watts
- 4) Lumen Output = 68

General Specification Notes

- 1) Electrical Contractor to determine fixture housing rating (IC, Non-IC or Remodel) unless otherwise noted.
- 2) No substitutions permitted without prior approval from Creative Designs in Lighting.
- 3) All recessed trims and/or trim rings shall be painted to match color of ceiling.
- 4) Electrical Contractor to field measure all linear lighting prior to order.
- 5) All fixture finish colors to be verified with Architect / Interior Designer prior to order.
- 6) All Kelvin (color) temperatures to be verified with Architect / Interior Designer prior to order.





Model: WL-LED100

LEDme® Step Light

WAC LIGHTING

Responsible Lighting®



Fixture Type:

Catalog Number:

Project:

Location:

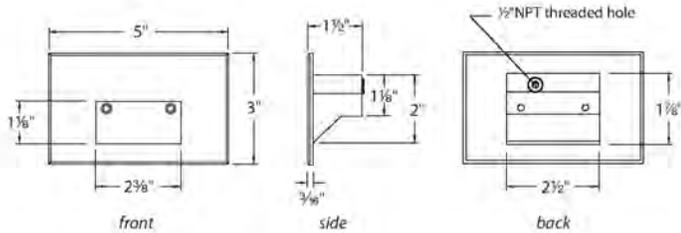
PRODUCT DESCRIPTION

Horizontal rectangle LEDme® Step Light. Designed for safety and style on stairways, patios, decks, balcony areas, walkways and building perimeters.

Features an architectural design. Energy efficient for long-lasting indoor and outdoor lighting solutions. Creates an attractive, romantic impression at night.

FEATURES

- Solid diecast brass, corrosion resistant aluminum alloy, or cast stainless steel construction
- Direct wiring, no driver needed
- **Low profile, flush to wall aesthetics with no visible hardware**
- 54,000 hour rated life
- Balanced lighting, free of shadows with minimum glare
- IP66 rated, Protected against high-pressure water jets
- **Up to 200 fixtures can be connected in parallel**
- 5 year WAC Lighting product warranty



SPECIFICATIONS

- Construction:** Die-cast aluminum or 316 marine grade cast stainless steel
- Power:** Direct wiring, no remote driver needed. Input voltage: 120V or 277VAC 50/60Hz
- Light Source:** 2700K or 3000K CCT Samsung HV-AC High Power LED, CRI: 90
Optional color lenses. Total power consumption of 3.5W
- Mounting:** Fits into 2" x 4" J-Box with minimum inside dimensions of 3"L x 2"W x 2"H
Includes bracket for J-Box mount.
- Dimming:** Dim to 10% with electronic low voltage (ELV) dimmer
Approved dimmers: Lutron Nova-T NTELV-300 & NTELV-600, Lutron Vietri VTELV-600, Lutron Diva DVELV-300P, Lutron Skylark SELV-300P, Lutron Maestro MAELV-600
- Standards:** IP66, UL & cUL Listed for wet locations, Title 24 JA8-2016 Compliant.

ORDER NUMBER

120V Model #	Light Color	Finish	277V Model #	Light Color	Finish
WL-LED100 120V	27 Warm 2700K	BK Black on Aluminum	WL-LED100F 277V	C White 1000K	BK Black on Aluminum
	C White 3000K	BN* Brushed Nickel on Aluminum		AM Amber 610nm	BN* Brushed Nickel on Aluminum*
	AM Amber 610nm	BZ Bronze on Aluminum		RD Red 640nm	BZ Bronze on Aluminum
	RD Red 640nm	GH Graphite on Aluminum		BL Blue 450nm	GH Graphite on Aluminum
	BL Blue 450nm	SS Stainless Steel			SS Stainless Steel
		WT White on Aluminum			WT White on Aluminum
WL-LED100 120V	27 Warm 2700K				
	C White 3000K	BBR Bronze on brass			
	AM Amber 610nm				

*Brushed Nickel Finish is for interior use only



Example: **WL-LED100F-BL-SS**

wacighting.com

Phone (800) 526.2588

Fax (800) 526.2585

Headquarters/Eastern Distribution Center

44 Harbor Park Drive

Port Washington, NY 11050

Central Distribution Center

1600 Distribution Ct

Lithia Springs, GA 30122

Western Distribution Center

1750 Archibald Avenue

Ontario, CA 91760



Estimated Quantity:

Manufacturer: FLEXA LIGHTING
Fixture Line: Downlight
Fixture: Babus 6
Catalog #: BT2230NE / L001
Mounting: Ceiling Recessed

Fixture Wattage: 5w
Fixture Voltage: 500mA
Load Type: ELV

Driver Remote (see schedule)

Addl. Finish: Black [not approved as of 10.18.24]

Requirements:

Lamp Spec: LED: 3000K | 90+ CRI
(INTEGRAL TO FIXTURE)

Fixture Specification Notes

1) Fixtures are constant current and must be wired in series. Driver can power between 1-6 fixtures.

2) Requires coordination with general contractor and trellis contractor. Requires 40mm hole for each fixture in bottom of trellis member.

3) Electrical Contractor to size all secondary wiring for remote transformers / drivers to prevent a voltage drop of more than 1 volt.

4) Architect to verify finish prior to ordering.

5) Unit Wattage: 4.5 watts

6) Lumen Output = 446

Description:

- recessed fixed downlight with 1.77" flanged trim
- refer to "V#" driver schedule for driver specification
- wet location rated

General Specification Notes

1) Electrical Contractor to determine fixture housing rating (IC, Non-IC or Remodel) unless otherwise noted.

2) No substitutions permitted without prior approval from Creative Designs in Lighting.

3) All recessed trims and/or trim rings shall be painted to match color of ceiling.

4) Electrical Contractor to field measure all linear lighting prior to order.

5) All fixture finish colors to be verified with Architect / Interior Designer prior to order.

6) All Kelvin (color) temperatures to be verified with Architect / Interior Designer prior to order.



IP RATED DOWNLIGHTS

BABUS 6

design: Roberto Mantovani



Supply current
Courant d'alimentation
Corriente de alimentación
500mA (V, 8.7V)

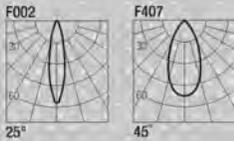
Power
Puissance
Potencia
4.5W



FLEXALIGHTING
NORTH AMERICA



Photometric diagrams



CCT	Flux	CRI	CCT	Flux	CRI
2400K	472 lm	95+	Dim to Warm 1800K-3000K	416 lm	90
2700K	421 lm	98+			
3000K	446 lm	98+			
3500K	464 lm	98+			
4000K	482 lm	98+			

Code Construction

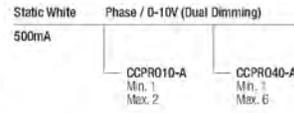
Construction du code produit
Construcción del código de producto

BT2 X XX X E

BT2	X	Beam angle	XX	Color Temp.	X	Finishing	E
		Angle de faisceau Ángulo del haz		Température couleur Temperatura de color		Finitions Acabados	
	1	25°		24 2400K	B	White Blanc Blanco	
	2	45°		27 2700K	N	Black Noir Negro	
				30 3000K	K	COR-TEN	
				35 3500K	C	Custom Personnalisée Personalizado	
				40 4000K			
				DW Dim Warm			
				CU Custom Personnalisée Personalizado			

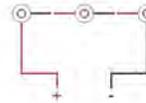
Drivers (Remote)

Alimentateurs
Alimentadores

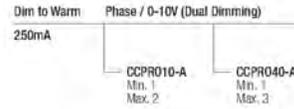


Series wiring

Câblage en série
Cableado en serie



For other driver options - including Lutron, Dalí and DMX - please consult factory



L001

Low luminance louvre
Filtre basse luminance
Filtro de baja luminancia



Note: the filter must be ordered together with the lighting fixture
Note: le filtre doit être commandé en même temps que l'appareil
Nota: el filtro debe pedirse junto con la luminaria

Optionals Accessoires - Accesorios

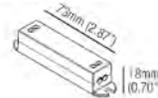
CSBU01

Recessing box
Boîtier d'encastrement
Caja de empotrar



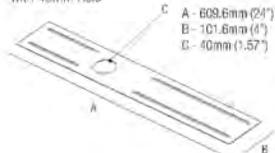
DCVI.B.1

24VDC Constant Voltage to Constant Current Converter
0-10V / Phase / Dim to Warm
Compatible, 13W



MP-R040

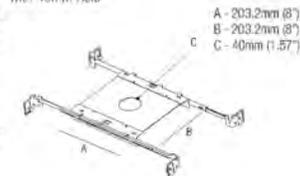
Mounting Plate
with 40mm Hole



T-Bar Installation

R02040

Mounting Plate
with 40mm Hole



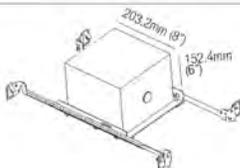
IC Housings

IC086R02040

Recessed Box for Insulated Ceiling with 40mm Hole

AT086R02040

Air Tight Recessed Box for Insulated Ceiling with 40mm Hole



- CHESNEY RESIDENCE -

- 7404 N. Las Brisas Ln. Paradise Valley, AZ. 85253 -
- Landscape Construction Documents -

GENERAL NOTES:

- THESE CONSTRUCTION DOCUMENTS, INCLUDING ALL PLANS, NOTES, DETAILS AND SPECIFICATIONS ARE INTENDED TO FACILITATE THE INSTALLATION CONTRACTOR BY PROVIDING GENERAL GUIDELINES FOR DESIGN INTENT. IT IS THE GOAL OF THE DOCUMENTS THAT THE WORK IS TO BE COMPLETED WITHOUT CHANGE ORDERS. ALL QUANTITIES SHOWN IN THE DOCUMENTS ARE ESTIMATES ONLY AND ARE NOT GUARANTEED; THE CONTRACTOR SHALL SUPPLY ALL MATERIALS, LABOR AND EQUIPMENT IN ORDER TO FULFILL THE INTENT OF THE DESIGN DRAWINGS.
- INTERPRETATION OF THE PLANS AND SPECIFICATIONS SHALL BE MADE BY THE "AUTHOR" OR "ARCHITECT/ENGINEER-OF-RECORD" OF THE RESPECTIVE DOCUMENT AND SHALL BE CONSIDERED FINAL. ANY POSSIBLE AMBIGUITY SHALL BE SUBMITTED IN WRITING BY THE CONTRACTOR PRIOR TO SUBMITTING FORMAL BIDS. ALL CLARIFICATIONS SHALL BE PREPARED IN WRITING BY THE "ARCHITECT/ENGINEER-OF-RECORD" PRIOR TO BIDDING. THE CONTRACTOR SHALL ACCEPT THE INTERPRETATION OF THE "ARCHITECT/ENGINEER-OF-RECORD" AS THE CORRECT AND FINAL INTERPRETATION.
- ANY INCIDENTAL INSTALLATION PROCEDURE, MATERIAL OR EQUIPMENT, NOT MENTIONED IN THESE CONSTRUCTION DOCUMENTS, THE SPECIFICATIONS NOR SHOWN ON THE PLANS, WHICH MAY BE NECESSARY FOR CONSTRUCTION AND SATISFACTORY OPERATION OF THE DESIGN SYSTEM SHALL BE FURNISHED AND INSTALLED (AS BASED ON INDUSTRY STANDARDS) AS THOUGH SHOWN OR PROVIDED FOR.
- EXISTING CONDITIONS AND BASE INFORMATION ARE BASED ON PLANS PREPARED BY THE ARCHITECT. THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE LOCATIONS OF EXISTING AND FUTURE UNDERGROUND SERVICES AND IMPROVEMENTS WHICH MAY CONFLICT WITH THE WORK TO BE DONE. NOTIFY THE OWNER'S AUTHORIZED REPRESENTATIVE IMMEDIATELY SHOULD A CONFLICT ARISE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING ALL NECESSARY PERMITS AND SHALL NOTIFY ALL UTILITY COMPANIES WITH UTILITIES ON SITE PRIOR TO THE CONSTRUCTION OF THE PROJECT.
- FOR UNDERGROUND UTILITY COORDINATION AND 48 HOURS PRIOR TO START OF CONSTRUCTION (DEPENDING ON AREA OR JURISDICTION), THE CONTRACTOR SHALL CONTACT:
 - A) BLUE STAKE (ARIZONA) 1-800-782-5346
 - B) UNDERGROUND SERVICES ALERT (USA) 1-800-227-2600
- THESE NOTES ARE TO BE USED FOR GENERAL REFERENCE IN CONJUNCTION WITH AND AS A SUPPLEMENT TO THE WRITTEN SPECIFICATIONS, APPROVED ADDENDUMS, AND THE CHANGE ORDERS AS ASSOCIATED WITH THESE CONSTRUCTION DOCUMENTS.
- SHOULD THE CONTRACTOR HAVE ANY QUESTIONS REGARDING THESE CONSTRUCTION DOCUMENTS OR SHOULD THERE BE ANY DISCREPANCIES, HE SHALL CONTACT THE LANDSCAPE ARCHITECT FOR CLARIFICATION BEFORE PROCEEDING WITH THE WORK.
- ALL WORK SHALL CONFORM TO THE CONTRACT DOCUMENTS AND PER GOVERNING CODES AND/OR ORDINANCES.
- THE CONTRACTOR SHALL PROVIDE BARRICADES AND TRAFFIC CONTROL ALONG PUBLIC STREETS, IF REQUIRED, DURING INSTALLATION.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO REPORT TO THE LANDSCAPE ARCHITECT AND/OR THE OWNER'S AUTHORIZED REPRESENTATIVE ANY DISCREPANCIES BETWEEN THE CONSTRUCTION DOCUMENTS AND FIELD CONDITIONS PRIOR TO THE START OF WORK.
- BEFORE WORK BEGINS ON THE PROJECT, THE CONTRACTOR SHALL REVIEW THE PROJECT WITH THE LANDSCAPE ARCHITECT AND/OR THE OWNER'S AUTHORIZED REPRESENTATIVE.
- THE LANDSCAPE ARCHITECT AND/OR THE OWNER'S AUTHORIZED REPRESENTATIVE SHALL APPROVE ANY OR ALL CHANGES PRIOR TO THE START OF WORK.
- THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING AND COORDINATING EXISTING SITE CONDITIONS.
- THE CONTRACTOR SHALL ADHERE TO ALL APPLICABLE LOCAL, STATE, AND/OR FEDERAL LAWS AND/OR REGULATIONS PERTAINING TO THE PROJECT.
- THE CONTRACTOR SHALL PROPERLY COORDINATE HIS WORK WITH OTHER CONTRACTOR'S WORK PRIOR TO INSTALLATION.
- THE CONTRACTOR SHALL TAKE PRECAUTIONARY MEASURES TO PROTECT EXISTING IMPROVEMENTS AND THE PUBLIC FROM DAMAGE THROUGHOUT CONSTRUCTION.
- THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY DAMAGES IMPOSED, UNINTENTIONALLY OR ACCIDENTALLY TO EXISTING UTILITIES, STRUCTURES, WALLS, OR OTHER AMENITIES, DUE TO THE ACTION OF THE CONTRACTOR. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ANY SUBCONTRACTOR'S DAMAGE OCCURRED DURING THE CONTRACTOR'S OPERATION SHALL BE REPAIRED, AT THE EXPENSE OF THE CONTRACTOR, TO THE SATISFACTION OF THE OWNER'S AUTHORIZED REPRESENTATIVE.
- MATCH GRADES, LAYOUT AND ELEVATIONS OF ADJACENT LANDSCAPE WORK BY OTHERS. NOTIFY THE LANDSCAPE ARCHITECT OF CONFLICTS BEFORE PROCEEDING WITH CONSTRUCTION.

PLANTING GENERAL NOTES:

- THE CONTRACTOR SHALL REVIEW PLANTING PLAN WITH LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
- THE LANDSCAPE ARCHITECT OR HIS REPRESENTATIVE RESERVES THE RIGHT TO REFUSE ANY PLANT MATERIALS HE DEEMS UNACCEPTABLE. SEE SPECIFICATIONS.
- THE CONTRACTOR SHALL SUPPLY AND INSTALL ALL PLANT MATERIAL, AS SPECIFIED ON THE PLANTING PLANS. HOWEVER, SHOULD THE PLANT MATERIAL BE TEMPORARILY UNAVAILABLE, THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT AND INSTALL 5 GALLON NURSERY BUCKETS WITH IRRIGATION AT EACH PLANT LOCATION, AS THE PLANT MATERIAL BECOMES AVAILABLE. THE 5 GALLON BUCKETS SHALL BE REMOVED AND PLANT MATERIAL INSTALLED.
- ANY AND ALL SUBSTITUTIONS TO BE APPROVED BY THE LANDSCAPE ARCHITECT.
- LOCATE PLANTS AWAY FROM SPRINKLER HEADS, LIGHT FIXTURES AND OTHER OBSTRUCTIONS.
- FINAL LOCATION OF ALL PLANT MATERIAL SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER'S AUTHORIZED REPRESENTATIVE.
- PLANTING AND IRRIGATION DESIGN MAY BE MODIFIED TO ADAPT TO WALK CONFIGURATIONS THAT DIFFER FROM THESE PLANS, OR BECAUSE OF GRADE LIMITATIONS ON SITE.
- WATER TEST ALL TREE PLANTING HOLES PRIOR TO PLANTING. IF TREE HOLE DOES NOT DRAIN, DO NOT PLANT. SEE HARDPAN DETAIL.
- REFER TO THE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS NOT SHOWN ON DRAWINGS.
- TREES SHALL BE PLANTED A MINIMUM OF 10'-0" FROM STREET LIGHTS / FIRE HYDRANTS, 6'-0" FROM EDGE OF UNDERGROUND UTILITIES AND A MINIMUM OF 4'-0" FROM WALLS, CURBS AND WALLS. SHRUBS SHALL BE PLANTED A MINIMUM OF 2'-0" FROM CURB AND WALLS.
- ALL SPECIMEN TREES, SHRUBS AND CACTI SHALL BE FIELD LOCATED BY LANDSCAPE ARCHITECT OR OWNER'S AUTHORIZED REPRESENTATIVE.
- THE CONTRACTOR SHALL INSTALL "SHAWTOWN ROOT BARRIER PANELS" (OR APPROVED EQUAL) AT ALL TREES WITHIN 7'-0" FEET OF HARDSCAPE ELEMENTS INCLUDING (BUT NOT LIMITED TO) SIDEWALKS, ASPHALT, CONCRETE SLABS / FOOTINGS AND STRUCTURES. CONTRACTOR SHALL SUBMIT SPECIFICATION SHEETS OF PROPOSED ROOT BARRIER PANELS TO THE LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO INSTALLATION.
- THE CONTRACTOR SHALL INSTALL ARBOR GUARDS AT ALL TREES LOCATED IN TURF AREAS.
- ON-SITE AND OFF-SITE TOPSOIL SHALL CONFORM TO CONTENT REQUIREMENTS AS SPECIFIED IN PART 2 OF THE PLANTING SPECIFICATIONS. AGRONOMY TEST SUBMITTALS ARE REQUIRED FOR ALL MATERIAL USED FOR TOPSOIL AND BACKFILL. SUBMIT REPORT TO LANDSCAPE ARCHITECT FOR REVIEW.
- ALL PLANT MATERIAL SHALL BE IN COMPLIANCE WITH THE AMERICAN STANDARDS FOR NURSERY STOCK, LATEST EDITION.
- THE CONTRACTOR SHALL PROVIDE MAINTENANCE FOR ALL ALL PLANT MATERIAL FROM THE TIME OF INSTALLATION THROUGH SUBSTANTIAL COMPLETION.
- CACTI SHALL BE PLANTED A MINIMUM OF 3'-0" AWAY FROM ALL PEDESTRIAN ROUTES.
- CACTI SHALL BE WELL ROOTED AND NON-SHARRED.
- PLANT MATERIAL MARKED "SALVAGE" SHALL BE SELECTED FROM ON-SITE SALVAGE INVENTORY. ALL MATERIAL SELECTIONS SHALL BE APPROVED BY LANDSCAPE ARCHITECT AND/OR OWNER'S AUTHORIZED REPRESENTATIVE.
- IN DISTURBED AREAS INDICATED TO RECEIVE REVEGETATION HYDROSEED AND/OR PLANTING, THE CONTRACTOR SHALL MATCH EXISTING NATURAL DESERT STONE GROUND COVER CONDITIONS ADJACENT TO THE PROJECT.
- NATIVE REVEGETATION AREAS AND PLANTER BEDS SHALL BE TREATED WITH PRE-EMERGENT AS PER MANUFACTURER'S INSTRUCTIONS. RE-APPLY AS NECESSARY TO ELIMINATE INVASIVE WEEDS. REMOVE ALL DEAD DEBRIS.
- THE CONTRACTOR SHALL PROVIDE A 50'-0" BY 50'-0" TYPICAL MOCK-UP OF NATIVE REVEGETATION AREAS FOR REVIEW BY THE LANDSCAPE ARCHITECT OR OWNER'S AUTHORIZED REPRESENTATIVE.
- ALL TREE STAKING SHALL CONFORM TO THE PLANTING DETAILS OR AS NOTED IN THE SPECIFICATIONS. THE LANDSCAPE ARCHITECT OR OWNER'S AUTHORIZED REPRESENTATIVE SHALL REVIEW TYPICAL TREE STAKING PRIOR TO FINAL ACCEPTANCE.

INERT GENERAL NOTES:

- ANGULAR GRANITE RIP-RAP
- INSTALL GRANITE RIP-RAP IN ALL DRAINAGE SWALES, AND WHERE INDICATED ON PLANS (TYPICAL). REFER TO MATERIALS SCHEDULE / PLANTING LEGEND FOR COLOR AND SIZE OF GRANITE RIP-RAP.
 - THE CONTRACTOR SHALL SUBMIT SAMPLES TO LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.
 - THE CONTRACTOR SHALL REFER TO CIVIL PLANS FOR ADDITIONAL INFORMATION.

DECOMPOSED GRANITE

- DECOMPOSED GRANITE IS REQUIRED IN ALL PLANTING AREAS, EXCEPT AREAS OF TURF AND GRANITE RIP-RAP, AND SHALL EXTEND UNDER PLANT MATERIAL UNLESS NOTED OTHERWISE ON PLANS. REFER TO MATERIALS SCHEDULE / PLANTING LEGEND.
- ALL PLANTING AREAS SHALL RECEIVE A 2" MINIMUM LAYER OF DECOMPOSED GRANITE, THROUGHOUT (TYPICAL).
- CONTRACTOR SHALL SUBMIT SAMPLES TO LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.

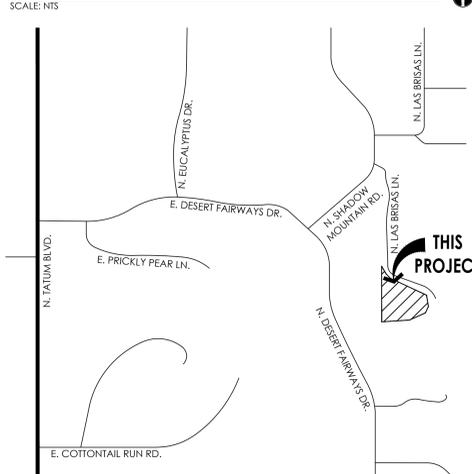
IRRIGATION GENERAL NOTES:

- THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR FULL IRRIGATION COVERAGE OF ALL PLANT MATERIAL.
- THE LANDSCAPE CONTRACTOR SHALL SUBMIT FULL PIPING PLANS, AFTER FIELD VERIFICATION, DEPICTING POINT OF CONNECTION, METER LOCATION AND SIZE, BACKFLOW PREVENTER LOCATION AND SIZE, AND PIPE ROUTING AND SIZE.
- THE LANDSCAPE CONTRACTOR SHALL INSTALL THE SPECIFIED SYSTEM IN ACCORDANCE WITH THE ATTACHED SCHEDULES, NOTES, DETAILS, AND SPECIFICATIONS.
- THE LANDSCAPE CONTRACTOR TO SITE VERIFY PRESSURE AND NOTIFY LANDSCAPE ARCHITECT OF ANY DIFFERENCES PRIOR TO INSTALLATION OR ORDERING OF MATERIALS. IF CONTRACTOR FAILS TO NOTIFY LANDSCAPE ARCHITECT, HE IS FINANCIALLY RESPONSIBLE FOR ANY NECESSARY SYSTEM ALTERATIONS THAT RESULT.
- THE LANDSCAPE CONTRACTOR SHALL FIELD VERIFY EXISTING TAP LOCATIONS. INSTALL NEW METERS PER THE ATTACHED IRRIGATION SCHEDULE.
- THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR CUTTING AND PATCHING OF ASPHALT AND CONCRETE AS REQUIRED FOR SLEEVE INSTALLATION ACCORDING TO THE IRRIGATION SCHEDULE.
- CONTROLLER TO BE INSTALLED AS PER MANUFACTURER'S SPECIFICATIONS. CONTROLLER SIZE AND QUANTITIES TO BE DETERMINED BY THE VALVE REQUIREMENTS AND POINTS OF CONNECTION. INSTALL ONE (1) CONTROLLER AT EACH POINT OF CONNECTION.
- INSTALL PVC MAINLINE AND LATERALS ACCORDING TO THE IRRIGATION AND PIPING SCHEDULES.
- ALL VALVE FLOWS SHALL NOT EXCEED MANUFACTURER'S SPECIFICATIONS.
- VALVE BOXES SHALL BE SQUARE TO ADJACENT WALKS OR CURBS AND FLUSH WITH THE FINAL GRADE.
- WORK SHALL CONFORM TO ALL CONSTRUCTION CODES AND REGULATIONS.
- THE LANDSCAPE CONTRACTOR SHALL INSTALL GREEN VALVE BOXES IN TURF AREAS AND TAN VALVE BOXES IN DECOMPOSED GRANITE AREAS (TYPICAL).
- REFER TO THE IRRIGATION NOTES FOR THE CALCULATED PRESSURE AT THE WATER METER. REFER TO NOTE #4 IF PRESSURE DEFERS FROM THAT NOTED.
- THE LANDSCAPE CONTRACTOR SHALL VISIT SITE PRIOR TO BIDDING ON PROJECT TO VERIFY INSTALLATION CONDITIONS.
- PRIOR TO COMMENCEMENT OF ANY WORK, THE CONTRACTOR SHALL CONTACT BLUE STAKE TO VERIFY LOCATIONS AND DEPTHS OF UNDERGROUND UTILITIES THAT MAY BE EFFECTED BY HIS WORK, AND HE SHALL BE RESPONSIBLE FOR DAMAGES TO SUCH UTILITIES CAUSED AS A RESULT OF HIS IRRIGATION INSTALLATION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPENSATING THE OWNER AND/OR OWNER'S REPRESENTATIVE FOR ANY DESIGN CHANGES MADE AS A RESULT OF DEVIATION BY THE CONTRACTOR FROM THE PLANS AND SPECIFICATIONS OR DUE TO ERRORS, FAULTY MATERIAL OR FAULTY WORKMANSHIP.
- INSTALL ALL MAINLINES WITH A MINIMUM OF 30" OF COVER.
- INSTALL ALL LATERALS WITH A MINIMUM OF 12" OF COVER.
- ALL PIPE TO BE INSTALLED PER THE MANUFACTURER'S SPECIFICATIONS AND ASTM STANDARD D 2774.
- ALL THREADED JOINTS TO BE COATED WITH TEFLON TAPE UNLESS OTHERWISE SPECIFIED BY THE MANUFACTURER. USE LIQUID TEFLON ON METAL PIPE THREADS. ONLY.
- FLUSHING OF ALL LINES PRIOR TO INSTALLATION OF SPRINKLERS AND EMITTERS IS REQUIRED.
- INSTALL ALL SPRINKLERS, EMITTERS, AND RELATED MATERIAL PER IRRIGATION SYSTEM SPECIFICATIONS AND DETAILS.
- INSTALL ALL ELECTRICAL JOINTS WITH 3-M WATERPROOF CONNECTORS.
- ALL ELECTRICAL CONNECTIONS SHALL BE MADE AT THE REMOTE CONTROL VALVE BOXES. CONTROLLER ENCLOSURES AND VALVE BOXES SPECIFICALLY FOR ELECTRICAL CONNECTIONS.
- A CERTIFIED ELECTRICIAN SHALL BE RESPONSIBLE FOR INSTALLING ALL WIRING FROM THE CIRCUIT BREAKER AT THE 120 VOLT SOURCE LOCATION TO AUTOMATIC CONTROLLER.
- ALL 120 VOLT VOLT POWER WIRE TO BE INSTALLED PER LOCAL CODE AND THE N.E.C.
- INSTALL ALL VALVE WIRINGS IN MAINLINE TRENCH AS DETAILED.
- INSTALL ALL REMOTE CONTROL VALVES AT HEIGHT INDICATED ON DETAILS, AS HIGH AS POSSIBLE BUT ALLOWING CLEARANCE BETWEEN VALVE BOX LID AND FLOW CONTROL HANDLE ON REMOTE CONTROL VALVE.
- INSTALL ALL MAINLINE GATE VALVES IN A ROUND PLASTIC VALVE BOX PER DETAILS.
- ALL PVC SOLVENT WELD FITTINGS SHALL BE LASCO OR APPROVED EQUAL.
- THE MAINLINE, LATERAL PIPE, AND VALVES ARE SHOWN **SCHEMATICALLY** AND SHALL BE **INSTALLED WITHIN THE LANDSCAPE AREA, OUTSIDE R.O.W. AND P.U.E.** ADJACENT TO SIDEWALK OR CURB AND OFFSET 18" WHEREVER POSSIBLE.
- SUPPLY THE FOLLOWING MATERIAL TO THE OWNER:
 - A) TWO WRENCHES FOR DISASSEMBLY AND ADJUSTING OF EACH TYPE OF SPRINKLER HEAD AND VALVE SUPPLIED.
 - B) TWO KEYS FOR EACH OF THE CONTROLLERS.
 - C) TWO COUPLERS WITH MATCHING HOSE BIBS AND SHUT-OFF VALVE.
 - D) TWO VALVE BOX KEYS.
- ALL MAINLINE FITTINGS FOR PIPE 9" AND LARGER SHALL BE CAST OR DUCTILE IRON FOR PVC SCHEDULE 80 PVC FOR 1/2" AND SMALLER.
- ALL MAINLINE PIPE SHALL BE A MINIMUM OF SCHEDULE 40.
- SLEEVES SHALL BE A MINIMUM OF TWO TIMES THE DIAMETER OF THE LINE SIZE.
- ALL MAINLINE AND IRRIGATION EQUIPMENT SHALL BE PLACED IN THE LANDSCAPED AREAS.
- CONTROLLER WIRES THAT ARE DIRECT BURIED SHALL BE #14 OR BETTER, BUNDLED OR WRAPPED A MINIMUM OF EVERY TWELVE (12) FEET. DURING INSTALLATION WIRES SHALL HAVE A 24" LOOP TIED IN ALL DIRECTION CHANGES GREATER THAN 30 DEGREES AND BE UNITED PRIOR TO TRENCH FILL IN.
- DRIP SYSTEM FLUSH CAPS SHALL BE PLACED IN A VALVE BOX AT THE END OF ALL DRIP LATERAL RUNS, AS DESCRIBED ON THE DRAWINGS.
- ALL VALVES, PRESSURE REGULATORS AND OTHER DEVICES SHALL BE PLACED IN AN APPROPRIATELY SIZED VALVE BOX WITH A MINIMUM OF TWO (2) INCHES OF PEA GRAVEL.
- PRIOR TO PLACING ANY IRRIGATION SYSTEM IN SERVICE, AN ARIZONA CERTIFIED BACKFLOW DEVICE TESTER SHALL TEST THE BACKFLOW PREVENTION DEVICE AND GIVE A COPY OF THE PASSED TEST RESULTS TO THE MARICOPA COUNTY INSPECTOR OR MAIL IT TO THE MARICOPA COUNTY DEPARTMENT OF PUBLIC WORKS INSPECTION STATION.
- AFTER INITIAL TESTING, ALL BACKFLOW DEVICES SHALL BE TESTED ANNUALLY.
- BACKFLOW DEVICES SHALL BE A MINIMUM OF TWO (2) FEET FROM THE WATER METER AND BE THE SAME SIZE AS THE METER SERVICE LINE.
- ALL BACKFLOW PREVENTION DEVICES SHALL HAVE A MINIMUM OF 3/8"x4" CLASS B CONCRETE SLAB WITH PIPE SLEEVES. IF A SECURITY CAGE IS INSTALLED, CONCRETE SHALL BE SIX (6") INCHES LARGER ON ALL SIDES THAN THE SECURITY CAGE.
- ALL PIPE CROSSINGS IN THE RIGHT-OF-WAY SHALL BE MARKED ON EACH SIDE OF THE CURB WITH A NON-DSTRUCTIBLE MARKING.

GRADING GENERAL NOTES:

- CONTRACTOR SHALL GRADE TO MAINTAIN POSITIVE DRAINAGE AWAY FROM ALL STRUCTURES. REVIEW ENGINEERS PLAN FOR DRAINAGE.
- FINISH GRADING SHALL BE BY THE DIRECTION OF THE LANDSCAPE ARCHITECT.
- LANDSCAPE ARCHITECT SHALL APPROVE GRADING PRIOR TO PLANTING.
- GRADING FOR THIS PROJECT INCLUDES THE FOLLOWING:
 - A) FINE GRADING OF EXISTING ROUGH GRADES IS REQUIRED TO PROVIDE SMOOTH, EVEN GRADE TRANSITION IN LANDSCAPE AREA.
 - B) IMPORTING AND PLACING "OFF-SITE 3/8" MINUS TOPSOIL" IN THE FOLLOWING AREAS:
 - I) TURF AND ANNUAL AREAS (6" DEPTH).
 - II) PLANT BACKFILL (CAN BE SCREENED ON-SITE SOIL).
- THE CONTRACTOR IS RESPONSIBLE FOR REMOVING ANY CALICHE ENCOUNTERED ON SITE AT NO ADDITIONAL COST TO THE OWNER. THE OWNER AND CONTRACTOR SHALL COORDINATE A SUITABLE LOCATION ON SITE TO DISPOSE OF THE CALICHE MATERIAL. SHOULD A SUITABLE LOCATION ON SITE NOT EXIST, THE OWNER SHALL BE RESPONSIBLE FOR ALL FEES ASSOCIATED WITH REMOVAL AND DISPOSAL OF THE CALICHE.
- FINISH GRADE OF ALL PLANTING AREAS IS TO BE 1/2" BELOW ADJACENT PAVING UNLESS NOTED OTHERWISE.
- REFERENCE CIVIL ENGINEERING DRAWINGS FOR GRADING AND DRAINAGE FLOWS. THE CONTRACTOR SHALL BE RESPONSIBLE THAT THESE ARE PROVIDED FOR AND NOT IMPAIRED WITH OBSTRUCTIONS.
- THE CONTRACTOR IS RESPONSIBLE FOR GRADING ALL AREAS AT THE DIRECTION OF THE LANDSCAPE ARCHITECT TO CREATE A NATURALLY UNDLATING GROUND PLANE.

VICINITY MAP:



HARDSCAPE GENERAL NOTES:

- FOOTINGS, WALLS AND FENCES SHALL BE PLACED OUTSIDE OF THE PUBLIC RIGHT-OF-WAY.
- REFER TO CIVIL PLANS PREPARED BY CIVIL ENGINEERS FOR ALL INFORMATION REGARDING HORIZONTAL AND VERTICAL CONTROLS.
- ALL DETAILS SHALL BE REVIEWED BY A STRUCTURAL ENGINEER AND MODIFIED (IF NECESSARY) PRIOR TO CONSTRUCTION.
- ALL DIMENSIONS SHOWN ON THIS PLAN ARE BASED ON THE CIVIL PLAN SUBMITTED BY THE ARCHITECT. SHOULD DISCREPANCIES OCCUR, FIELD REVISIONS SHALL BE REQUIRED.
- THE CONTRACTOR SHALL HAVE SIDEWALK SURVEYED AND STAKED FOR REVIEW BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
- IN ADDITION TO SUBMITTING MATERIAL SAMPLES OF ALL SITE RELATED MATERIALS, THE CONTRACTOR SHALL PREPARE A 4'x4' SAMPLE PANEL FOR EACH TYPE OF CONSTRUCTION, I.E. A) CONCRETE PAVERS, B) EXPOSED AGGREGATE PAVING, C) INTEGRAL COLORED CONCRETE, ETC., FOR APPROVAL BY THE LANDSCAPE ARCHITECT AND OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO FINAL CONSTRUCTION.
- UNLESS NOTED OTHERWISE ON CONSTRUCTION DOCUMENTS OR NOTED IN DETAILS, SIDEWALKS SHALL BE 5'-0" WIDE, 4" THICK, 3,000 PSI CONCRETE ON COMPACTED BASE WITH CONSTRUCTION JOINTS AT 3'-0" ON CENTER AND EXPANSION JOINTS AT 20'-0" ON CENTER. SIDEWALKS SHALL HAVE A MEDIUM BROOM, NON-SKID FINISH WITH 1/2" RADIUS TOOLED EDGES.
- RADIUS AT SIDEWALK INTERSECTIONS SHALL BE 5'-0" (TYPICAL), UNLESS NOTED OTHERWISE.
- THE CONTRACTOR SHALL LAYOUT AND VERIFY ALL HARDSCAPE ELEMENTS PRIOR TO CONSTRUCTION FOR REVIEW BY THE LANDSCAPE ARCHITECT OR OWNER'S AUTHORIZED REPRESENTATIVE. SHOULD DISCREPANCIES EXIST, CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT OR OWNER'S AUTHORIZED REPRESENTATIVE BEFORE PROCEEDING FURTHER.

SHEET INDEX:

COVER SHEET	L.0.0
LAYOUT PLAN	L.2.1
PLANTING PLAN	L.3.1
IRRIGATION PLAN	L.4.1
LIGHTING PLAN	L.5.1
HARDSCAPE DETAILS	L.6.1-6.2
PLANTING DETAILS	L.7.1

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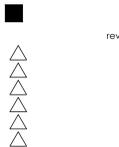
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drawing: Cover

L.O.O
of





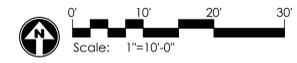
- KEY NOTES**
- 1.10 COLORED CONCRETE, VEHICULAR, ACID WASH FINISH, COLOR TBD, SAW CUT JOINTS AND PATTERNS, PER PLAN.
 - 1.11 COLORED CONCRETE, PEDESTRIAN, ACID WASH FINISH, COLOR TBD, SAW CUT JOINTS AND PATTERNS, PER PLAN.
 - 1.12 PATIO PAVING, TBD.
 - 1.30 3/16" THICK STEEL ANGLE LANDSCAPE HEADER.
 - 1.31 1/4" THICK RAISED STEEL HEADER, HEIGHT PER PLAN.
 - 1.61 STEPS, TO MATCH KEYNOTE 1.11.
 - 1.62 STEPS, PER ARCHITECT.
 - 2.10 8" WIDE MASONRY WALL, STUCCO AND PAINT FINISH TO MATCH ARCHITECTURE, FLAT STUCCO CAP, SLOPE TO DRAIN.
 - 2.11 16" WIDE MASONRY WALL, CLAD IN STONE TO MATCH ARCHITECTURE.
 - 2.12 8" WIDE MASONRY WALL, CLAD IN STONE TO MATCH ARCHITECTURE.
 - 2.13 MAILBOX, TO MEET CITY STANDARDS.
 - 2.50 DECORATIVE STEEL PANEL, ATTACHED TO ADJACENT WALLS.
 - 2.51 STEEL PANEL GATE.
 - 2.52 STEEL VEHICULAR GATE.
 - 2.53 STICKS IN THE DESERT' REBAR FENCE, #4 REBAR @ 4' O.C., MAINTAIN 5'-0" HIGH MINIMUM WITH GRADE CHANGE.
 - 2.54 RAILING ON TOP OF WALL.
 - 3.30 STEEL FIRE PIT.
 - 4.10 PLAY POOL, PER CONTRACTOR.
 - 4.11 POOL SHELF, MAXIMUM 9" OF WATER DEPTH.
 - 4.12 18" HIGH RAISED NEGATIVE EDGE SPA, PER CONTRACTOR.
 - 4.13 WATER FEATURE POOL AT ENTRY.
 - 5.10 SYNTHETIC TURF PUTTING GREEN, ARTIFICIAL LAWNS CO. TURF, CONTRACTOR TO PROVIDE SAMPLE ON SITE FOR OWNER APPROVAL PRIOR TO PURCHASE OR INSTALL.
 - 5.11 SURFACE SELECT BOULDERS TO BE FIELD LOCATED BY LANDSCAPE ARCHITECT.
 - 5.12 DECORATIVE COBBLE MIX, COORDINATE WITH LANDSCAPE ARCHITECT. SPREAD 3" MATERIAL THINLY, THEN 18" MINUS MATERIAL WILL BE STREWN ABOUT TO CREATE 'ROCKY/ ROUGH' TERRAIN.
 - 5.13 LANDSCAPE PLANTER AREA.

- NOTES:**
1. WALLS: IF RETAINING DAMP PROOF AND GROUT ALL CELLS BELOW GRADE. SEE PLAN FOR HEIGHT.
 2. ALL GATES AND FENCING TO MEET POOL BARRIER STANDARDS.
 3. POOL CONTRACTOR TO PROVIDE SHOP DRAWINGS TO LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO CONSTRUCTION.
 4. CONCRETE COLOR TO BE SELECTED BY OWNER. CONTRACTOR TO PROVIDE 2'X2' SAMPLE OF PROPOSED CONCRETE COLOR AND FINISH FOR APPROVAL BY OWNER PRIOR TO INSTALLATION.
 5. ALL STEEL TO BE ELECTROSTATIC PAINTED TO MATCH ARCHITECTURAL STEEL. GRIND ALL WELDS SMOOTH.
 6. ALL SPOT ELEVATIONS AND CALLOUTS ARE FOR DESIGN INTENT PURPOSES ONLY. REFER TO CIVIL PLAN FOR ALL GRADING AND DRAINAGE INFORMATION.

- BOULDER NOTES:**
1. BOULDER SYMBOLS ARE SHOWN FOR REFERENCE ONLY. SIZE THE BOULDERS BASED ON TONNAGE ONLY, BUT INCLUDE A VARIETY OF SHAPES AND SIZES.
 2. SURFACE SELECT BOULDERS TO BE SELECTED/TAGGED BY LANDSCAPE ARCHITECT AND FIELD LOCATED.
 3. LANDSCAPE CONTRACTOR TO SET BOULDERS WITH CRANE USING STEEL CABLES, PROVIDE NECESSARY CRANE FOR WEIGHT.
 4. SIZES TO RANGE FROM 1-4 TONS, MINIMUM 1 TON SIZE.

INERTS

Sym.	Description
	IN ALL PLANTING AREAS INSIDE WALLS: 3' MINUS DC RANCH COBBLE.
	IN ALL NATIVE/NATURAL AREAS: DESERT COBBLE: THE TOP 6" OF DESERT SOIL IS TO BE SALVAGED AND STOCKPILED FOR RE-VEGETATION AREAS. CONTRACTOR TO MIX AND SPREAD COBBLE MIX (THINLY) ON SITE TO MATCH THE CHARACTER OF THE NATIVE SURROUNDING AREA. SUPPLEMENTAL COBBLE, IF NEEDED, TO BE D.C. RANCH COBBLE, 3' MINUS.
	DECORATIVE COBBLE MIX, COORDINATE WITH LANDSCAPE ARCHITECT. SPREAD 3" MATERIAL THINLY, THEN 18" MINUS MATERIAL WILL BE STREWN ABOUT TO CREATE 'ROCKY/ ROUGH' TERRAIN.



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drawing: Layout Plan
of L2.1

SHAPING AND FINE GRADING NOTES:

1. LANDSCAPE CONTRACTOR SHALL PROVIDE A GRADING TRACTOR TO SHAPE AND FINE GRADE AT DRIVE ENTRY LANDSCAPE.
2. LANDSCAPE ARCHITECT TO FIELD DIRECT FINE GRADING WITH LANDSCAPE CONTRACTOR.
3. LANDSCAPE ARCHITECT TO APPROVE FINAL GRADING. PLANTING SHALL NOT OCCUR UNTIL FINAL GRADING IS APPROVED.

BOULDER NOTES:

1. BOULDER SYMBOLS ARE SHOWN FOR REFERENCE ONLY. SIZE THE BOULDERS BASED ON TONNAGE ONLY, BUT INCLUDE A VARIETY OF SHAPES AND SIZES.
2. SURFACE SELECT BOULDERS TO BE SELECTED/TAGGED BY LANDSCAPE ARCHITECT AND FIELD LOCATED.
3. LANDSCAPE CONTRACTOR TO SET BOULDERS WITH CRANE USING STEEL CABLES. PROVIDE NECESSARY CRANE FOR WEIGHT. SIZES TO RANGE FROM 1-4 TONS. MINIMUM 1 TON SIZE.

REVEGETATION SEED MIX

Plant Name	Pounds/Acre
<i>Ericameria laricina</i> Turpentine Bush	5
<i>Ambrosia deltoidea</i> Bursage	1
<i>Eriogonum fasciculatum</i> Desert Buckwheat	1
<i>Prosopis velutina</i> Native Mesquite	1
<i>Calliandra eriophylla</i> Pink Fairy Duster	.5
<i>Cercidium floridum</i> Blue Palo Verde	1
<i>Cercideum microphyllum</i> Foothill Palo Verde	1
<i>Baileya multiradiata</i> Desert Marigold	.5
<i>Simmondsia chinensis</i> Jojoba	1

PLANT MATERIALS LEGEND

Sym.	Plant Name	Size	Qty	Remarks
Trees				
	<i>Platanus wrightii</i> Arizona Sycamore	10' tall	3	single trunk
	<i>Populus fremontii</i> Fremont Cottonwood	36" box	4	single trunk
	<i>Prosopis chilensis</i> Chilean Mesquite	36" box	15	single trunk
	<i>Quercus virginiana</i> Southern Live Oak	48" box	3	single trunk
Shrubs				
	<i>Ambrosia deltoidea</i> Triangle Leaf Bursage	1 gal.	121	
	<i>Calliandra eriophylla</i> Pink Fairy Duster	5 gal.	11	
	<i>Ephedra viridis</i> Mormon Tea	5 gal.	2	
	<i>Eriogonum fasciculatum</i> Flat Top Buckwheat	5 gal.	8	
	<i>Justicia californica</i> Chuparosa	5 gal.	31	
	<i>Justicia californica 'Yellow'</i> Yellow Chuparosa	5 gal.	10	
	<i>Larrea tridentata</i> Creosote	5 gal.	13	
	<i>Olea europaea 'Montra'</i> Little Olive Dwarf Olive	5 gal.	36	
	<i>Pentstemon parryi</i> Perry's Pentstemon	1 gal.	33	
	<i>Rhus ovata</i> Sugarbush	5 gal.	6	
	<i>Rosa 'Korbin' Iceberg</i> Floribunda Rose	5 gal.	12	
	<i>Rosmarinus officinalis 'Tuscan Blue'</i> Upright Rosemary	5 gal.	20	
	<i>Simmondsia chinensis</i> Jojoba	5 gal.	34	
	<i>Sphaeralcea ambigua</i> Globe Mallow	1 gal.	5	
Groundcovers				
	<i>Baileya multiradiata</i> Desert Marigold	1 gal.	8	
	<i>Chrysantha mexicana</i> Damianita	1 gal.	36	
	<i>Glandularia goodingii</i> Gooding Verbena	1 gal.	4	
	<i>Glandularia rigida</i> Sandpaper Verbena	1 gal.	64	
	<i>Hymenocallis acutis</i> Angelita Daisy	1 gal.	12	
	<i>Melampodium leucanthum</i> Blackfoot Daisy	1 gal.	20	
Accents Cactus				
	<i>Agave deserti</i> Desert Agave	5 gal.	9	
	<i>Asclepias subulata</i> Desert Milkweed	5 gal.	42	
	<i>Carnegiea gigantea</i> Saguaro	10'4" 30'6" 10'18" 20'5" 30'6" 10'20"	11	
	<i>Cylindropuntia fulgida</i> Chain Fruit Cholla	5 gal.	18	
	<i>Cylindropuntia versicolor</i> Staghorn Cholla	5 gal.	2	
	<i>Echinocereus engelmannii</i> Hedgehog Cactus	5 gal.	16	
	<i>Euphorbia ingens 'Chocolate Drop'</i> Chocolate Drop Cactus	15 gal.	6	
	<i>Ferocactus wislizenii</i> Fishhook Barrel Cactus	bare root	18	
	<i>Fouquieria splendens</i> Ocotillo	bare root	9	
	<i>Opuntia basilaris</i> Beavertail Prickly Pear	5 gal.	3	
	<i>Opuntia engelmannii</i> Engelmann's Prickly Pear	5 gal.	9	
	<i>Opuntia ficus-indica</i> Indian Fig	15 gal.	13	
	<i>Opuntia violacea santa-rita</i> Purple Prickly Pear	5 gal.	40	
	<i>Stenocereus marginatus</i> Mexican Fence Post	90" 90" 100" 70" 4"	34	
	<i>Yucca baccata</i> Banana Yucca	5 gal.	10	
	<i>Yucca elata</i> Soaptree Yucca	40" 1" 30" 7" 30" 2" 10" 4"	11	
	<i>Yucca rostrata</i> Beaked Yucca	5 gal.	7	

MASS PLANTING

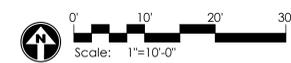
- SYNTHETIC TURF (TURF PER SPEC.) ARTIFICIAL LAWNS CO. 'CORONADO' TURF. CONTRACTOR TO PROVIDE SAMPLE ON SITE FOR OWNER APPROVAL PRIOR TO PURCHASE OR INSTALL.

INERTS

Sym.	Description
	IN ALL PLANTING AREAS INSIDE WALLS: 3" MINUS DC RANCH COBBLE.
	IN ALL NATIVE/NATURAL AREAS: DESERT COBBLE: THE TOP 6" OF DESERT SOIL IS TO BE SALVAGED AND STOCKPILED FOR RE-VEGETATION AREAS. CONTRACTOR TO MIX AND SPREAD COBBLE MIX (THINLY) ON SITE TO MATCH THE CHARACTER OF THE NATIVE SURROUNDING AREA. SUPPLEMENTAL COBBLE, IF NEEDED, TO BE D.C. RANCH COBBLE, 3" MINUS.
	DECORATIVE COBBLE MIX. COORDINATE WITH LANDSCAPE ARCHITECT. SPREAD 3" MATERIAL THINLY, THEN 18" MINUS MATERIAL WILL BE STREWN ABOUT TO CREATE 'ROCKY/ ROUGH' TERRAIN.

NOTES:

1. ALL PLANTS SHALL BE WATERED WITH AUTOMATIC DRIP IRRIGATION SYSTEM.
2. ALL LANDSCAPE AREAS EXCLUDING TURF TO BE COVERED WITH CRUSHED ROCK.
3. LANDSCAPE ARCHITECT TO APPROVE FINAL GRADING. PLANTING SHALL NOT OCCUR UNTIL FINAL GRADING IS APPROVED.
4. LOCATIONS OF PLANTS SHOWN ON DRAWING ARE APPROXIMATE. LANDSCAPE ARCHITECT TO FIELD APPROVE ALL FINAL LOCATIONS PRIOR TO INSTALLATION. DUE TO SEASONAL AND OR UNFORESEEN CONSTRAINTS SOME PLANT MATERIAL WILL POSSIBLY NOT BE AVAILABLE AT TIME OF INSTALLATION. LANDSCAPE CONTRACTOR TO SUBMIT LIST OF ANY NON-AVAILABLE MATERIAL TO LANDSCAPE ARCHITECT FOR REPLACEMENTS TO BE SELECTED.
5. PLANT MATERIAL SHALL BE ADJUSTED IN FIELD TO AVOID TREE ROOT BALLS.
6. ALL PLANT MATERIAL IS TO BE RETAIL QUALITY.
7. LANDSCAPE CONTRACTOR TO PROVIDE PICTURES OR SAMPLES OF ALL PLANT MATERIAL PRIOR TO INSTALLATION FOR APPROVAL.
8. ALL PLANT MATERIAL SOURCED FROM OUTSIDE OF ARIZONA TO BE PROPERLY ACCLIMATED TO ARIZONA CLIMATE DEPENDING ON TIME OF YEAR OF INSTALLATION. METHODS: SUN-SCREEN CLOTH/FABRIC TO BE INSTALLED ABOVE PLANT MATERIAL.



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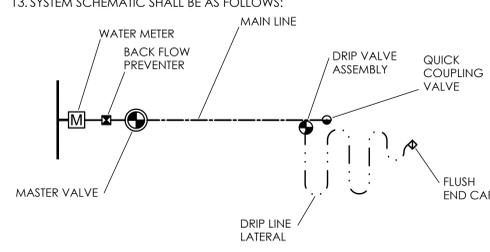
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 drawing: Planting Plan
L3.1
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IRRIGATION GENERAL NOTES

- THE SYSTEM DESIGN ASSUMES A MINIMUM DYNAMIC PRESSURE FOR THE IRRIGATION SYSTEM OF 65 PSI. AT A MINIMUM DISCHARGE OF 50 GPM AT MAINLINE POINT-OF-CONNECTION. VERIFY PRESSURE AND FLOW ON SITE AND NOTIFY LANDSCAPE ARCHITECT OF ANY DIFFERENCES PRIOR TO INSTALLATION OR ORDERING OF ANY MATERIALS OR STARTING CONSTRUCTION. IF CONTRACTOR FAILS TO NOTIFY LANDSCAPE ARCHITECT, HE ASSUMES FULL RESPONSIBILITY FOR ANY NECESSARY SYSTEM ALTERATIONS AND ADDITIONAL COST THAT RESULT. FIELD MODIFICATIONS MAY OCCUR IN ORDER TO FULFILL THE DESIGN INTENT OF THE DRAWINGS. CONTRACTOR SHALL CONSULT WITH IRRIGATION DESIGNER AND PREPARE AS-BUILT PLANS SHOULD FIELD MODIFICATIONS BE NECESSARY.
- READ THOROUGHLY AND BECOME FAMILIAR WITH THE SPECIFICATIONS AND INSTALLATION DETAILS FOR THIS AND RELATED WORK PRIOR TO CONSTRUCTION.
- COORDINATE UTILITY LOCATES ("CALL BEFORE YOU DIG") OF UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.
- DO NOT PROCEED WITH THE INSTALLATION OF THE IRRIGATION SYSTEM WHEN IT IS OBVIOUS IN THE FIELD THAT OBSTRUCTIONS OR GRADE DIFFERENCES EXIST THAT MIGHT NOT HAVE BEEN CONSIDERED IN THE ENGINEERING. IF DISCREPANCIES IN CONSTRUCTION DETAILS, LEGEND, NOTES, OR SPECIFICATIONS ARE DISCOVERED, BRING ALL SUCH OBSTRUCTIONS OR DISCREPANCIES TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE.
- THESE IRRIGATION CONSTRUCTION DOCUMENTS, INCLUDING ALL PLANS, NOTES, DETAILS AND SPECIFICATIONS ARE INTENDED TO FACILITATE THE INSTALLATION CONTRACTOR BY PROVIDING GENERAL GUIDELINES FOR DESIGN INTENT. THEREFORE, ALL IRRIGATION ELEMENTS GRAPHICALLY REPRESENTED IN THESE CONSTRUCTION DOCUMENTS ARE SCHEMATIC.
 - ALTHOUGH IRRIGATION COMPONENTS MAY BE SHOWN OUTSIDE PLANTING AREAS FOR CLARITY, INSTALL IRRIGATION PIPE AND WIRING IN LANDSCAPED AREAS WHENEVER POSSIBLE. PROVIDE 18" DEEP, ROCK FREE COVER OVER MAINLINE AND WIRE, AND COVER 12" DEEP OVER LATERALS. 6" OVER POLY PIPE AND 1/4" PIPE, BASED ON FINISHED GRADE.
 - TREE AND SHRUB LOCATIONS AS SHOWN ON LANDSCAPE PLANS TAKE PRECEDENCE OVER IRRIGATION EQUIPMENT LOCATIONS. AVOID CONFLICTS BETWEEN THE IRRIGATION SYSTEM, PLANTING MATERIALS, AND ARCHITECTURAL FEATURES.
 - USE ONLY STANDARD TEES AND ELBOW FITTINGS. USE OF CROSS TYPE FITTINGS IS NOT ALLOWED.
- PROVIDE THE FOLLOWING COMPONENTS TO THE OWNER PRIOR TO THE COMPLETION OF THE PROJECT:
 - TWO (2) OPERATING KEYS FOR EACH TYPE OF MANUALLY OPERATED VALVES.
 - TWO (2) OF EACH SERVICING WRENCH OR TOOL NEEDED FOR COMPLETE ACCESS, ADJUSTMENT, AND REPAIR OF ALL ROTARY SPRINKLERS.
- SELECT NOZZLES FOR SPRAY AND ROTARY SPRINKLERS WITH ARCS WHICH PROVIDE COMPLETE AND ADEQUATE COVERAGE WITH MINIMUM OVERSPRAY FOR THE SITE CONDITIONS. CAREFULLY ADJUST THE RADIUS OF THROW AND ARC OF COVERAGE OF EACH ROTARY SPRINKLER TO PROVIDE THE BEST PERFORMANCE.
- THE IRRIGATION CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF IRRIGATION SLEEVING. SLEEVES ARE REQUIRED FOR BOTH PIPING AND ELECTRICAL WIRING AT EACH HARDSCAPE CROSSING. ALL PIPE AND WIRING UNDER PAVED SURFACES SHALL BE IN CLASS 200 MINIMUM PVC SLEEVES. WHETHER OR NOT SHOWN, PIPING IN SLEEVES UNDER ROADWAYS SHALL BE A MINIMUM DEPTH OF 24". PIPING IN SLEEVES UNDER SIDEWALKS SHALL BE A MINIMUM DEPTH OF 18". EXTEND SLEEVES 12" BEYOND EDGE OF PAVEMENT.
- COORDINATE INSTALLATION OF SLEEVING WITH OTHER TRADES. ANY PIPE OR WIRE WHICH PASSES BENEATH EXISTING HARDSCAPE WHERE SLEEVING WAS NOT INSTALLED WILL REQUIRE HORIZONTAL BORING BY THE IRRIGATION CONTRACTOR.
- INSTALL ALL ELECTRICAL POWER TO THE IRRIGATION CONTROL SYSTEM IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE AND ALL APPLICABLE LOCAL ELECTRIC UTILITY CODES. ALL 24-VOLT WIRING SHALL BE #14 UFUL DIRECT-BURIAL, SOLID COPPER.
- THE FOLLOWING SHOULD BE NOTED REGARDING PIPE SIZING: IF A SECTION OF UNSIZED PIPE IS LOCATED BETWEEN THE IDENTICALLY SIZED SECTIONS, THE UNSIZED PIPE IS THE SAME NOMINAL SIZE AS THE TWO SIZED SECTIONS. THE UNSIZED PIPE SHOULD NOT BE CONFUSED WITH THE DEFAULT PIPE SIZE NOTED IN THE LEGEND.
- INSTALL TWO (2) #14 AWG CONTROL WIRES FROM CONTROLLER LOCATION TO EACH DEAD-END OF MAINLINE FOR USE AS SPARES IN CASE OF CONTROL WIRE FAILURE. COIL 3 FEET OF WIRE IN VALVE BOX.
- SYSTEM SCHEMATIC SHALL BE AS FOLLOWS:



EMITTER SCHEDULE

INSTALL PRESSURE COMPENSATING EMITTERS AS FOLLOWS:

Plant type	Plant size	Emitters per Plant	GPH Outlet	# of Outlets	Total GPH/Plant
TREES	15 gal.	1 Multi-Outlet	2 GPH	3	6 GPH
	24" Box	1 Multi-Outlet	2 GPH	4	8 GPH
	36" Box	1 Multi-Outlet	2 GPH	5	10 GPH
	48" Box	1 Multi-Outlet	2 GPH	6	12 GPH

INSTALL PRESSURE COMPENSATING EMITTERS AS FOLLOWS:

SHRUBS	Plant size	Emitters per Plant	GPH Outlet	# of Outlets	Total GPH/Plant
SHRUBS	1 gallon	2 Single	1/2 GPH	2	1 GPH
	5 gallon	2 Single	2 GPH	2	4 GPH

NOTES:
 ALL SHRUBS SPACED 18 INCHES OR CLOSER SHALL RECEIVE ONLY ONE DRIP EMITTER. SHRUBS SPACED GREATER THAN 18 INCHES TO RECEIVE EMITTERS PER THE ABOVE SCHEDULE.

ALL EMISSION POINTS TO BE LOCATED ON THE UPHILL SIDE OF PLANT MATERIAL. ONE EMISSION POINT TO BE LOCATED AT THE PLANT BALL, WITH THE ADDITIONAL POINTS WITHIN PLANT PIT PERIMETER.

ALL PIPING SHALL BE THOROUGHLY FLUSHED PRIOR TO EMITTER INSTALLATION. CONTRACTOR IS RESPONSIBLE FOR ANY NECESSARY FLUSHING OF EMITTERS DUE TO CLOGGING FOR THE DURATION OF THE MAINTENANCE PERIOD. ANY PLANT MATERIAL THAT DIES DUE TO EMITTER CLOGGING SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST.

IRRIGATION LEGEND

SYMBOL	DESCRIPTION	NOTES
	WATER METER. ALSO PROVIDE REDUCED PRESSURE BACKFLOW PREVENTOR TO MATCH METER	
	CONTROLLER	WALL MOUNTED, PAINT TO MATCH WALL. SPEC: HUNTER HPC-PP
	CONTROL VALVE QTY. TBD	FLUSH MOUNTED, BOX COLOR TO MATCH GROUND PLANE
	FERTIGATION SYSTEM	EZ FLOW MAIN-LINE 2.5 GALLON
	MAINLINE	CLASS 200 PVC

THE INSTALLATION CONTRACTOR SHALL PROGRAM THE CONTROLLER, IN ORDER TO MANAGE THE DURATION OF THE IRRIGATION CYCLE TO AVOID RUNOFF CONDITIONS

SLEEVING SCHEDULE

PIPE OR WIRE BUNDLE	REQUIRED SLEEVE
3/4", 1", 1-1/4" PIPE	1-2" PVC SLEEVE PER PIPE
1-1/2", 2" PIPE	1-4" PVC SLEEVE PER PIPE
1-25 CONTROL WIRES	1-2" PVC SLEEVE
26-55 CONTROL WIRES	2-2" PVC SLEEVE

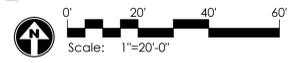
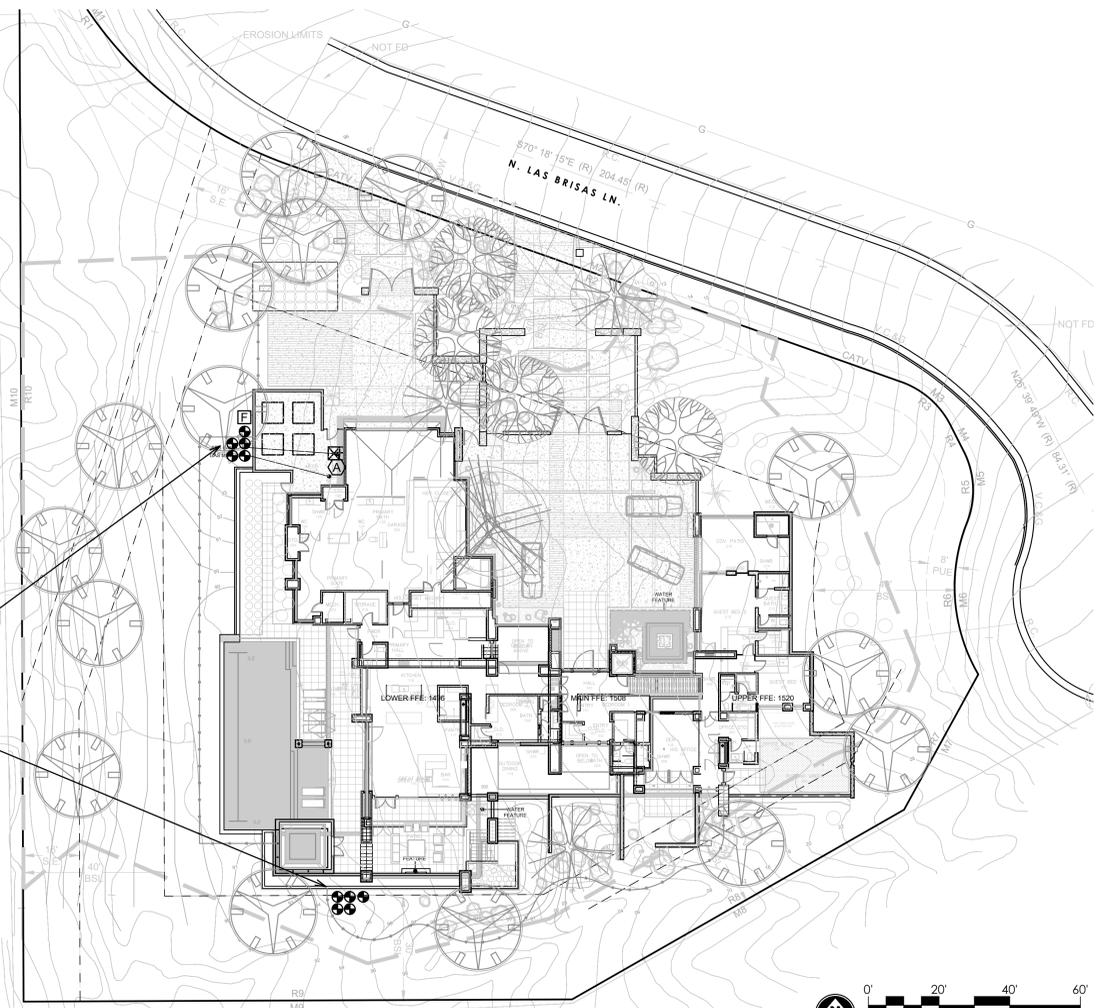
APPROXIMATE IRRIGATION VALVE BOX LOCATIONS. VALVE BOX LOCATION TO BE FIELD LOCATED AND APPROVED BY LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.

VALVE ALLOCATION: (TYPICAL)

- TREES VALVE
- SHRUBS VALVE
- REVEGETATION VALVE
- STEEL PLANTER VALVE
- INTERIOR AUTO COURT VALVE

NOTE:

- IRRIGATION MAINLINES TO BE ALL HARD PIPE PVC, SCH 40.
- DIRECT PUNCTURE INTO LATERALS. NO FLAG EMITTERS.
- USE INLINE EMITTERS, NO FLAG EMITTERS.
- CONTRACTOR TO COORDINATE WITH LANDSCAPE ARCHITECT FOR PROPOSED IRRIGATION SYSTEM FOR APPROVAL PRIOR TO CONSTRUCTION.
- ALL LATERAL LINES TO BE COMMERCIAL GRADE THICK WALL SWING RISER PIPE WITH COLOR CODING ON PIPE. *NO SPRAY PAINT*
- VALVES SHOWN ON PLAN TO SERVE AS A GUIDE. CONTRACTOR TO ADD VALVES AS NECESSARY TO ZONE THE YARD AND MEET IRRIGATION NEEDS OF ALL PLANT MATERIAL.**
- DUE TO ROCKY NATURE OF HILLSIDE SOIL, SHADE PIPE BURIAL WITH SAND OR SIMILAR, TO PROTECT PIPING.



revisions:
 project #: DWA073
 scale: 1"=20'-0"
 issued for: Hillside Submittal
 drawn by: TEAM
 date: 08/07/2024
 drawing: Irrigation Plan

LIGHTING FIXTURE CUT SHEETS

ACCENT 12V
5011

WAC
LANDSCAPE LIGHTING

Fixture Type:
Catalog Number:
Project:
Location:



PRODUCT DESCRIPTION:
Landscape accent lighting. One fixture replaces all other landscape lighting.

FEATURES:

- Adjustable and lockable beam angle
- IP66 rated, Protected against high-pressure water jets
- Indirectly illuminated through
- Solid aluminum base or companion outdoor materials
- Decorative and weather-resistant finishes
- Mounting hardware included and direct wiring guide (these items not included)
- Maximum current furnished (amp) 1.0/amp (1.0/amp)
- UL 180 Listed
- MEC Approved with UL6188 listing

ORDERING NUMBER

Color Temp.	Finish	Material
27K	BL	Black Aluminum
3000K	BL	Black Aluminum
5000K	BL	Black Aluminum
5000K	BR	Brushed Aluminum

5011:
Example: 5011-27BK

QUAD LED PATH LIGHT
6091

WAC
LANDSCAPE LIGHTING

Fixture Type:
Catalog Number:
Project:
Location:



PRODUCT DESCRIPTION:
Sleek linear design blends seamlessly into pathways while providing soft, even illumination.

FEATURES:

- IP66 rated, Protected against powerful water jets
- Fixture rated against light flicker
- Solid aluminum construction for added durability
- Recommended spacing for installation (to be advised by WAC Contractor 1 to 10)
- Mounting holes, floor base, etc. and direct wiring guide (these items not included)
- Maximum current furnished (amp) 1.0/amp (1.0/amp)
- UL 180 Listed

ORDERING NUMBER

Color Temp.	Finish
27K	Black Aluminum
3000K	Black Aluminum
5000K	Black Aluminum
5000K	Brushed Aluminum

6091:
Example: 6091-27BK

RECTANGLE STEP LIGHTS 12V
4011

WAC
LANDSCAPE LIGHTING

Fixture Type:
Catalog Number:
Project:
Location:



PRODUCT DESCRIPTION:
Recessed landscape lighting designed for safety and style on walkways, patios, decks, safety areas, walkways and building exteriors.

FEATURES:

- Solid aluminum, corrosion resistant aluminum alloy or cast stainless steel construction
- IP66 rated, Protected against high-pressure water jets
- Companion step-including 12V system
- Weather-resistant
- Maximum current furnished (amp) 1.0/amp (1.0/amp)
- UL 180 Listed

ORDERING NUMBER

Color Temp.	Finish	Material
27K	BL	Black Aluminum
3000K	BL	Black Aluminum
5000K	BL	Black Aluminum
5000K	BR	Brushed Aluminum

4011:
Example: 4011-27BK

HILLSIDE OUTDOOR LIGHTING REQUIREMENTS:

AREA OF LOT: 55,539 S.F.
ALLOWABLE DISTURBED AREA: (16.48%) 9,153 S.F.

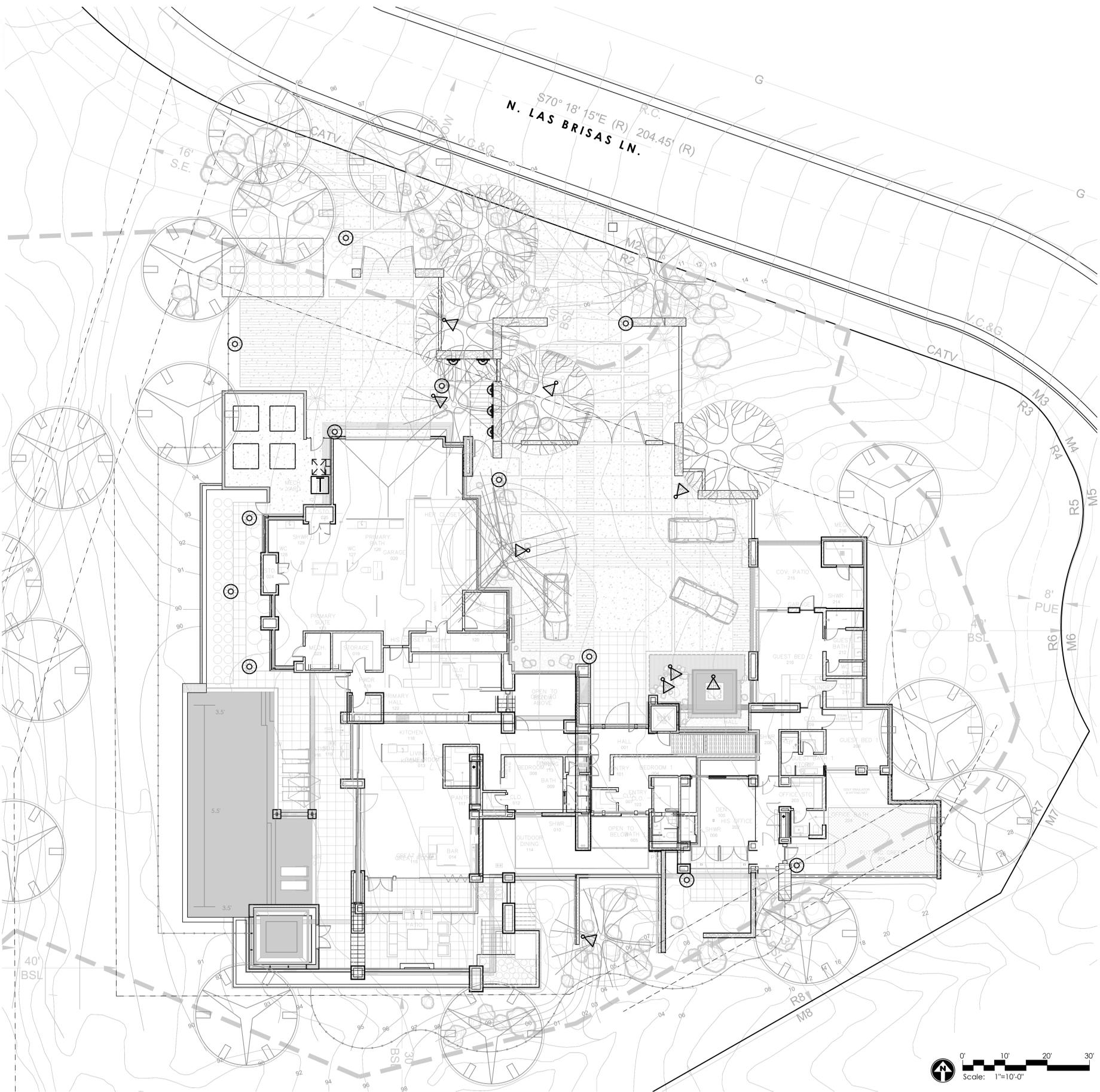
LANDSCAPE UP-LIGHTING: LIMITED TO ONE (1) FIXTURE PER 1000 S.F. OF ALLOWABLE DISTURBED AREA.
UP-LIGHTS PERMITTED: 9
UP-LIGHTS PROVIDED: 9

NOTE: ALL OTHER LIGHTING (LUMINAIRE) IS CONSIDERED 'SAFETY LIGHTING' USED TO ILLUMINATE VEHICULAR AND PEDESTRIAN CIRCULATION AND DOES NOT EMIT LIGHT RAYS ABOVE A HORIZONTAL PLANE.

LIGHTING FIXTURE SCHEDULE

SYMBOL	QTY	MANUFACTURER	MODEL #	COLOR	DESCRIPTION	LAMP
▽	9	WAC LIGHTING	5011-27BK	BLACK	LOW VOLTAGE UPLIGHT	MAX 150
⊕	12	WAC LIGHTING	6091-27BK	BLACK	LOW VOLTAGE PATHLIGHT	100
⌒	5	WAC LIGHTING	4011-27BK	BLACK	LOW VOLTAGE WALL LIGHT	MAX 38
⌈	TBD	-	-	-	LOW VOLTAGE TRANSFORMER (CONTRACTOR TO DETERMINE QUANTITY REQUIRED)	-

- LIGHTING NOTES**
- CONTRACTOR SHALL VERIFY ALL SPECIFICATIONS, COLORS, AND FINISHES WITH OWNER PRIOR TO ORDERING OR INSTALLING.
 - LANDSCAPE ARCHITECT TO FIELD APPROVE ALL LIGHTS.
 - ALL LIGHTS TO BE FIELD LOCATED BY LANDSCAPE ARCHITECT.
 - ALL LIGHTS TO BE 2,700K COLOR TEMPERATURE.



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PROFESSIONAL SEAL
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No. 28448
Russell E. Greedy
Greedy Pickett
Landscape Architecture, Inc.
Arizona State Board of Landscape Architecture

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@GREYPICKETT.COM

CHESNEY RESIDENCE
7404 N. Las Brisas Ln.
Paradise Valley, AZ 85253

project #: DWA073
scale: 1"=10'-0"
issued for: Hillside Submittal
drawn by: TEAM
date: 08/07/2024
drawing: Lighting Plan
L5.1
of

Scale: 1"=10'-0"

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Colored concrete

Color: Davis Adobe

Finish:

(Driveway) - 3/8" exposed aggregate

(Walkways) - light acid wash

LRV: 24



Patio Material

Mt Sinai Mequim

LRV: 36.95

Source: Solstice Stone

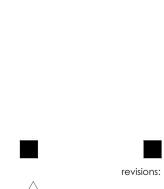
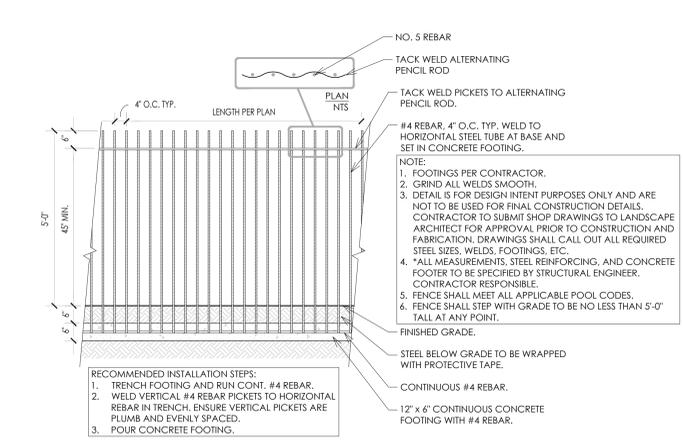
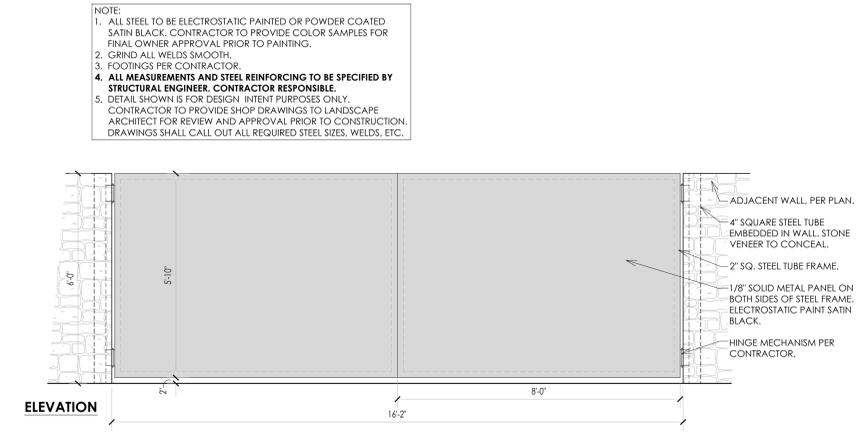
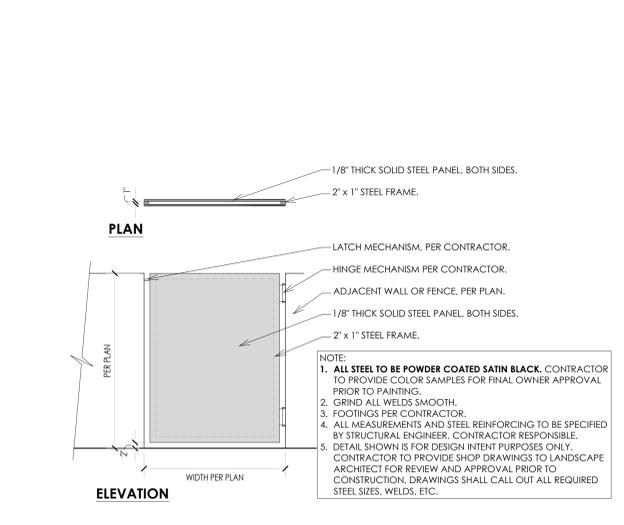
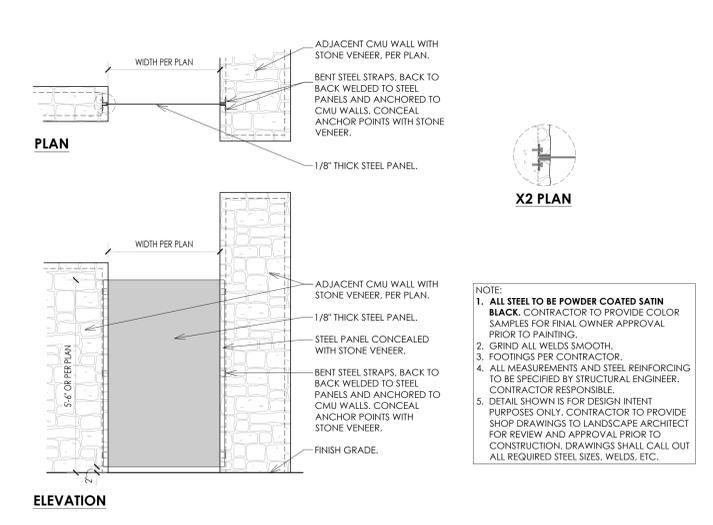
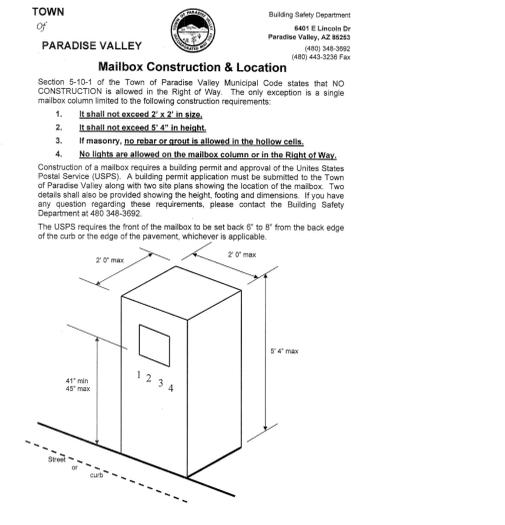
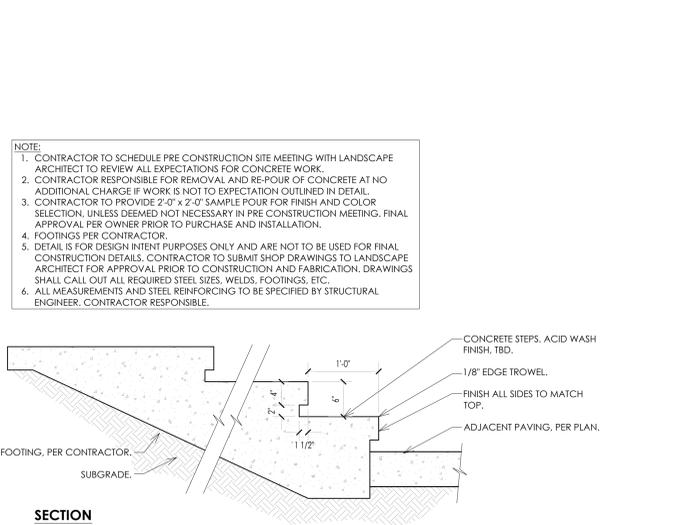
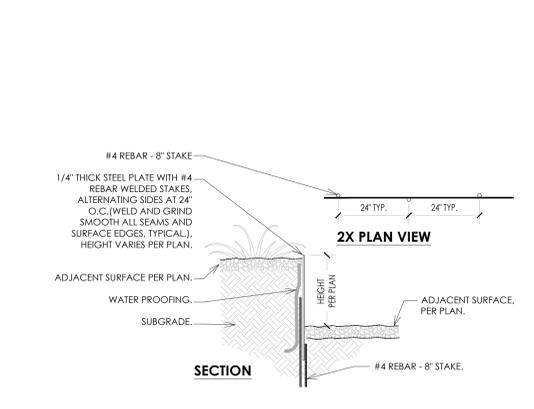
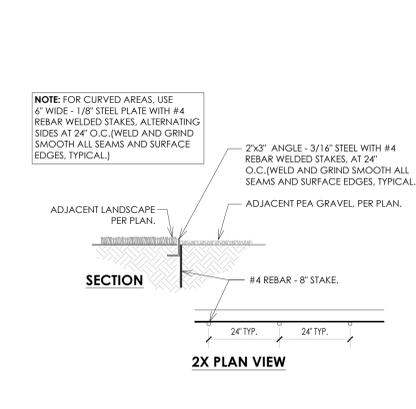
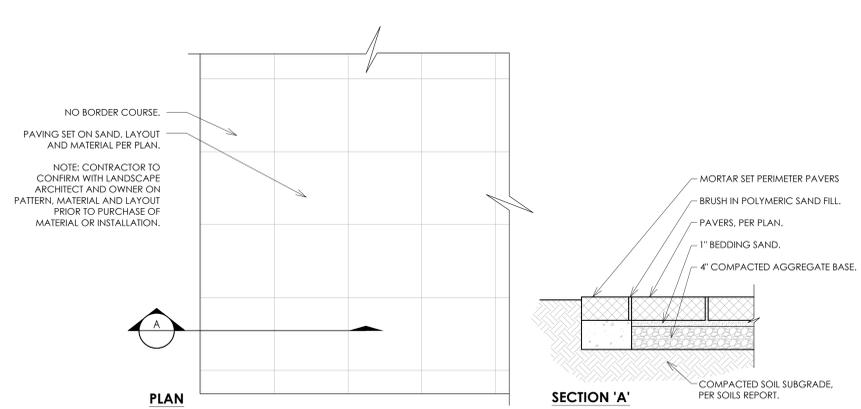
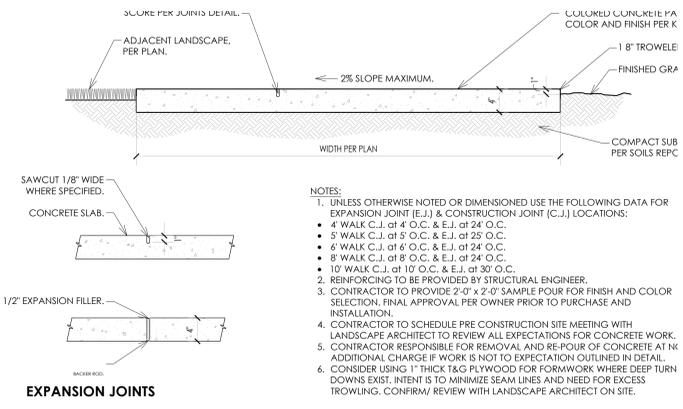


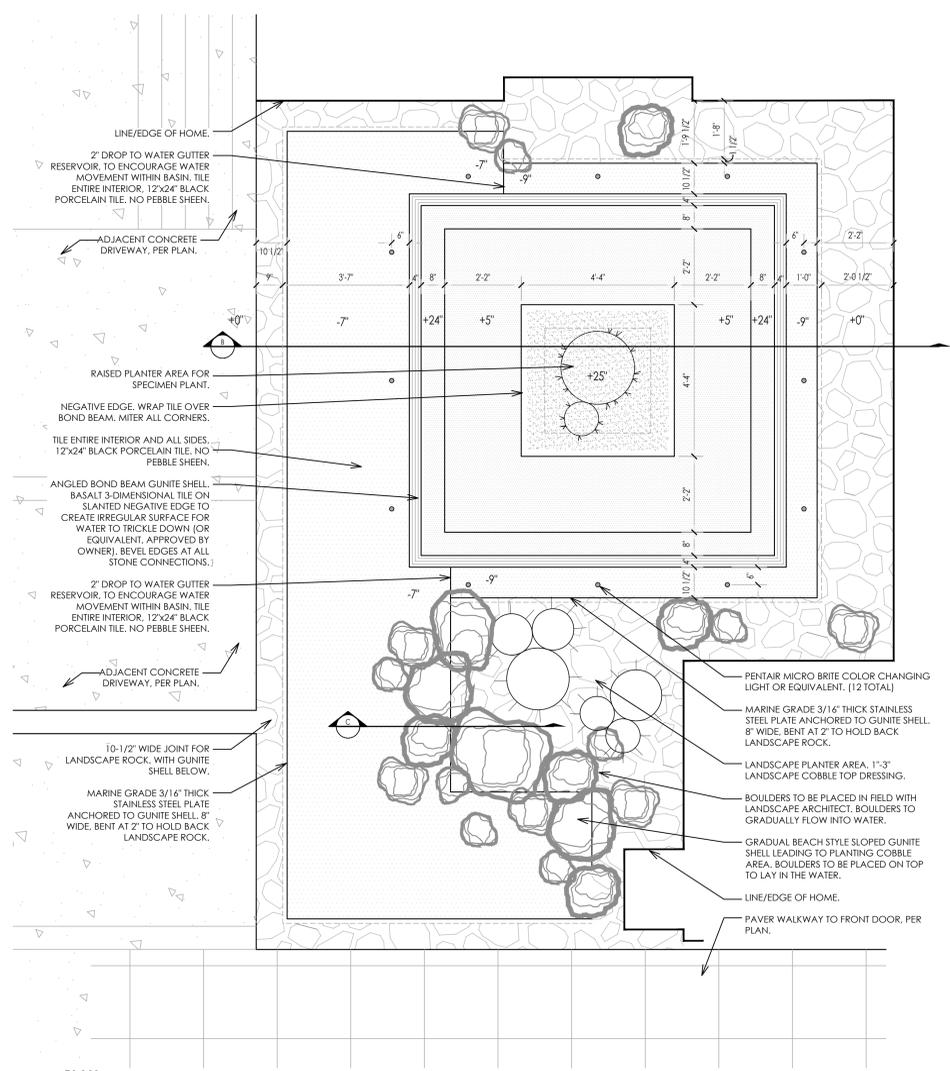
Synthetic Turf

Artificial Lawns Co: Coronado

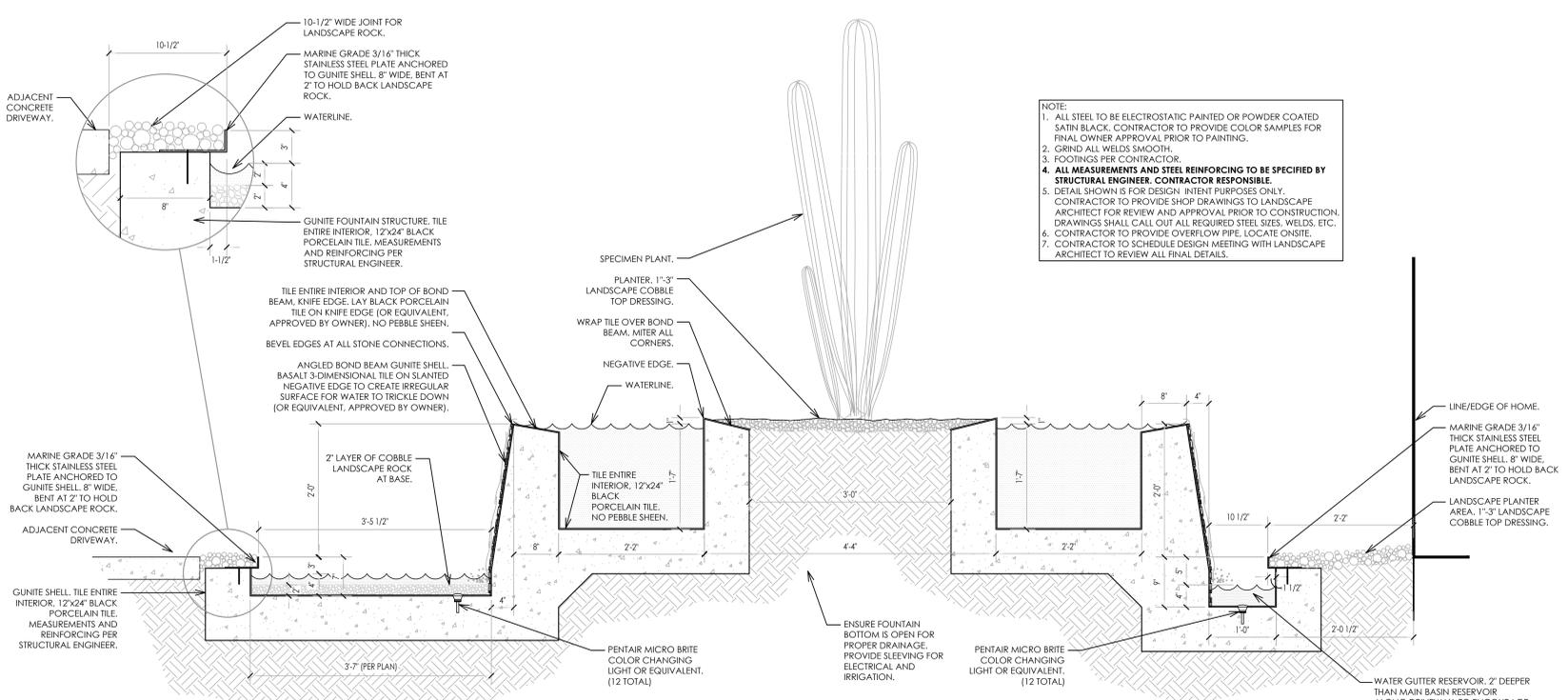
LRV: 32

*note no materials to exceed LRV 38%

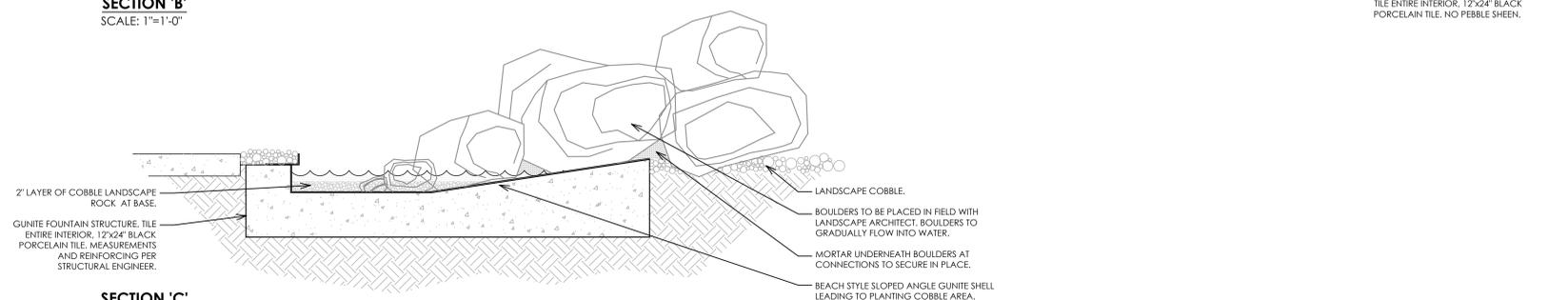




PLAN
 SCALE: 1/2" = 1'-0"

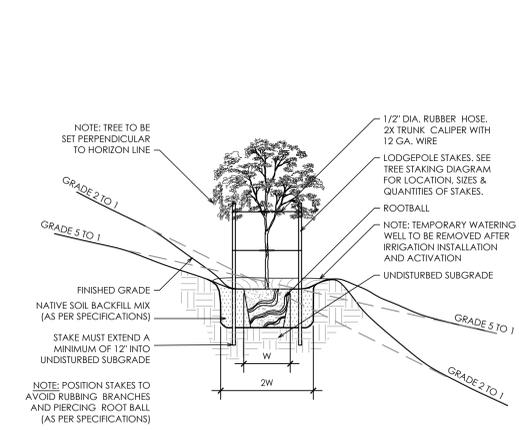


SECTION 'B'
 SCALE: 1" = 1'-0"

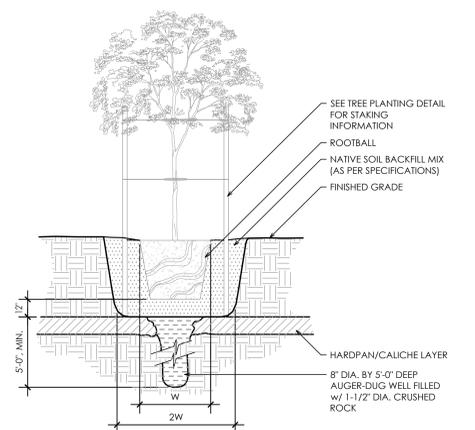


SECTION 'C'
 SCALE: 1" = 1'-0"

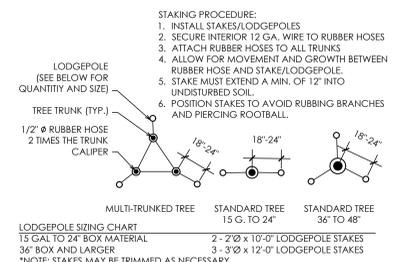
NOTE:
 1. ALL STEEL TO BE ELECTROSTATIC PAINTED OR POWDER COATED SATIN BLACK. CONTRACTOR TO PROVIDE COLOR SAMPLES FOR FINAL OWNER APPROVAL PRIOR TO PAINTING.
 2. GRIND ALL WELDS SMOOTH.
 3. FOOTINGS PER CONTRACTOR.
 4. ALL MEASUREMENTS AND STEEL REINFORCING TO BE SPECIFIED BY STRUCTURAL ENGINEER. CONTRACTOR RESPONSIBLE.
 5. DETAIL SHOWN IS FOR DESIGN INTENT PURPOSES ONLY. CONTRACTOR TO PROVIDE SHOP DRAWINGS TO LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. DRAWINGS SHALL CALL OUT ALL REQUIRED STEEL SIZES, WELDS, ETC.
 6. CONTRACTOR TO PROVIDE OVERFLOW PIPE. LOCATE ON-SITE.
 7. CONTRACTOR TO SCHEDULE DESIGN MEETING WITH LANDSCAPE ARCHITECT TO REVIEW ALL FINAL DETAILS.



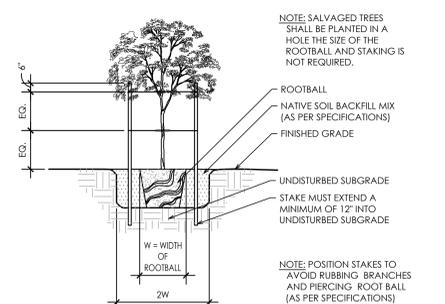
1 Tree Planting on Slope Detail
 Scale: NTS



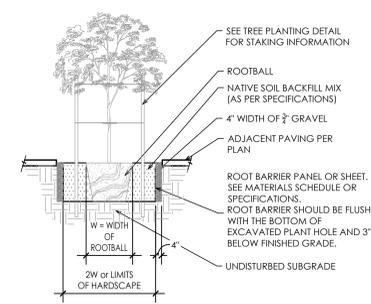
2 Hard Pan Planting
 Scale: NTS



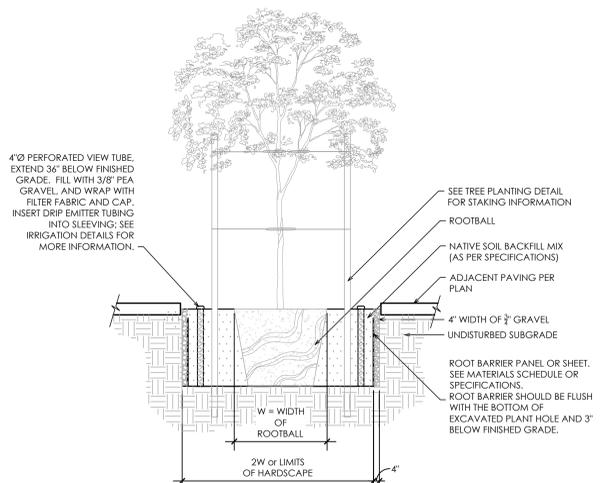
3 Tree Staking Diagram
 Scale: NTS



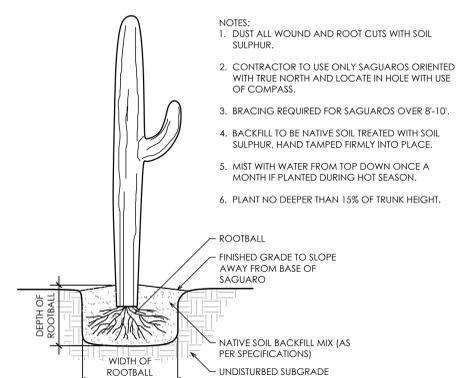
4 Tree Planting Detail
 Scale: NTS



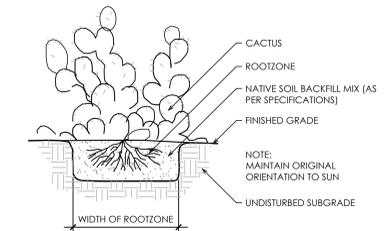
5 Root Barrier Detail
 Scale: NTS



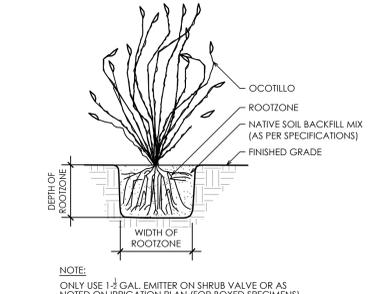
6 Deep Watering Detail
 Scale: NTS



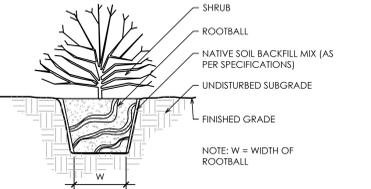
7 Saguaro Planting Detail
 Scale: NTS



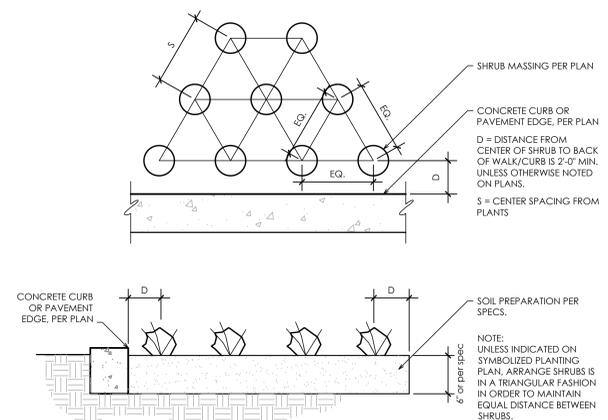
8 Cactus Planting Detail
 Scale: NTS



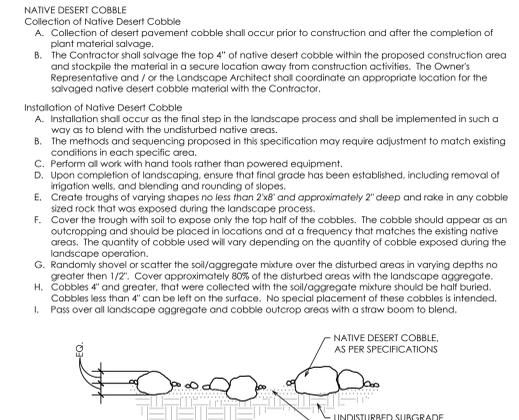
9 Ocotillo Planting Detail
 Scale: NTS



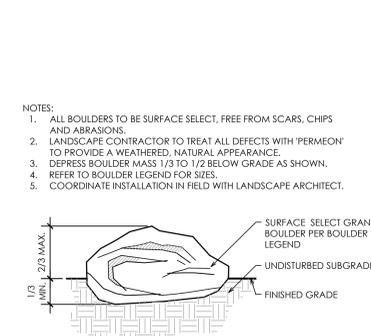
10 Shrub Planting Detail
 Scale: NTS



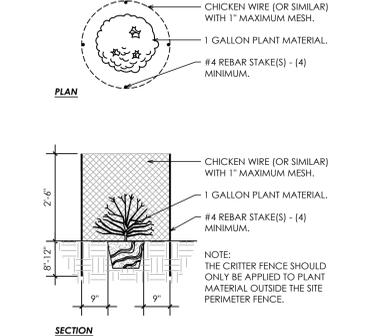
11 Plant Spacing Detail
 Scale: NTS



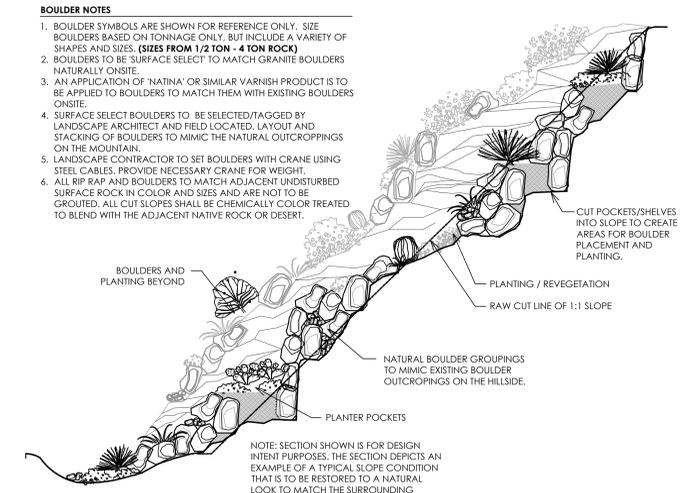
12 Desert Pavement Detail
 Scale: NTS



13 Boulder Detail
 Scale: NTS



14 Critter Barrier Detail
 Scale: NTS



15 Typical Section at Boulder Slope
 Scale: NTS