

# PAGE SPLASH PAD IMPROVEMENTS: PAGE SPORTS COMPLEX

#### CITY OF PAGE

#### **MAYOR**

**BILL DIAK** 

**VICE MAYOR** 

JOHN KOCJAN

#### **COUNCIL MEMBERS**

DAVID AUGE KENNA HETTINGER RICHARD LEIGHTNER MICHAEL FARROW

#### **CITY MANAGER**

**CITY CLERK** 

DARREN COLDWELL

CINDY SCOTT

#### LANDSCAPE ARCHITECT

J2 DESIGN

SHANE HANNEMAN, PLA, CPESC 4649 E. COTTON GIN LOOP, SUITE B2

PHOENIX, AZ 85040 PHONE: (602) 438-2221

EMAIL: SHANNEMAN@J2DESIGN.US

#### **SURVEY**

CONSULTANT REGISTERED SURVEYING, INC CARL SITTERLEY, RLS 8732 E. PICCADILLY ROAD

SCOTTSDALE, AZ PHONE: (480) 620-1382

EMAIL: CSITTERLEY-CRS@COX.NET

#### **CIVIL ENGINEER**

KREUZER CONSULTING RICK KREUZER, PE 18872 MACARTHUR BLVD, UNIT 210

**IRVINE**, CA 92612

PHONE: (714) 656-0160 EMAIL: RICK@KREUZERCONSULTING.COM

# **OWNER**

CITY OF PAGE DARREN COLDWELL 697 VISTA AVENUE PAGE, ARIZONA 86040 DCOLDWELL@PAGEAZ.GOV

#### **ELECTRICAL**

WRIGHT ENGINEERING CLIFF TOLMAN, PE 165 E CHILTON DRIVE CHANDLER, AZ 85225 PHONE: (480) 497-5829 EMAIL: CTOLMAN@ WRIGHTENGINEERING.US

#### **APPROVALS**

CITY ENGINEERING DEPARTMENT

THE CITY APPROVES THESE PLANS FOR CONCEPT ONLY AND ACCEPTS NO LIABILITY FOR ERRORS OR OMISSIONS

DATE

-WARNING-

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

34185 HANNEMAN

DATE DESCRIPTION

Design

4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

CONSULTANT(S):

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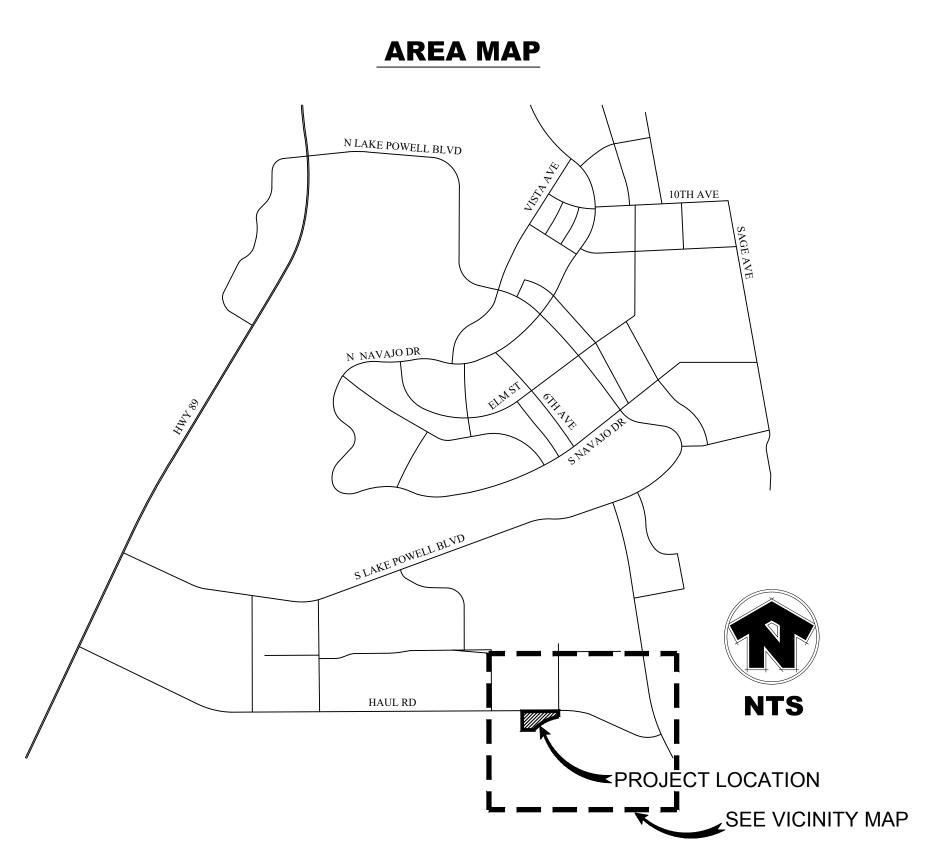
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2024/12/10 GN-101

# **VICINITY MAP**

#### SI

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- 1. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL CONSTRUCTION STAKING FOR THE PROJECT. THE CONSTRUCTION STAKING SHALL BE PERFORMED BY A PROFESSIONAL SURVEYOR, REGISTERED WITH THE STATE
- 2. ALL DIMENSIONS AND CURVE DATA ARE REPORTED TO THE FACE OF CURB UNLESS OTHERWISE NOTED. 3. WHERE REPLACEMENT AND/OR NEW INSTALLATION OF MONUMENTATION FOR SECTION CORNERS, QUARTER CORNERS, CENTER OF SECTION, AND ROADWAY GEOMETRY IS REQUIRED; THE INSTALLATION SHALL BE IN ACCORDANCE WITH THE STATE OF ARIZONA BOARD OF TECHNICAL REGISTRATION PUBLICATION "ARIZONA BOUNDARY SURVEY MINIMUM STANDARDS" AND THE STATE OF ARIZONA REVISED STATUTES 33-103, 33-104, 33-105
- AND 33-106. 4. ALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE CONTRACT DRAWINGS, SPECIAL PROVISIONS, TECHNICAL SPECIFICATIONS, SUPPLEMENTAL GENERAL CONDITIONS, MARICOPA ASSOCIATION OF GOVERNMENTS (MAG) STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (LATEST EDITION), MAG UNIFORM STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION (LATEST EDITION) AND THE LA PAZ COUNTY STANDARD DETAILS AND SPECIFICATIONS (LATEST EDITION).
- 5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING BLUE STAKE (800-782-5348) OR BY DIALING 811 FOR UTILITY LOCATION A MINIMUM OF 48 HOUR IN ADVANCE OF ANY EXCAVATION. UTILITY LOCATIONS SHALL BE PROTECTED, MAINTAINED AND UPDATED IN ACCORDANCE WITH APPLICABLE STATE AND MUNICIPAL LAWS.
- 6. PRIOR TO THE START OF ANY WORK ACTIVITIES, THE CONTRACTOR SHALL PROVIDE NOTIFICATION TO THE OWNER AND THE ENGINEER. A PRE-ACTIVITY MEETING (PRECONSTRUCTION CONFERENCE) MAY BE REQUIRED.
- 7. EXISTING UTILITIES AND OTHER FACILITIES HAVE BEEN SHOWN ON THE CONTRACT DRAWINGS BASED ON FIELD SURVEYS, EXISTING MAPS AND OTHER INFORMATION GATHERED BY THE ENGINEER DURING DESIGN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE EXACT LOCATIONS OF ALL UTILITIES IMPACTING CONSTRUCTION AND PROTECTION OF SAID UTILITIES. IF RELOCATION OF UTILITIES IS REQUIRED. THE CONTRACTOR SHALL COORDINATE THE RELOCATION WITH THE OWNER. UTILITIES DAMAGED BY CONTRACTORS ACTIVITIES SHALL BE REPAIRED WITH NEW MATERIALS AT NO COST TO THE OWNER AND TO THE OWNER'S
- 8. CONTRACTOR SHALL SUPPORT AND PROTECT IN-PLACE UTILITIES WITHIN THE EXCAVATION IN ACCORDANCE WITH MAG SPECIFICATIONS, UNLESS OTHERWISE APPROVED IN WRITING BY THE OWNER OF THE UTILITY.
- 9. EXISTING FEATURES AND FACILITIES WHICH ARE NOT SPECIFICALLY LOCATED WITH HORIZONTAL AND VERTICAL CONTROLS ARE LOCATED APPROXIMATELY WITH THE BEST AVAILABLE INFORMATION. VARIATIONS BETWEEN PLAN LOCATION AND ACTUAL DIMENSIONS WILL NOT BE A BASIS FOR A MODIFICATION OF THE CONTRACT AMOUNT.
- 10. THE OWNER HAS OBTAINED PERMIT APPROVAL FROM DESIGNATED AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING PERMITS, PAYING PERMIT FEES, COORDINATING DESIGNATED AGENCY INSPECTIONS AND CLOSURE OF PERMITS. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROVISIONS OF THE DESIGNATED PERMITS AND THE REGULATIONS OF THE PERMITTING AGENCIES.
- 11. TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE GOVERNING AGENCY'S REQUIREMENTS. CONTRACTOR SHALL SUBMIT TRAFFIC CONTROL PLANS TO THE GOVERNING AGENCIES AS REQUIRED BY THE AGENCY.
- 12. CONTRACTOR'S WORK ACTIVITIES SHALL BE SCHEDULED AND PHASED SO AS NOT TO UNDULY IMPEDE OR PREVENT ACCESS TO PRIVATE RESIDENCES, PUBLIC FACILITIES, SCHOOLS, OR BUSINESS EXCEPT BY PRIOR WRITTEN AGREEMENT WITH THE IMPACTED OWNER(S) OR OPERATORS.
- 13. ALL EQUIPMENT, MATERIALS, VEHICLES AND CONSTRUCTION ACTIVITIES SHALL REMAIN WITHIN PUBLIC RIGHTS-OF-WAY OR DESIGNATED EASEMENTS.
- 14. ANY EXISTING FEATURES OR FACILITIES DISTURBED BY THE CONTRACTOR SHALL BE REPLACED IN KIND WITH NEW MATERIALS MEETING THE OWNER'S APPROVAL AT NO ADDITIONAL COST TO THE OWNER
- 15. THE CONTRACTOR SHALL PROVIDE CLEAR AND ACCURATE REDLINES TO THE OWNER FOR PREPARATION OF RECORD DRAWINGS. THE REDLINES SHALL BE UPDATED ON A DAILY BASIS TO REFLECT THE CURRENT CONSTRUCTION ACTIVITIES AT ALL TIMES AND MAY BE INSPECTED BY THE OWNER/ENGINEER AT ANY TIME UPON
- 16. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR SAFETY ON THE CONSTRUCTION SITE. THE CONTRACTOR SHALL IMPLEMENT AN APPROVED SAFETY PLAN. AND ALL PERSONNEL ON THE JOB SHALL FOLLOW THE APPROVED SAFETY PLAN.
- 17. THE CONTRACTOR SHALL PROVIDE SUITABLE PROTECTION FOR EXCAVATIONS. AT A MINIMUM, OSHA REGULATIONS REQUIRE PROTECTION FROM CAVE-INS FOR EXCAVATIONS GREATER THAN FIVE FEET IN DEPTH. WHERE EXCAVATIONS ARE DEEPER THAN TWENTY FEET. EXCAVATION PLANS AND SHORING SYSTEM DESIGN SHALL BE SIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF ARIZONA.
- 18. TRENCH EXCAVATION, BACKFILL, AND SURFACE REPLACEMENT SHALL BE AS SHOWN ON THE DRAWINGS AND/OR REQUIRED BY THE CONTRACT DOCUMENTS. IN NO CASE SHALL TRENCH EXCAVATION, BACKFILL AND SURFACE REPLACEMENT BE LESS STRINGENT THAN MAG REQUIREMENTS, EXCEPT AS MAY BE SPECIFICALLY ALLOWED IN WRITING BY THE ENGINEER. UNLESS OTHERWISE DESIGNATED, ALL COMPACTION DENSITIES SHALL MEET THE REQUIREMENTS OF MAG SPECIFICATION SECTION 601, TYPE I.
- 19. CONTRACTOR SHALL USED EXTREME CAUTION WHILE WORKING IN THE VICINITY OF ALL GAS AND POWER LINES. THE CONTRACTOR SHALL MAINTAIN THE INTEGRITY OF THE GAS AND POWER TRENCHES AND PIPELINES AT ALL SPECIAL ATTENTION SHALL BE GIVEN TO BRACING AND SUPPORT FOR UNDERGROUND POWER CROSSINGS. POLE BRACING MAY BE REQUIRED BY THE POWER COMPANY WHEN EXCAVATING NEAR POWER POLES.
- 20. RECLAIMED ASPHALT PAVEMENT (RAP) SHALL NOT BE UTILIZED IN PIPE OR TRENCH BACKFILL.



PHOENIX, AZ 85040 602.438.2221

CONSULTANT(S):



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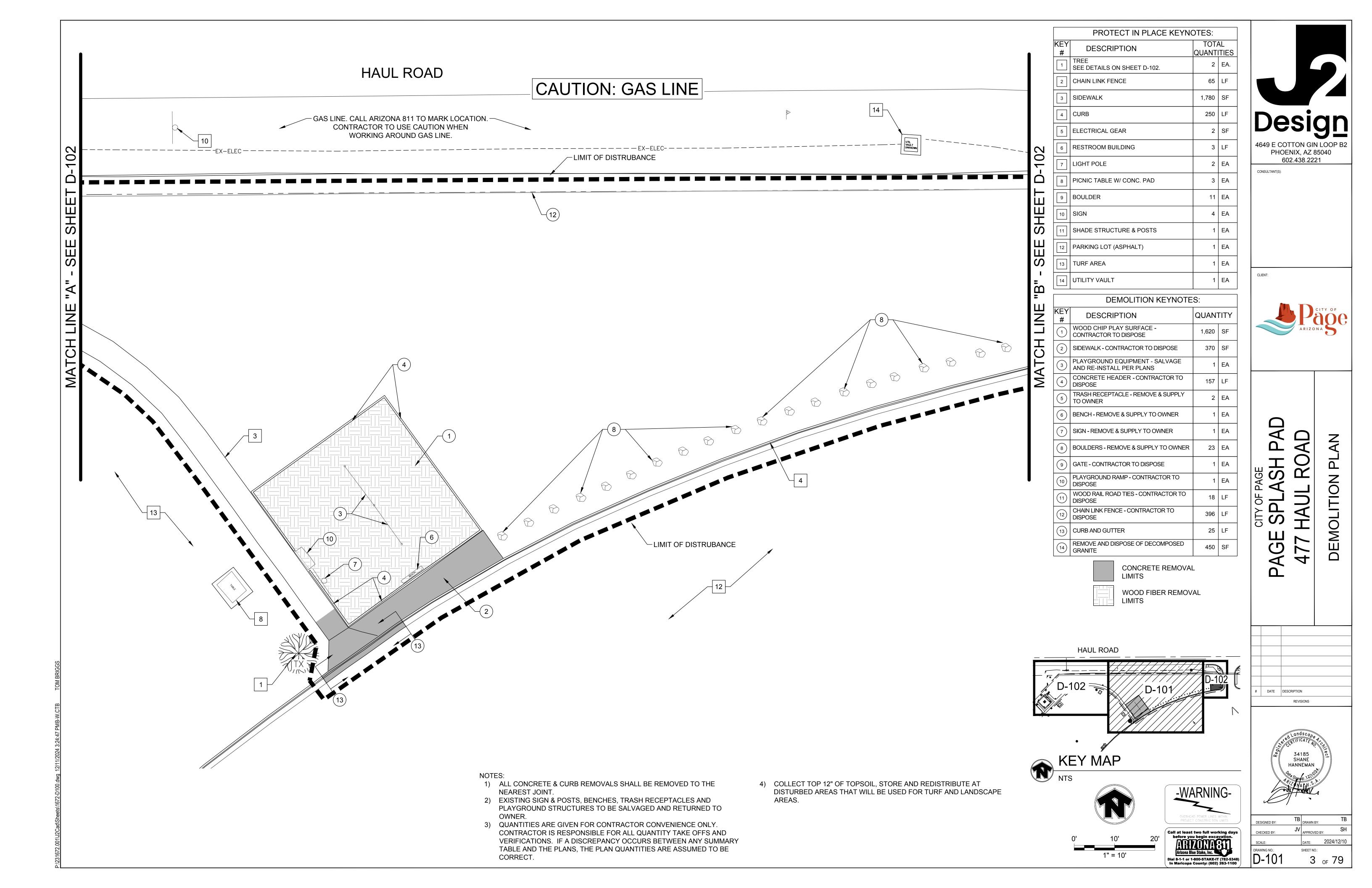
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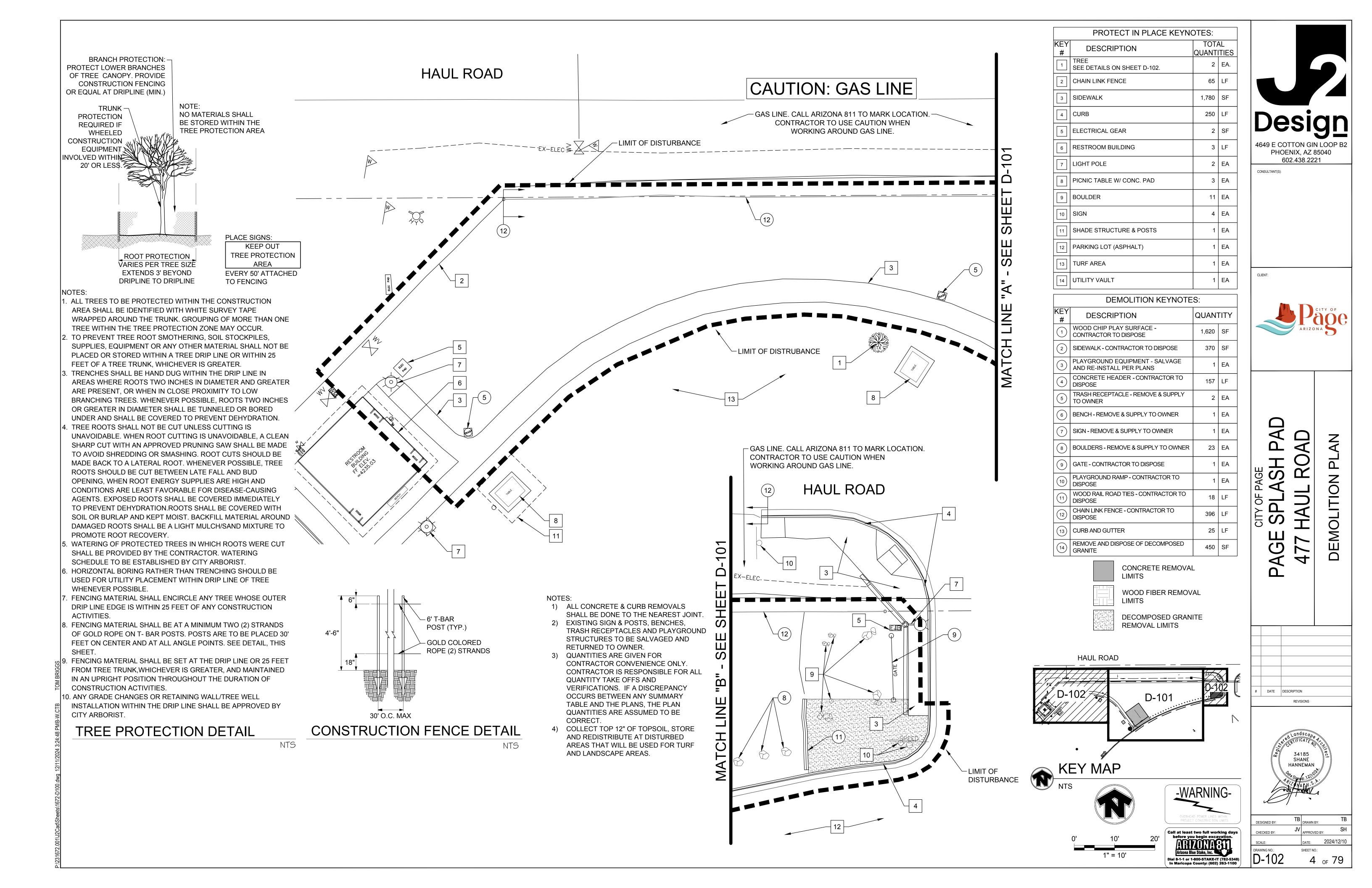


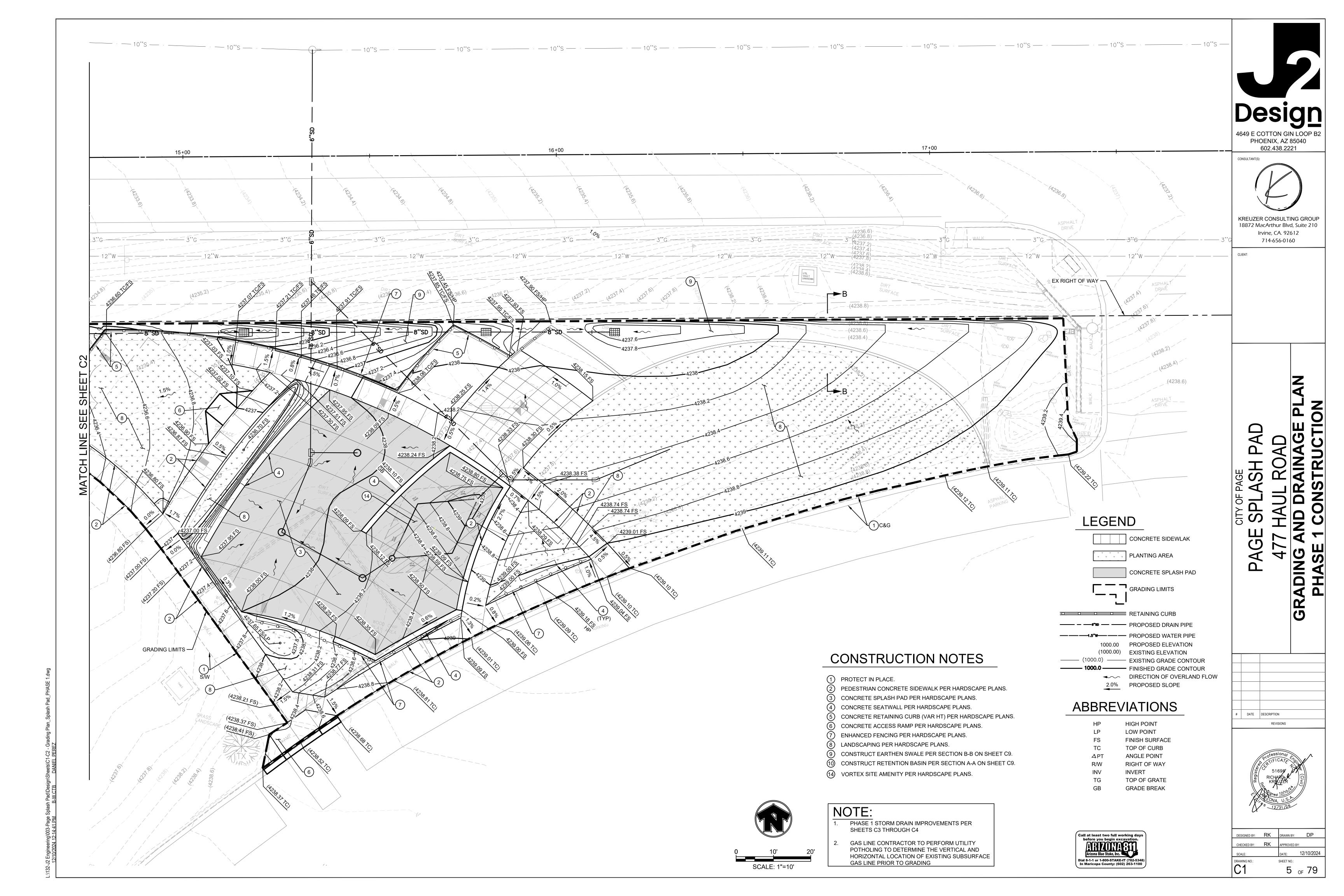
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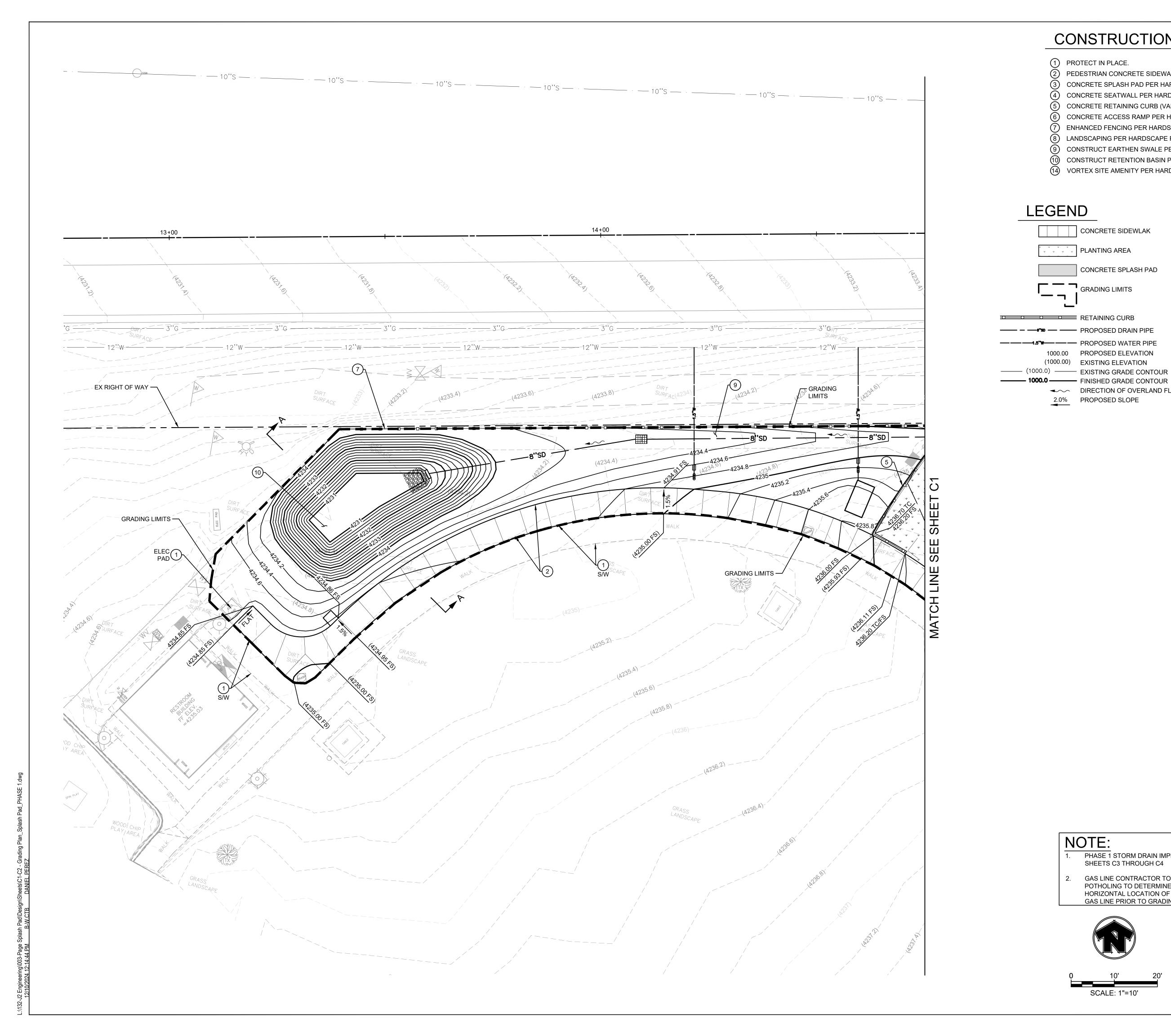
Call at least two full working days Arizona Blue Stake, Inc.

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









- (1) PROTECT IN PLACE.
- 2) PEDESTRIAN CONCRETE SIDEWALK PER HARDSCAPE PLANS.
- 3) CONCRETE SPLASH PAD PER HARDSCAPE PLANS.
- (4) CONCRETE SEATWALL PER HARDSCAPE PLANS.
- 5) CONCRETE RETAINING CURB (VAR HT) PER HARDSCAPE PLANS.
- 6 CONCRETE ACCESS RAMP PER HARDSCAPE PLANS.
- (7) ENHANCED FENCING PER HARDSCAPE PLANS.
- 8) LANDSCAPING PER HARDSCAPE PLANS.
- (9) CONSTRUCT EARTHEN SWALE PER SECTION B-B ON SHEET C9.
- (10) CONSTRUCT RETENTION BASIN PER SECTION A-A ON SHEET C9.
- (14) VORTEX SITE AMENITY PER HARDSCAPE PLANS.

#### LEGEND

PLANTING AREA

GRADING LIMITS

1000.00 PROPOSED ELEVATION (1000.00) EXISTING ELEVATION

2.0% PROPOSED SLOPE

◆ DIRECTION OF OVERLAND FLOW

CONCRETE SPLASH PAD

CONCRETE SIDEWLAK

FINISH SURFACE TOP OF CURB

ANGLE POINT RIGHT OF WAY INVERT

TOP OF GRATE

GRADE BREAK

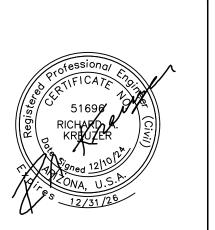
ABBREVIATIONS HIGH POINT

> LOW POINT KREUZER CONSULTING GROUP 18872 MacArthur Blvd, Suite 210 Irvine, CA. 92612

> > 714-656-0160

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602.438.2221



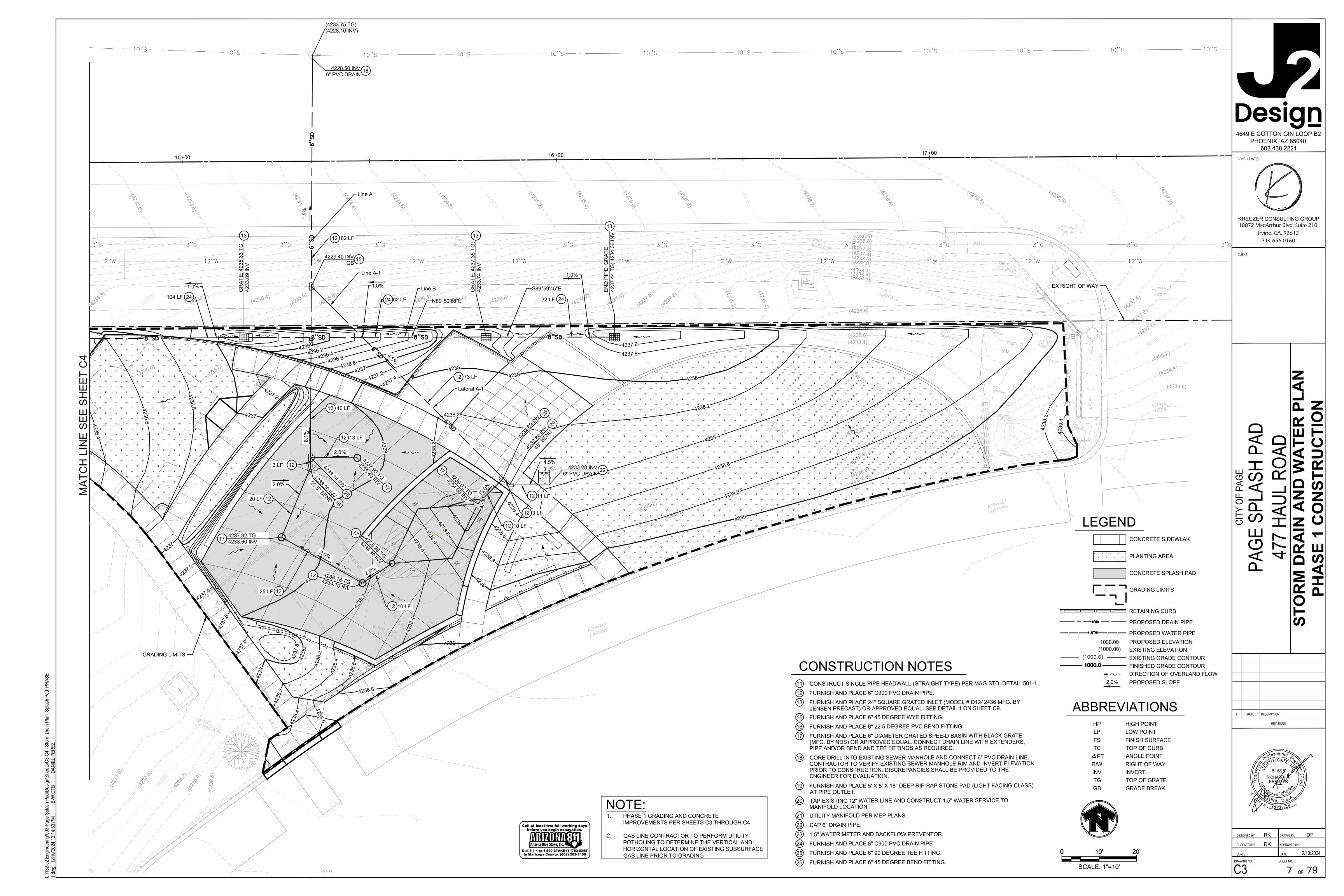
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	6	OF 79
		RK APPROVED B DATE: SHEET NO.:

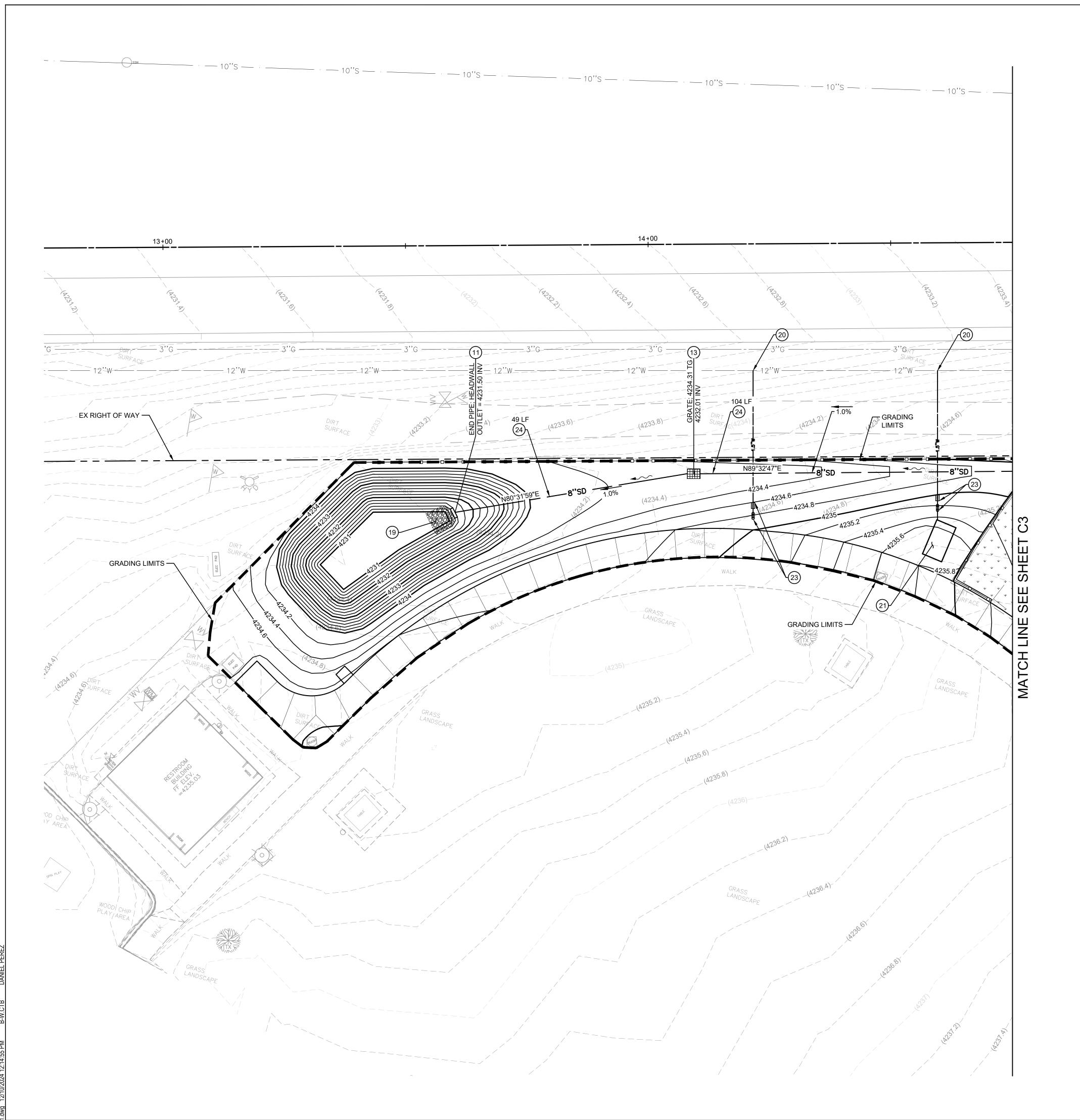
NOTE:

PHASE 1 STORM DRAIN IMPROVEMENTS PER SHEETS C3 THROUGH C4

GAS LINE CONTRACTOR TO PERFORM UTILITY
POTHOLING TO DETERMINE THE VERTICAL AND
HORIZONTAL LOCATION OF EXISTING SUBSURFACE
GAS LINE PRIOR TO GRADING







- (11) CONSTRUCT SINGLE PIPE HEADWALL (STRAIGHT TYPE) PER MAG STD. DETAIL 501-1.
- FURNISH AND PLACE 6" C900 PVC DRAIN PIPE.
- furnish and place 24" Square Grated Inlet (Model # D1242436 MFG. BY JENSEN PRECAST) OR APPROVED EQUAL. SEE DETAIL 1 ON SHEET C9.
- (15) FURNISH AND PLACE 6" 45 DEGREE WYE FITTING.
- (16) FURNISH AND PLACE 6" 22.5 DEGREE PVC BEND FITTING.
- (17) FURNISH AND PLACE 6" DIAMETER GRATED SPEE-D BASIN WITH BLACK GRATE (MFG. BY NDS) OR APPROVED EQUAL. CONNECT DRAIN LINE WITH EXTENDERS, PIPE AND/OR BEND AND TEE FITTINGS AS REQUIRED.
- (18) CORE DRILL INTO EXISTING SEWER MANHOLE AND CONNECT 6" PVC DRAIN LINE. CONTRACTOR TO VERIFY EXISTING SEWER MANHOLE RIM AND INVERT ELEVATION PRIOR TO CONSTRUCTION. DISCREPANCIES SHALL BE PROVIDED TO THE ENGINEER FOR EVALUATION.
- (19) FURNISH AND PLACE 5' X 5' X 18" DEEP RIP RAP STONE PAD (LIGHT FACING CLASS) AT PIPE OUTLET.
- (20) TAP EXISTING 12" WATER LINE AND CONSTRUCT 1.5" WATER SERVICE TO
  - MANIFOLD LOCATION.
- (21) UTILITY MANIFOLD PER MEP PLANS.
- (22) CAP 6" DRAIN PIPE. 23) 1.5" WATER METER AND BACKFLOW PREVENTOR.
- (24) FURNISH AND PLACE 8" C900 PVC DRAIN PIPE

## **LEGEND**

## CONCRETE SIDEWLAK PLANTING AREA

CONCRETE SPLASH PAD

# GRADING LIMITS

RETAINING CURB

—— — PROPOSED DRAIN PIPE 1000.00 PROPOSED ELEVATION (1000.00) EXISTING ELEVATION

——— (1000.0) ——— EXISTING GRADE CONTOUR ——— 1000.0 — FINISHED GRADE CONTOUR → DIRECTION OF OVERLAND FLOW

2.0% PROPOSED SLOPE

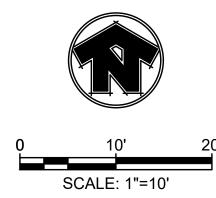
#### **ABBREVIATIONS**

HIGH POINT **LOW POINT** FINISH SURFACE TOP OF CURB ANGLE POINT

RIGHT OF WAY INVERT TOP OF GRATE GRADE BREAK

#### NOTE:

- PHASE 1 GRADING AND CONCRETE
  IMPROVEMENTS PER SHEETS C3 THROUGH C4
- GAS LINE CONTRACTOR TO PERFORM UTILITY POTHOLING TO DETERMINE THE VERTICAL AND HORIZONTAL LOCATION OF EXISTING SUBSURFACE GAS LINE PRIOR TO GRADING

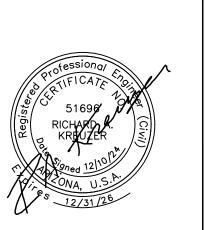




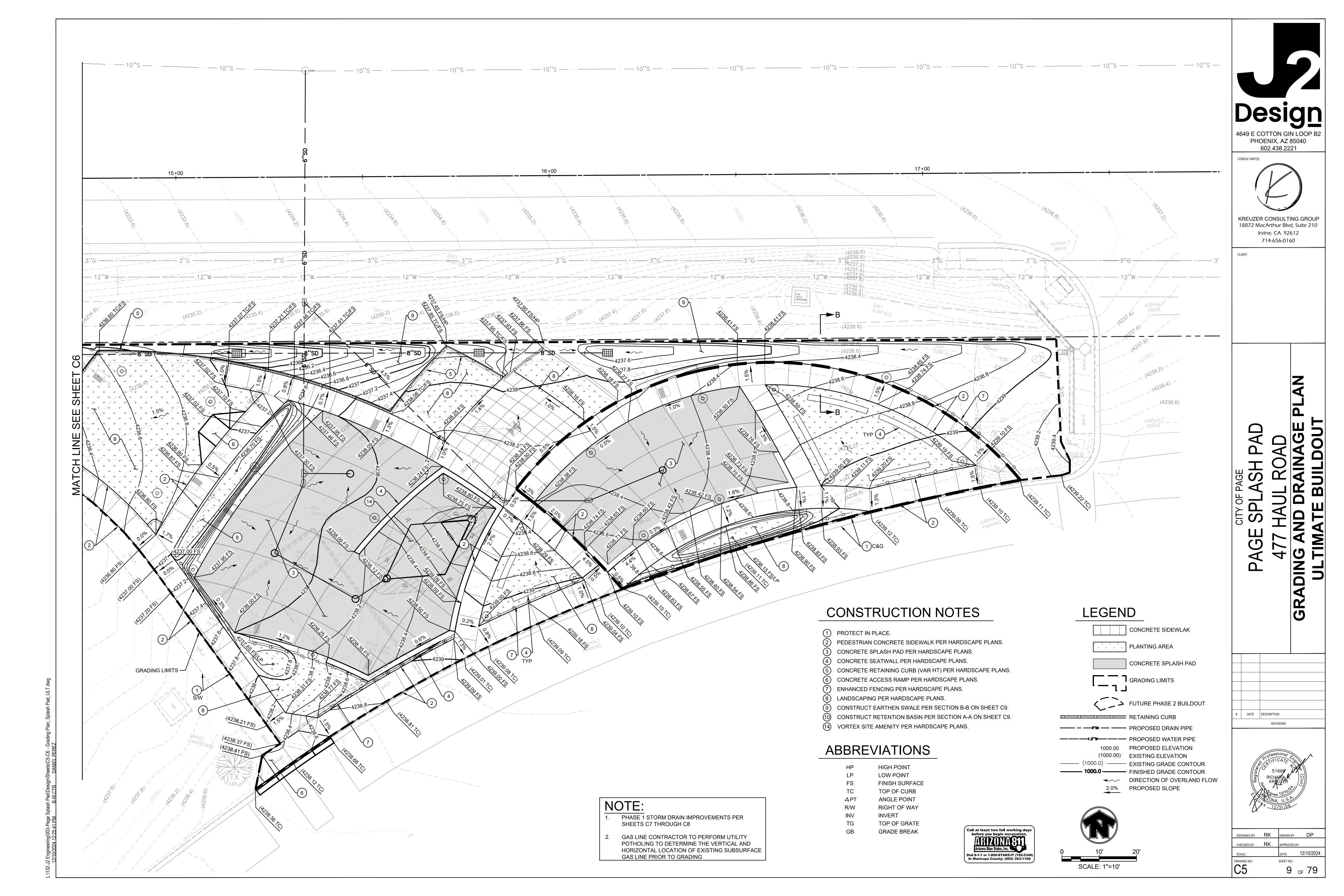
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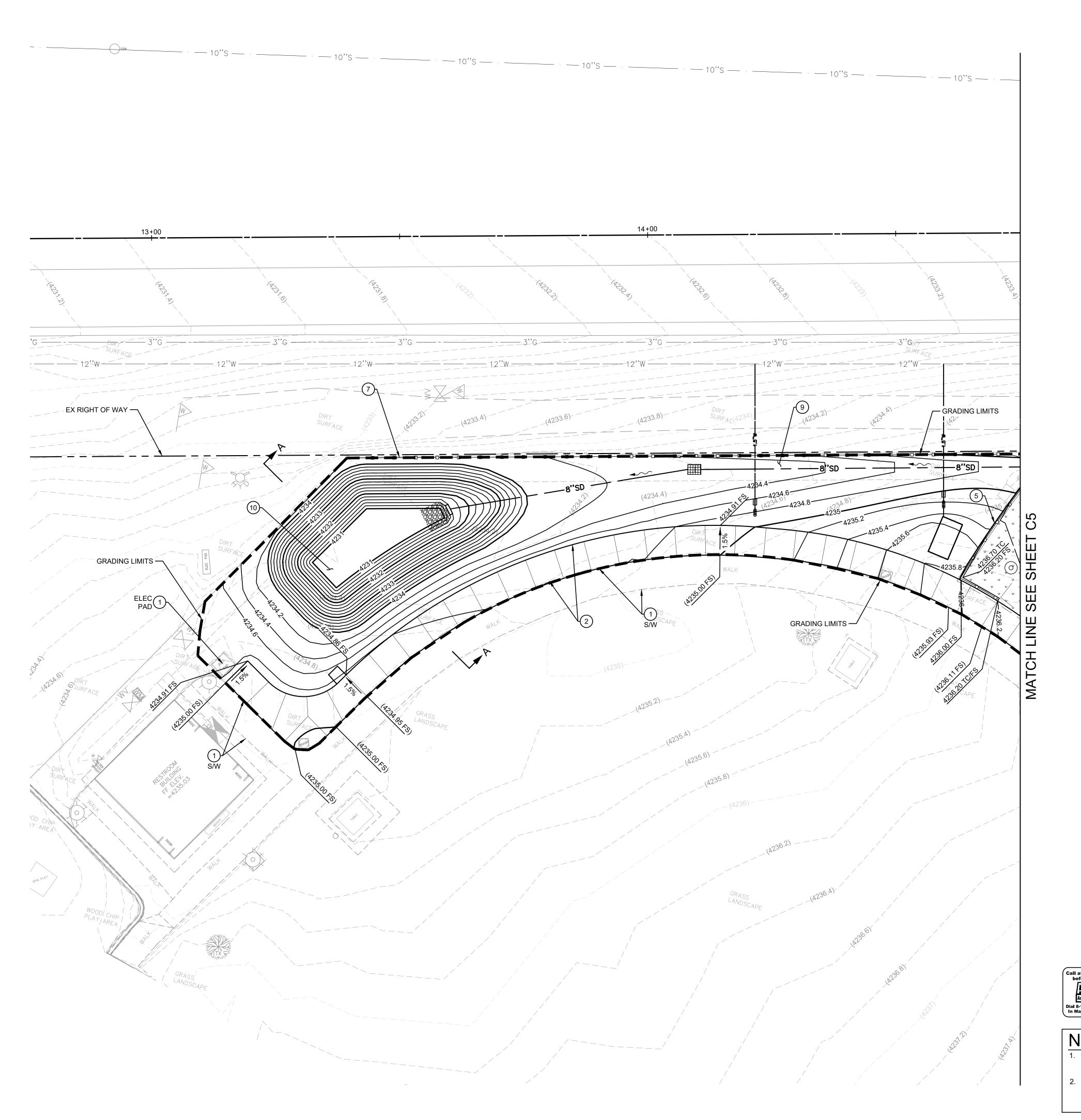


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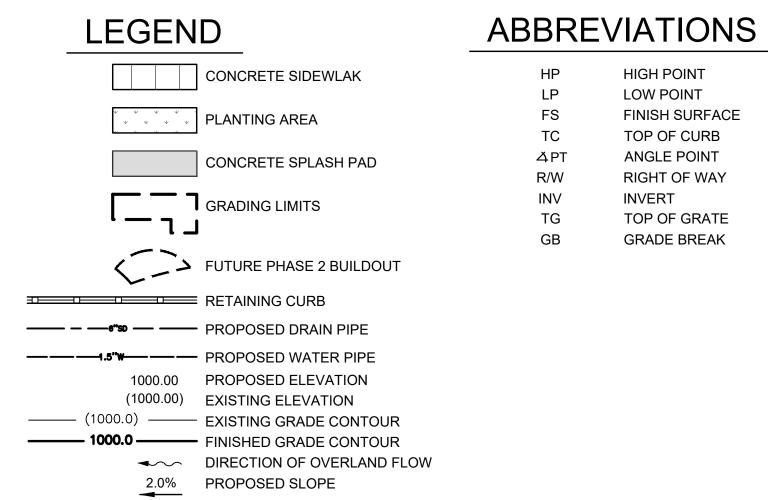


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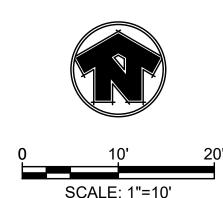
- (1) PROTECT IN PLACE.
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- 6 CONCRETE ACCESS RAMP PER HARDSCAPE PLANS.
- (7) ENHANCED FENCING PER HARDSCAPE PLANS.
- 8) LANDSCAPING PER HARDSCAPE PLANS.
- (9) CONSTRUCT EARTHEN SWALE PER SECTION B-B ON SHEET C9.
- (10) CONSTRUCT RETENTION BASIN PER SECTION A-A ON SHEET C9.
- (14) VORTEX SITE AMENITY PER HARDSCAPE PLANS.

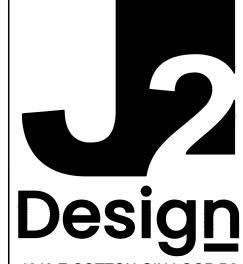




PHASE 1 STORM DRAIN IMPROVEMENTS PER SHEETS C7 THROUGH C8

GAS LINE CONTRACTOR TO PERFORM UTILITY POTHOLING TO DETERMINE THE VERTICAL AND HORIZONTAL LOCATION OF EXISTING SUBSURFACE GAS LINE PRIOR TO GRADING

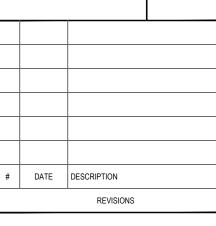




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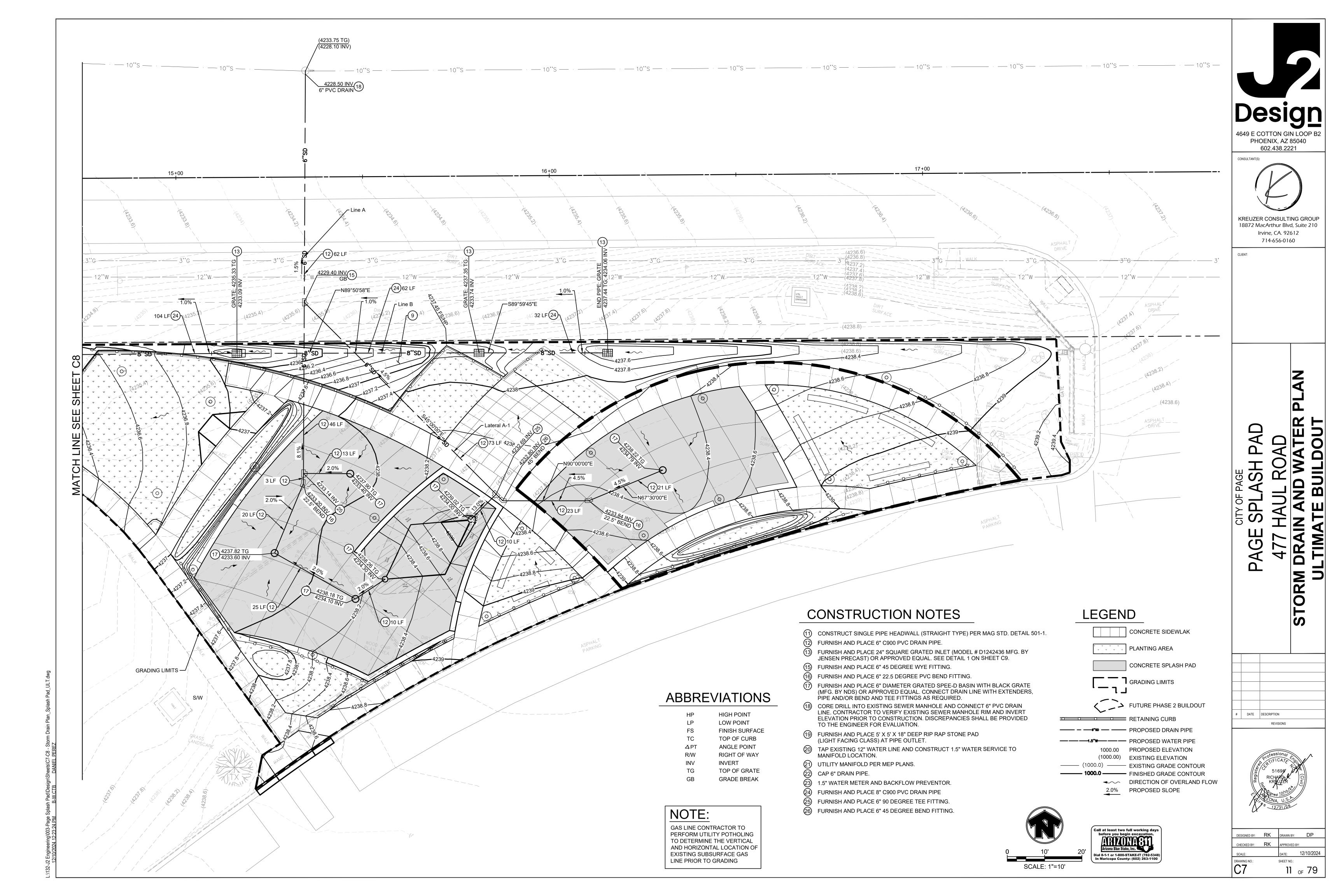


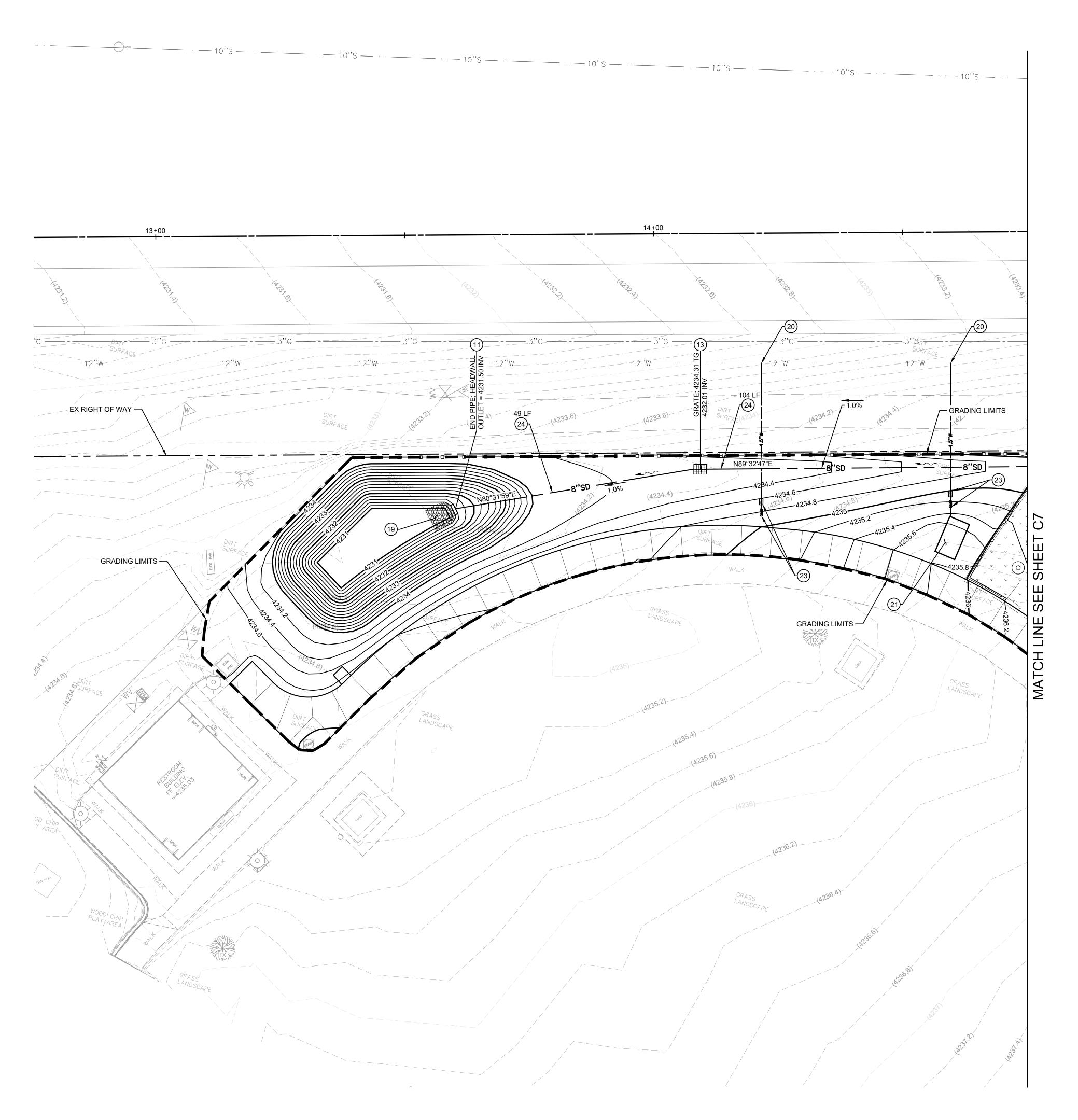
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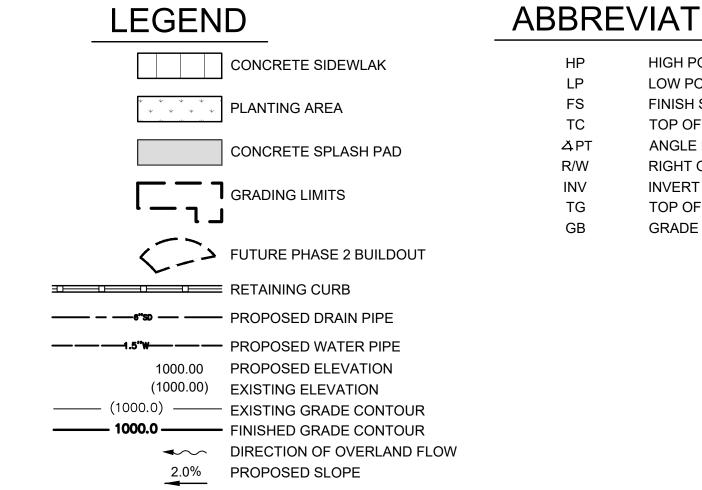


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	CHECKED BY:	RK	APPROVED B	Y:
	SCALE:		DATE:	12/10/2024
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	C6		10	<sub>05</sub> 79





- (11) CONSTRUCT SINGLE PIPE HEADWALL (STRAIGHT TYPE) PER MAG STD. DETAIL 501-1.
- 12) FURNISH AND PLACE 6" C900 PVC DRAIN PIPE.
- 13) FURNISH AND PLACE 24" SQUARE GRATED INLET (MODEL # D1242436 MFG. BY JENSEN PRECAST) OR APPROVED EQUAL. SEE DETAIL 1 ON SHEET C9.
- (15) FURNISH AND PLACE 6" 45 DEGREE WYE FITTING.
- (16) FURNISH AND PLACE 6" 22.5 DEGREE PVC BEND FITTING.
- 17) FURNISH AND PLACE 6" DIAMETER GRATED SPEE-D BASIN WITH BLACK GRATE (MFG. BY NDS) OR APPROVED EQUAL. CONNECT DRAIN LINE WITH EXTENDERS, PIPE AND/OR BEND AND TEE FITTINGS AS REQUIRED.
- (8) CORE DRILL INTO EXISTING SEWER MANHOLE AND CONNECT 6" PVC DRAIN LINE. CONTRACTOR TO VERIFY EXISTING SEWER MANHOLE RIM AND INVERT ELEVATION PRIOR TO CONSTRUCTION. DISCREPANCIES SHALL BE PROVIDED TO THE ENGINEER FOR EVALUATION.
- (19) FURNISH AND PLACE 5' X 5' X 18" DEEP RIP RAP STONE PAD (LIGHT FACING CLASS) AT PIPE OUTLET.
- (20) TAP EXISTING 12" WATER LINE AND CONSTRUCT 1.5" WATER SERVICE TO MANIFOLD LOCATION.
- (21) UTILITY MANIFOLD PER MEP PLANS.
- (22) CAP 6" DRAIN PIPE.
- (23) 1.5" WATER METER AND BACKFLOW PREVENTOR.
- (24) FURNISH AND PLACE 8" C900 PVC DRAIN PIPE



## **ABBREVIATIONS**

HP	HIGH POINT
LP	LOW POINT
FS	FINISH SURFACE
TC	TOP OF CURB
<b>∆</b> PT	ANGLE POINT
R/W	RIGHT OF WAY
INV	INVERT
TG	TOP OF GRATE
GB	GRADE BREAK

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

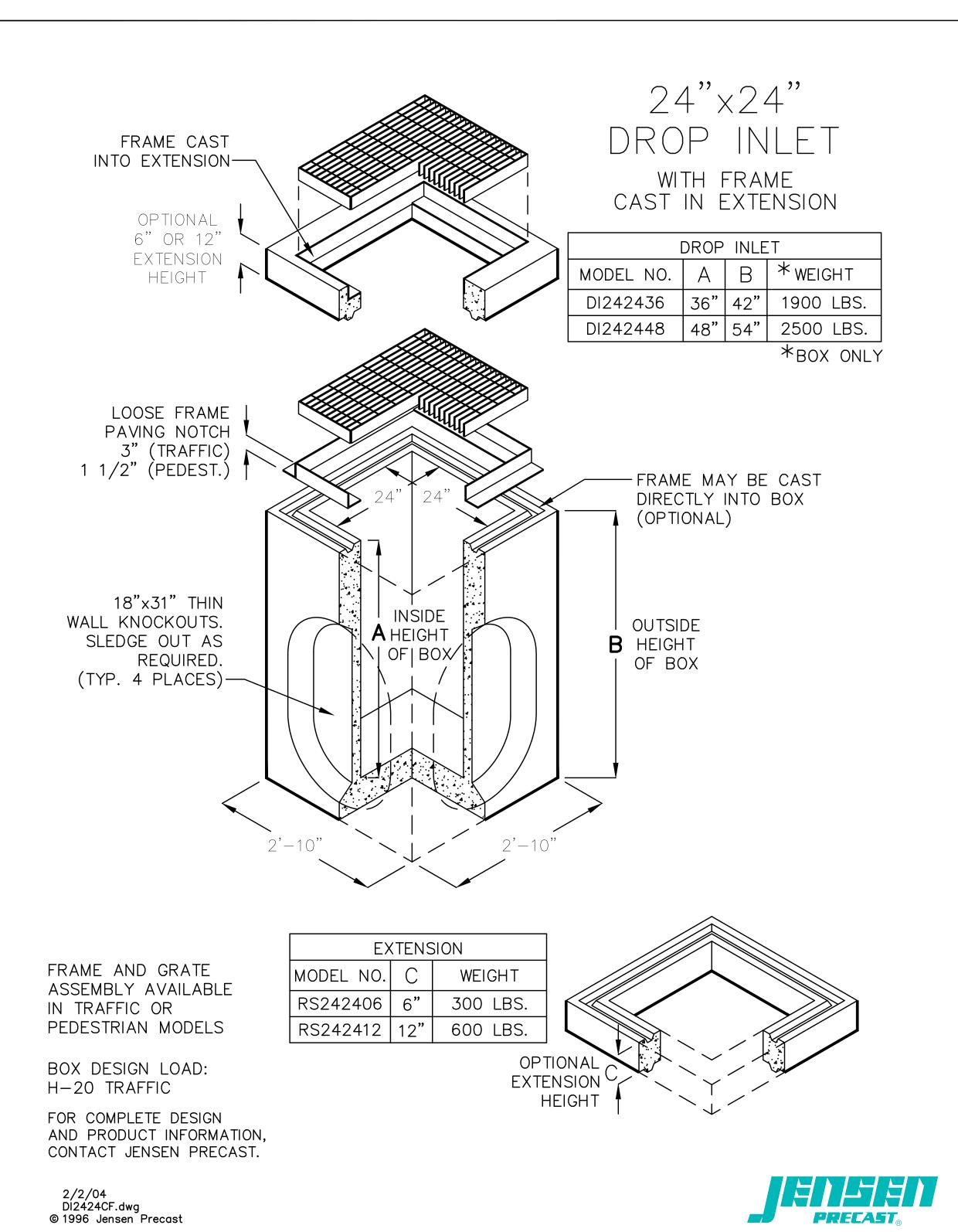
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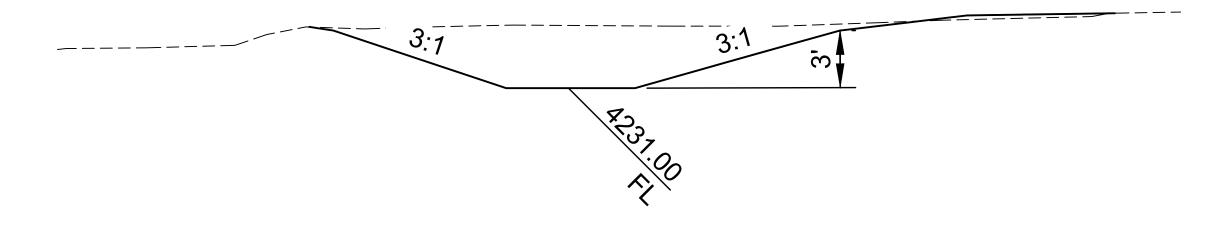
Arizona Blue Stake, Inc. DRAWING NO.: 12 of 79

GAS LINE CONTRACTOR TO
PERFORM UTILITY POTHOLING
TO DETERMINE THE VERTICAL
AND HORIZONTAL LOCATION OF
EXISTING SUBSURFACE GAS

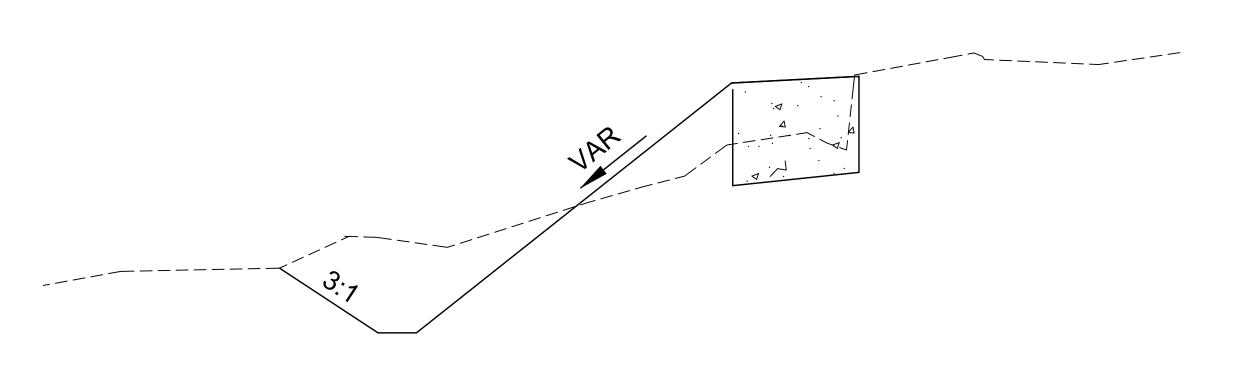
LINE PRIOR TO GRADING

SCALE: 1"=10'





SECTION A-A (BASIN)



SECTION B-B (SWALE)
N.T.S.

A77 HAUL ROAD
TYPICAL GRADING SECTIONS

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#	DATE	DESCRIPTION
		REVISIONS



DESIGNED BY: RK DRAWN BY: DP

CHECKED BY: RK APPROVED BY:

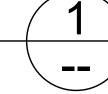
SCALE: DATE: 12/10/2024

DRAWING NO.: SHEET NO.:

C9 13 OF 79

24" SQUARE JENSEN PRECAST

SCALE: NTS



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DESCRIPTION	PHASE 1 QTY.	FULL BUILD	MANUFACTURER	MODEL	MATERIAI	COLOR	FINISH	DETAIL	NOTES	
HARDSCAPE ELEMENTS	S									
4" CONCRETE PAVING	2,340 SF	4,050 SF	N/A	N/A	CONCRETE	STD. GRAY	MEDIUM BROOM	DTL 2, SHEET HS-301	MOCK-UP AND SUBMITTAL REQUIRED	
6" CONCRETE PAVING	1,780 SF	1,780 SF	N/A	N/A	CONCRETE	STD. GRAY	MEDIUM BROOM	DTL 2, SHEET HS-301	MOCK-UP AND SUBMITTAL REQUIRED	
6" CONCRETE SPLASH PAD PAVING W/ WATER STOPS	3,590 SF	5,345 SF	N/A	N/A	CONCRETE	STD. GRAY	HEAVY BROOM	DTL 2+3, SHEET HS-302	MOCK-UP AND SUBMITTAL REQUIRED	
CONCRETE HEADER	126 LF	35 LF	N/A	N/A	CONCRETE	STD. GRAY	MEDIUM BROOM	DTL 3, SHEET HS-301	MOCK-UP AND SUBMITTAL REQUIRED	
PLAYGROUND SIDEWALK TURN DOWN	106 LF	106 LF	N/A	N/A	CONCRETE	STD. GRAY	MEDIUM BROOM	DTL 5, SHEET HS-301	MOCK-UP AND SUBMITTAL REQUIRED	
STEP (SINGLE)	10 LF	10 LF	N/A	N/A	CONCRETE	STD. GRAY	MEDIUM SAND BLAST	DTL 6, SHEET HS-310	MOCK-UP AND SUBMITTAL REQUIRED	
SITE AMENITIES	,	·	<u> </u>	•	•	•	•	<u> </u>	•	
						DAVIS COLORS, SALMON 10134				

SITE AMENITIES									
CIP CONC. SEAT WALL WITH CONC. CAP	170 LF	360 LF	N/A	N/A	CONCRETE	DAVIS COLORS, SALMON 10134 DAVIS COLORS, OMAHA TAN 5084 DAVIS COLORS, BRICK RED 160 DAVIS COLORS, MESA BUFF 5447	SMOOTH	DTL 1, SHEET HS-302	MOCK-UP AND SUBMITTAL REQUIRED
PICNIC TABLE (ADA)	2 EACH	2 EACH	PW ATHLETICS	4214-08 ADA	STEEL	810 SLATE BLUE	POWDER COAT	DTL 4, SHEET HS-307	INSTALL PER MANUFACTURER SPECIFICATIONS/ SUBMITTAL REQUIRED
6' BENCH W/ BACK	1 EACH	1 EACH	PW ATHLETICS	HYDE PARK, STEEL STRAP, 3107-06	STEEL	810 SLATE BLUE	POWDER COAT	DTL 3, SHEET HS-307	INSTALL PER MANUFACTURER SPECIFICATIONS/ SUBMITTAL REQUIRED
LITTER RECEPTACLE	3 EACH	3 EACH	PW ATHLETICS	HYDE PARK, 3150 -BV	STEEL	265 HUNTER GREEN	POWDER COAT	DTL 1, SHEET HS-307	INSTALL PER MANUFACTURER SPECIFICATIONS/ SUBMITTAL REQUIRED
BBQ GRILL	1 EACH	1 EACH	PW ATHLETICS	1140-00 GRILL, SURFACE MOUNTED	STEEL	BLACK	HIGH TEMP. ENAMEL	DTL 2, SHEET HS-307	INSTALL PER MANUFACTURER SPECIFICATIONS/ SUBMITTAL REQUIRED
RAMADA	1 EACH	1 EACH	POLIGON	SQR-20	STEEL	ROOF COLOR: TERRACOTTA STRUCTURE COLOR: MYSTIC BLUE	POLI-5000 POWDER COAT	SEE MANUFACTURER	INSTALL PER MANUFACTURER SPECIFICATIONS/ SHOP DRAWINGS REQUIRED. DEFERRED SUBMITTAL
CHAIN LINK FENCE (6' HIGH)	275 LF	275 LF	N/A	N/A	GALVANIZED STEEL	GALVANIZED	GALVANIZED	DTL 5, SHEET HS-310	INSTALL PER MANUFACTURER SPECIFICATIONS/ SHOP DRAWINGS REQUIRED. SUBMITTAL REQUIRED

									1
CAST IN PLACE RETAINING WALL	175 LF	175 LF	N/A	N/A	CONCRETE	DAVIS COLORS, SALMON 10134 DAVIS COLORS, OMAHA TAN 5084 DAVIS COLORS, BRICK RED 160 DAVIS COLORS, MESA BUFF 5447 DAVIS COLORS, SANGRIA 1117	SCOTT SYSTEMS FORMLINER #160B	DTL 3 SHEET HS-303	SUBMITTAL / SHOP DRAWINGS REQUIRED
PET WASTE STATION	2 EACH	1 EACH	CUSTOM	N/A	STEEL/ PVC	FOREST GREEN	POWDER COATED	DTL 1, SHEET HS-303	INSTALL PER DETAIL. LOCATIONS TO BE STAKED IN THE FIELD AND APPROVED BY CITY REPRESENTATIVE & LANDSCAPE ARCHITECT
PLAY GROUND RAMP	1 EACH	1 EACH	N/A	N/A	CONCRETE	STD. GRAY	MEDIUM BROOM	DTL 5, SHEET HS-301	

STEEL

STEEL

RAL 2001

RAL 6027

YELLOW

#### PLAYGROUND/PROGRAM AMENITIES

REMOVABLE BOLLARDS

CUSTOM SPECIALTY FENCE

EXISTING SWING SET	1 EACH	1 EACH	LANDSCAPE STRUCTURES	#278557 HEDRA SWING FRAME & (2) #174018 SEATS	N/A	REFER TO MANUFACTURER	PER MANUFACTURER	SEE MANUFACTURER	INSTALL SALVAGED EQUIPMENT PER PLANS. INSTALL PER MANUFACTURER SPECIFICATIONS /SUBMITTAL REQUIRED
SPLASH PAD	1 EACH	2 EACH	VORTEX	SEE SPLASH PAD PLANS SP-201 - SP-204	TBD	REFER TO MANUFACTURER	PER MANUFACTURER	SEE SPLASH PAD PLANS	DEFERRED SUBMITTAL SEALED BY ARIZONA REGISTERED ENGINEER
ENGINEERED WOOD FIBER PLAYGROUND SAFETY SURFACE	1,546 SF	1,546 SF	ROCKY MOUNTAIN DISTRIBUTORS	ZEAGER SYSTEM 1	ENGINEERED WOOD FIBER	NATURAL	PER MANUFACTURER	DTL 4, SHEET HS-301	INSTALL PER MANUFACTURER SPECIFICATIONS /SUBMITTAL REQUIRED

#### **CONCRETE MOCK-UP NOTES:**

- WILL REQUIRE A 3'-0" X 3'-0" MOCK-UP TO BE COMPLETED BY AND APPROVAL PRIOR TO FURTHER INSTALLATION.
- 2. MOCK-UP CAN NOT BE PART OF FINAL INSTALLATION.
- RAMADA & SHADE SAIL NOTES:

325 LF

2 EACH

405 LF

2 EACH

N/A

1. CONCRETE SPLASH PAD PAVING 1. DEFERRED SUBMITTAL: CONTRACTOR SHALL PROVIDE SEALED STRUCTURAL CALCULATIONS AND CONSTRUCTION DETAILS TO CITY OF PAGE AND LANDSCAPE ARCHITECT 1. QUANTITIES GIVEN FOR CONTRACTOR CONVENIENCE ONLY. CONTRACTOR SHALL FOR REVIEW AND APPROVAL PRIOR TO FABRICATION AND INSTALLATION OF RAMADA. THE CONTRACTOR IS RESPONSIBLE FOR ALL PERMITTING PROCESSES AND FEES.

CUSTOM

N/A

- CONTRACTOR FOR CITY REVIEW 2. RAMADA FRAME AND COLUMNS/ SAIL STRUCTURE SHALL BE PREPARED WITH ZINC RICH PRIMER AND POWDER COATED. ENTIRE STRUCTURE TO RECEIVE ANTI -GRAFFITI COATING FROM MANUFACTURER. FINAL COLOR SELECTIONS PER CITY OF PAGE.
  - 3. RAMADA ROOF SHALL BE CONSTRUCTED FROM 24 GAUGE 16" STANDING SEAM, COATED WITH 20 YEAR WARRANTED KYNAR 500 TOP FINISH.
  - 4. ALL ELECTRICAL CONDUITS TO BE CONCEALED WITHIN COLUMNS AND BEAMS OF RAMADAS.

ARTISAN PANELS, INC

- 5. ALL BOLTED CONNECTIONS SHALL BE HIDDEN.
- 6. DEFERRED SUBMITTAL: CONTRACTOR SHALL PROVIDE SEALED STRUCTURAL CALCULATIONS FROM AN ARIZONA PROFESSIONAL ENGINEER AND CONSTRUCTION DETAILS TO CITY OF PAGE AND LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO FABRICATION AND INSTALLATION OF RAMADA. THE CONTRACTOR IS RESPONSIBLE FOR ALL PERMITTING PROCESSES AND FEES.

**POWDERCOAT** 

POWDER COAT

- VERIFY ALL QUANTITIES.
- 2. ALL SITE AMENITIES SHALL BE INSTALLED PER MANUFACTURER SPECIFICATIONS.
- 3. REFERENCES TO EQUIPMENT OR MATERIALS BY MANUFACTURER, TRADE NAME, MAKE OR CATALOG NUMBER SHALL BE REGARDED AS ESTABLISHING A STANDARD OF QUALITY, FINISH, APPEARANCE, PERFORMANCE OR, AS INDICATED, A SELECTION BASED UPON COMPATIBILITY WITH EXISTING EQUIPMENT OR MATERIALS. AN ALTERNATE OR SUBSTITUTE ITEM OR SOURCE MAY BE SUBMITTED IN ACCORDANCE WITH MAG STD SECTION 106-4 TRADE NAMES & SUBSTITUTIONS.

DTL 4, SHEET HS-304

DTL 4, SHEET HS-310

4. ALL COLOR SELECTIONS ARE SUBJECT TO CHANGE & FINAL SELECTION WILL BE DETERMINED WITH SUBMITTAL PROCESS.



SUBMITTAL REQUIRED

SUBMITTAL REQUIRED

SHOP DRAWINGS REQUIRED.

INSTALL PER MANUFACTURER SPECIFICATIONS/

SUBMITTAL / SHOP DRAWINGS REQUIRED

ARIZONA 811.
Arizona Blue Stake, Inc. Dial 8-1-1 or 1-800-STAKE-IT (782-5348) In Maricopa County: (602) 263-1100

4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

CONSULTANT(S):



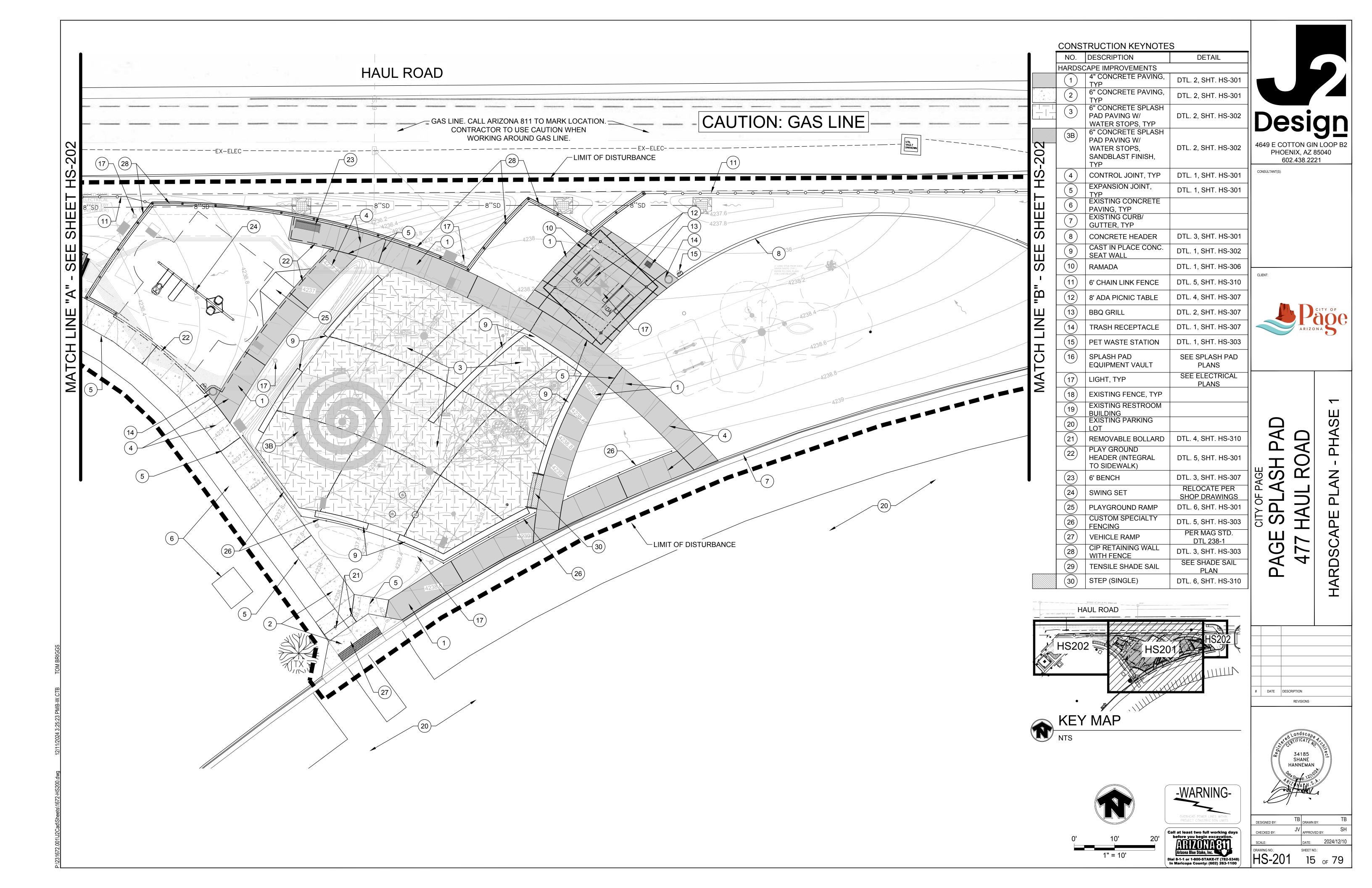
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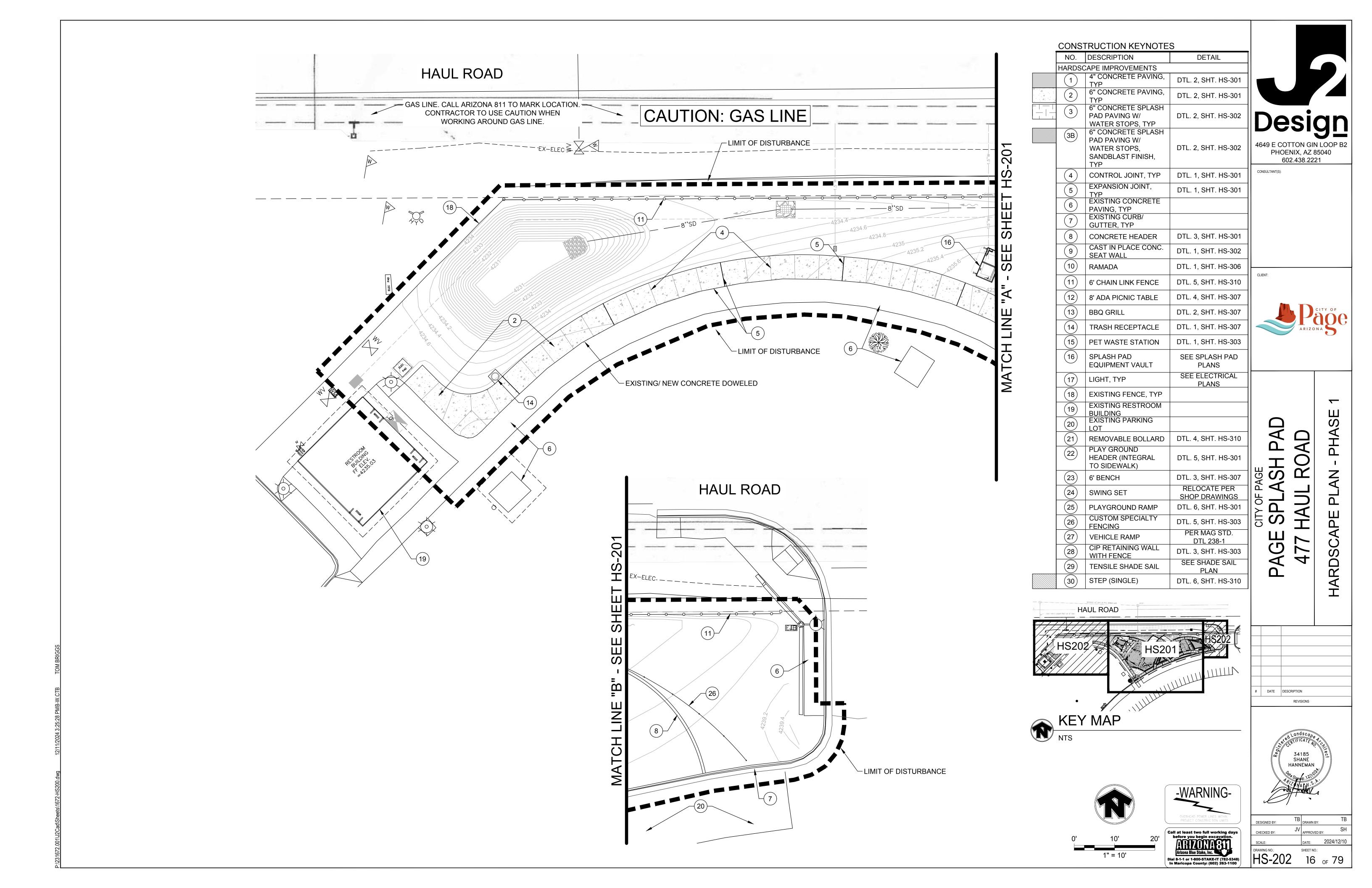
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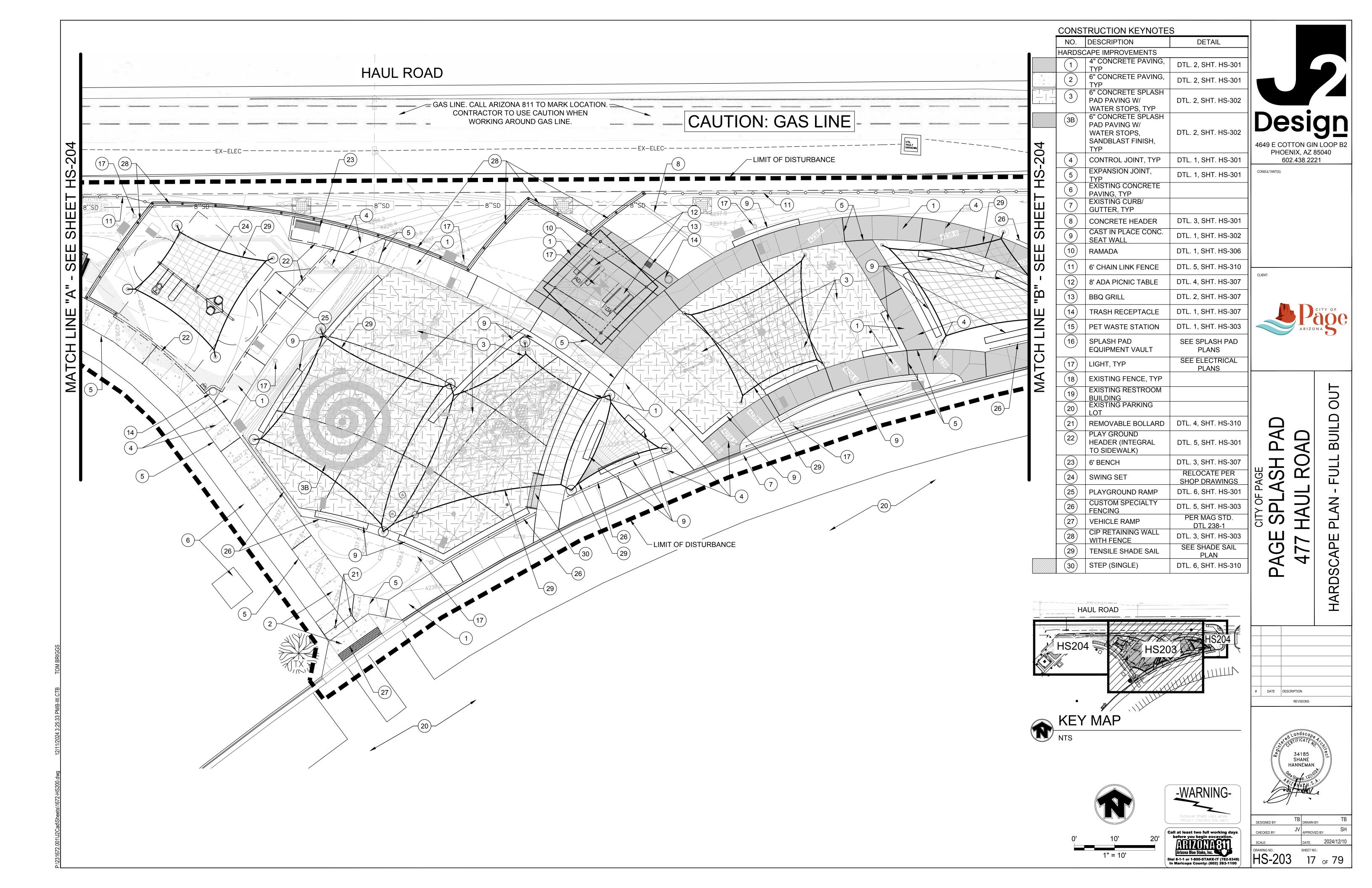


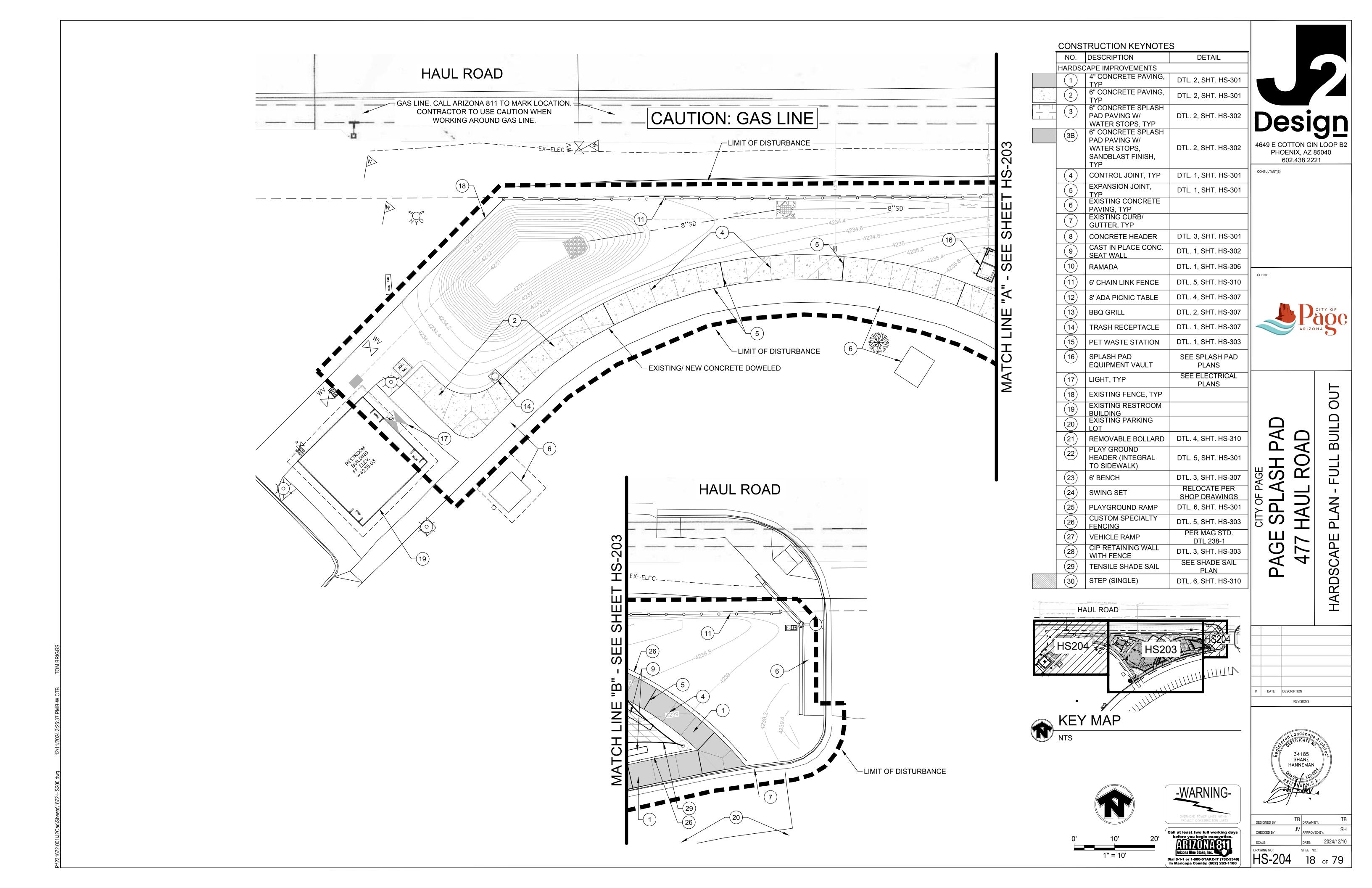
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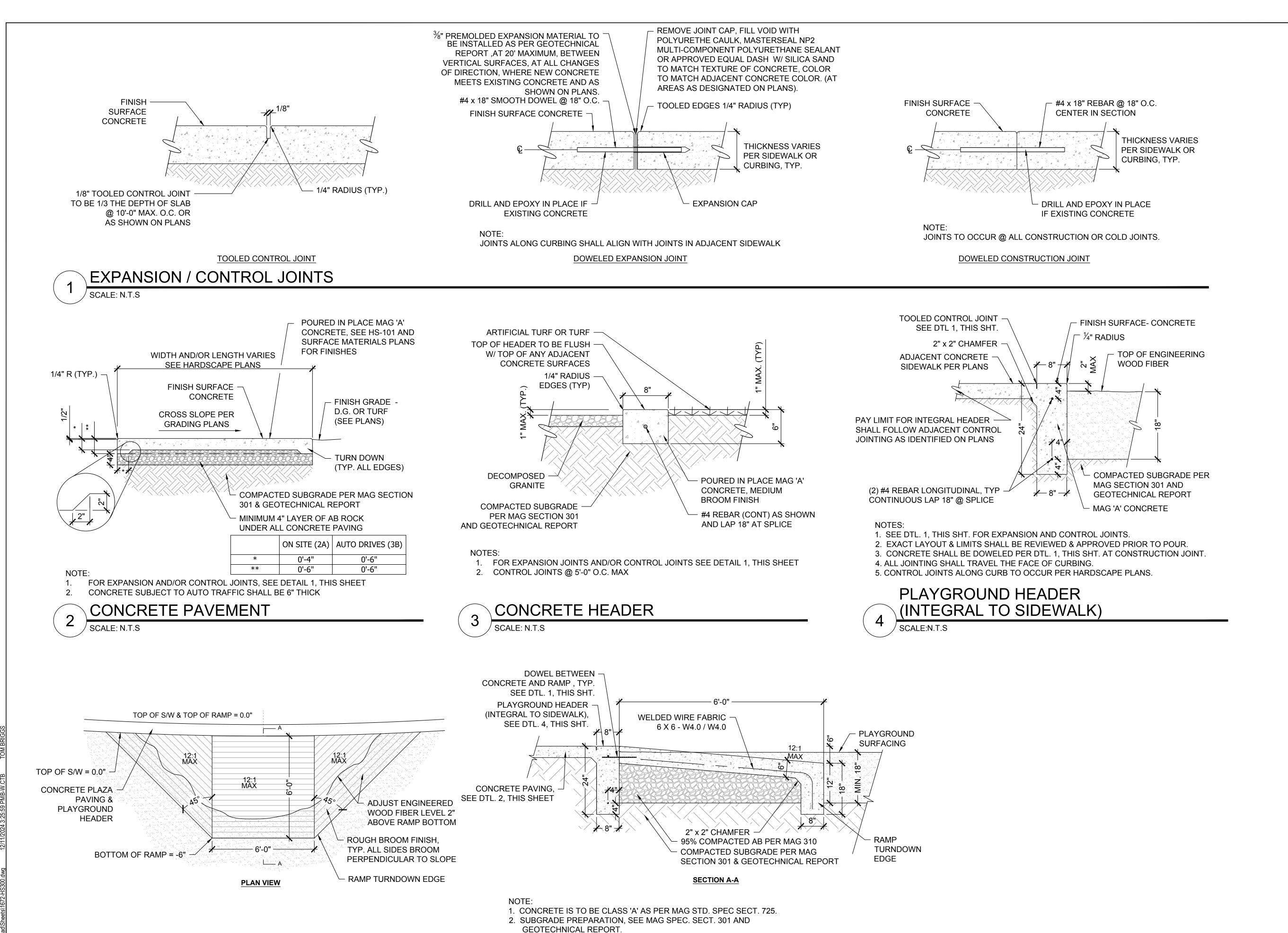
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PLAYGROUND ACCESS RAMP

SCALE: N.T.S

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2024/12/10

DATE DESCRIPTION

Design

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CONSULTANT(S):

PAD

**SH** 

S P

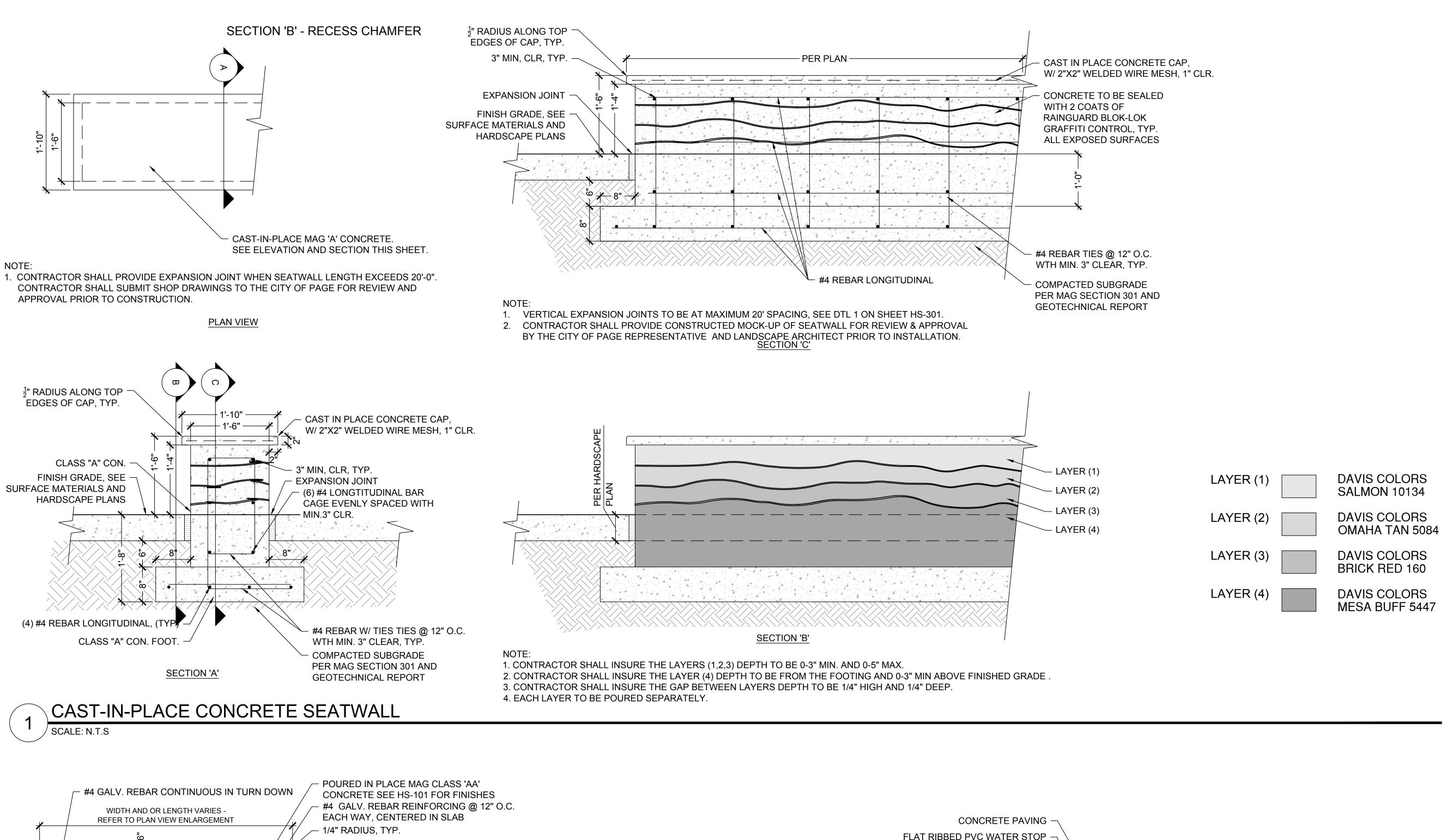
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SC/

HARD



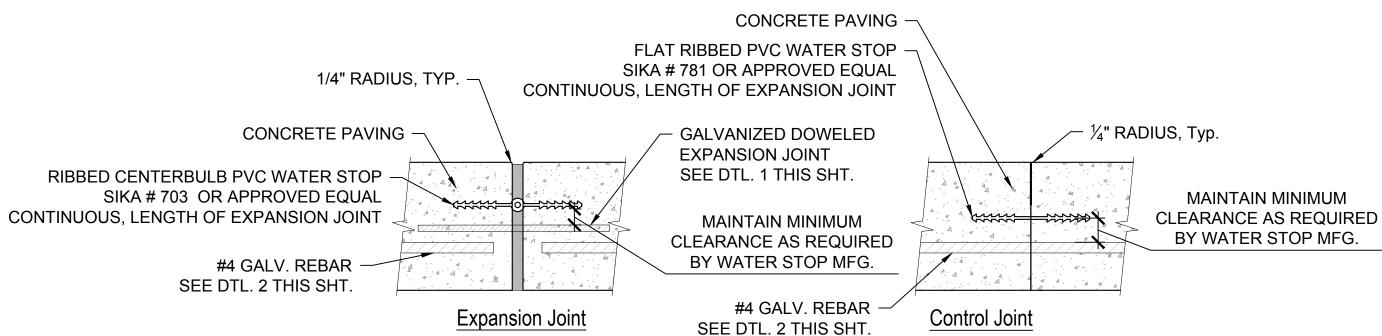
8" X 12" TURNDOWN, TYP. @ ALL EDGES, UNLESS NOTED OTHERWISE 12" OF IMPORTED LOW SWELL POTENTIAL MATERIAL PER GEOTECHNICAL REPORT **RECOMMENDATIONS** COMPACTED SUBGRADE PER MAG SPLASH PAD CONCRETE SLAB NOTES: SECTION 301AND GEOTECHNICAL REPORT 1. FOR CONTINUOUS WATER STOP EXPANSION JOINTS IN SPLASH 2. 3" MINIMUM CLEAR REBAR WHERE SOIL TO CONCRETE CONTACT.

PAD SLAB REFER TO DTL. 3, THIS SHEET.

3. 24" MIN. LAP SPLICE ALL BARS.

4. REFER TO ELECTRIC PLANS FOR EQUIPOTENTIAL BONDING GRID

SPLASH PAD 6" CONCRETE SLAB SCALE:N.T.S



NOTES:

SCALE:N.T.S

CONTRACTOR SHALL UTILIZE MANUFACTURED FABRICATED FITTINGS AT ALL CHANGES IN DIRECTION AND SPLICE IN ACCORDANCE W/ MANUFACTURERS RECOMMENDATIONS

2. ALL JOINTS IN SPLASH PAD SHALL UTILIZE WATER STOPS

WATER STOPS AT SPLASH PAD SLAB

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CONSULTANT(S):



AD

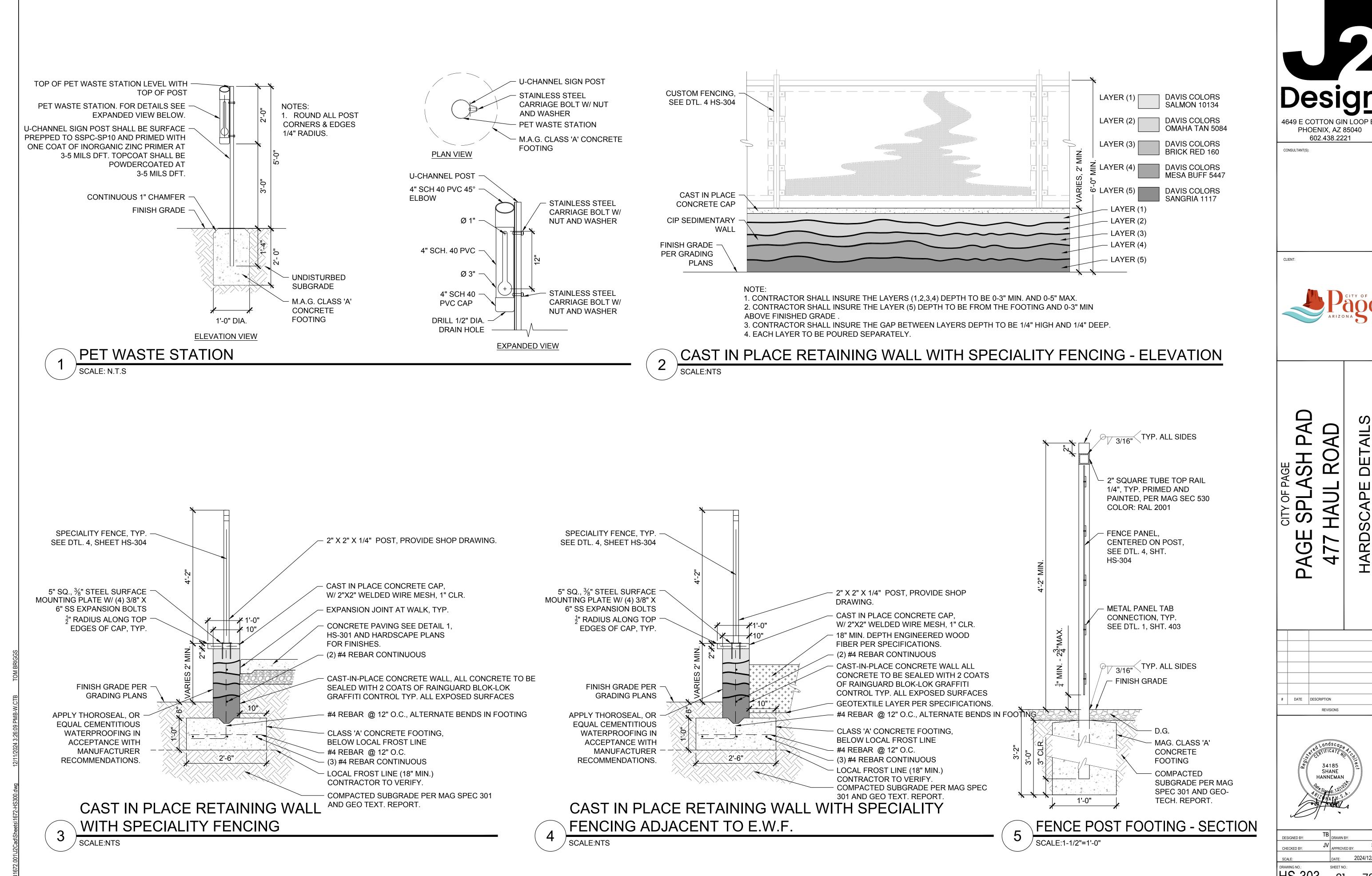
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PA

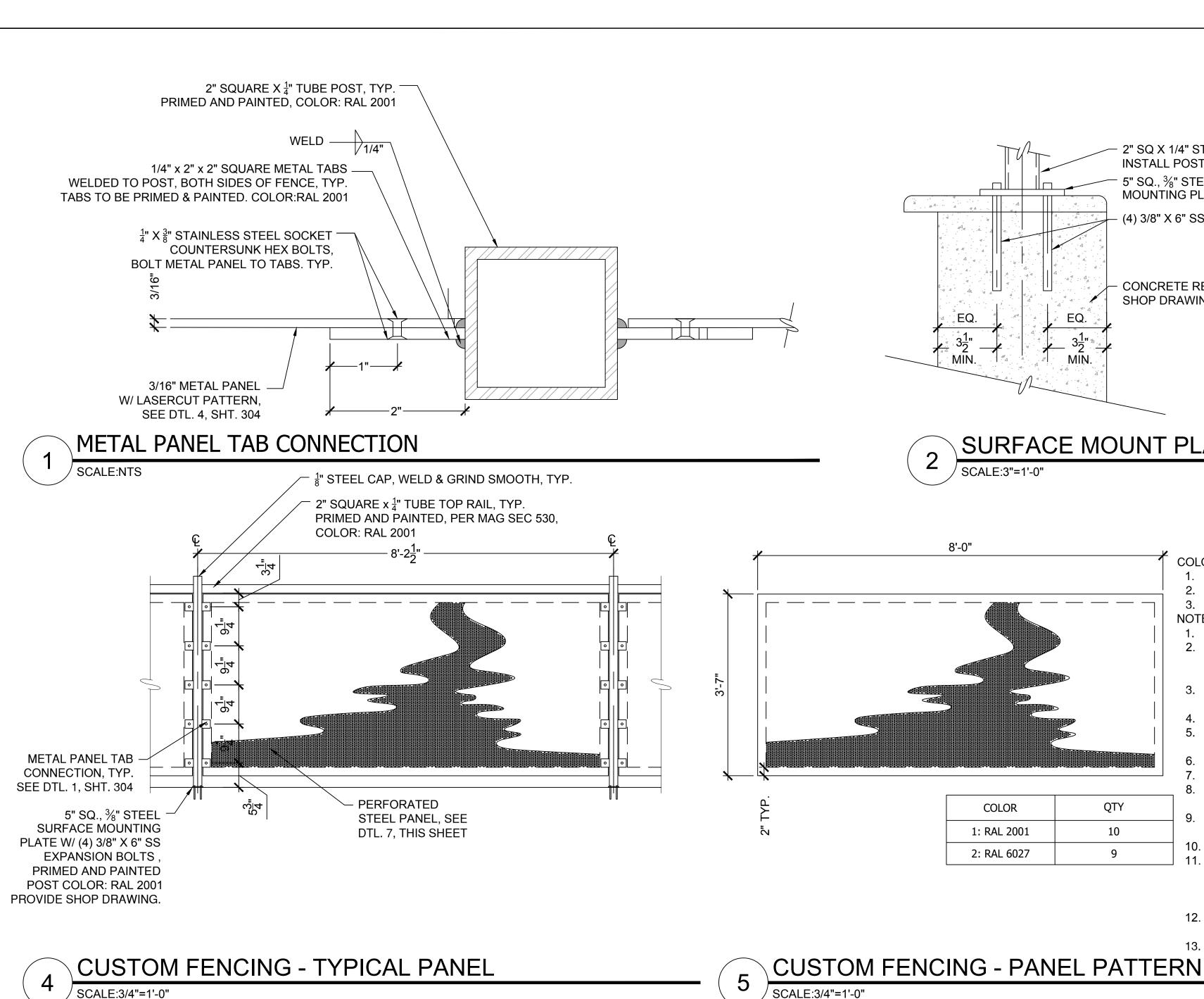


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Design 4649 E COTTON GIN LOOP B2

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2" SQ X 1/4" STEEL POST. INSTALL POST VERTICALLY. 5" SQ., 3/8" STEEL SURFACE MOUNTING PLATE (4) 3/8" X 6" SS EXPANSION BOLTS CONCRETE RETAINING WALL PER SHOP DRAWINGS. MIN.

SURFACE MOUNT PLATE SCALE:3"=1'-0"

QTY

10

COLOR

1: RAL 2001

2: RAL 6027

<sup>1</sup>/<sub>8</sub>" STEEL CAP, WELD & GRIND SMOOTH, TYP. 2" SQUARE TUBE TOP RAIL 1/4", TYP. PRIMED AND PAINTED, PER MAG SEC 530 COLOR: RAL 2001 FENCE PANEL, CENTERED ON POST, SEE DTL. 4, SHT. HS-304 METAL PANEL TAB CONNECTION, TYP. SEE DTL. 1, SHT. 403  $2\frac{3}{4}$ "MAX. ⊘<sub>// 3/16"</sub> TYP. ALL SIDES <u>-</u>14 CAST IN PLACE CAP CAST IN PLACE RETAINING WALL POST SURFACE MOUNT PLATE PER DTL. 2 THIS SHEET POST - SECTION

#### **COLOR NOTES:**

1. SEE HS-305 - HS-307 FOR LOCATIONS.

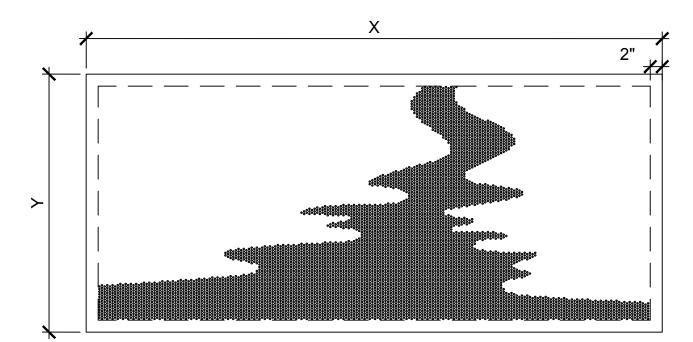
2. COLOR DRAW-DOWNS SHALL BE TO LANDSCAPE ARCHITECT AND CITY REPRESENTATIVE FOR REVIEW AND APPROVAL.

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

3. PANELS TO BE PRIMED AND POWDER COATED FROM PANEL MANUFACTURER.

#### NOTES:

- 1. PATTERN TO BE WATERJET CUT PER MANUFACTURER SPECIFICATIONS.
- 2. CONTRACTOR SHALL FIELD VERIFY/FIELD MEASURE ALL PANEL DIMENSIONS PRIOR TO FABRICATION. FINAL FIELD MEASUREMENTS SHALL GOVERN. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS WITH VERIFIED FIELD DIMENSIONS INCLUDED FOR LANDSCAPE ARCHITECT AND CITY REPRESENTATIVE REVIEW AND APPROVAL PRIOR TO FABRICATION.
- 3. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND SUBMITTALS OF ALL HARDWARE, STEEL MEMBERS AND PANELS FOR REVIEW & APPROVAL TO LANDSCAPE ARCHITECT AND CITY REPRESENTATIVE PRIOR TO FABRICATION
- 4. ALL METAL MEMBERS SHALL BE GROUND SMOOTH/ROUNDED TO BE FREE OF ANY SHARP EDGES, CORNERS AND BURRS. CONTRACTOR SHALL TEMPORARILY LAY OUT PANELS IN FIELD AND HAVE CITY REPRESENTATIVE REVIEW AND APPROVE
- PRIOR TO PERMANENT INSTALLATION. ALL WELDS SHALL CONFORM TO AWS STANDARDS. ALL FIELD WELDS SHALL BE TESTED BY NON-DESTRUCTIVE METHODS.
- 7. PAINT ALL SCREWS AND FASTENERS TO MATCH ADJACENT PAINT COLORS
- ALL STEEL COMPONENTS SHALL BE POWDER COATED. ANY REQUIRED FIELD PAINTING SHALL BE PRIMERED PRIOR TO PAINTING.
- 9. CONTRACTOR SHALL PROVIDE PAINT DRAW-DOWNS SAMPLES TO CITY'S / OWNER'S REPRESENTATIVE AND OBTAIN
- WRITTEN APPROVAL OF SELECTED COLOR(S) AND PRODUCTS PRIOR TO ORDERING AND PAINTING. 10. FENCE PAINT COLOR TO BE RAL 2001 OR RAL 6027 WITH COLOR SAMPLE SUBMITTED FOR APPROVAL.
- 11. ALL STEEL COMPONENTS SHALL HAVE SURFACE PREPARATION OF SSPC SP10. PRIME COAT SHALL BE ONE COAT OF REINFORCED INORGANIC ZINC PRIMER AS SPECIFIED AT 3-5 MILS DFT. TOP COAT WITH ONE COAT OF ALIPHATIC ACRYLIC URETHANE AS SPECIFIED AT 3-5 MILS DFT. ALL EDGES, BOLTS, AND WELDS TO RECEIVE STRIPE COAT OF ALIPHATIC
- 12. CONTRACTOR SHALL SUBMIT 2'X2' DRAW DOWN SAMPLES OF EACH COLOR SPECIFIED TO CONSTRUCTION MANAGER FOR REVIEW AND APPROVAL.
- 13. OPENINGS SHALL NOT EXCEED 4" IN DIAMETER.



#### NOTES:

SCALE:3/4"=1'-0"

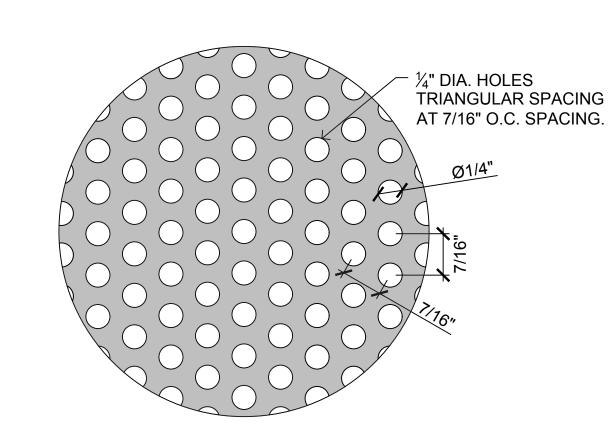
SEE HS-305 - HS-307 FOR LOCATIONS.

CONTRACTOR SHALL FIELD VERIFY/FIELD MEASURE ALL PANEL DIMENSIONS, INCLUDING CUSTOM PANELS PRIOR TO FABRICATION. CUSTOM PANEL DIMENSIONS HAVE BEEN PROVIDED AS A GUIDE; FINAL FIELD MEASUREMENTS SHALL GOVERN. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS WITH VERIFIED FIELD DIMENSIONS INCLUDED FOR LANDSCAPE ARCHITECT AND CITY REPRESENTATIVE REVIEW AND APPROVAL PRIOR TO FABRICATION.

**CUSTOM FENCING - CUSTOM PANEL DIMENSIONS** 

LASERCUT PATTERN ENDS 2" CLR.FROM METAL PANEL EDGES, TYP.

CUT PANEL	X (WIDTH)	Y (HEIGHT)
A	5.84	3.58
В	7.3	3.58
С	6.4	3.58
D	0.96	3.58
E	6.16	3.58
F	4.54	3.58
G	6.36	3.58
Н	5.6	3.58
I	4.69	3.58



PERFORATION PATTERN SAMPLE

SCALE:NTS



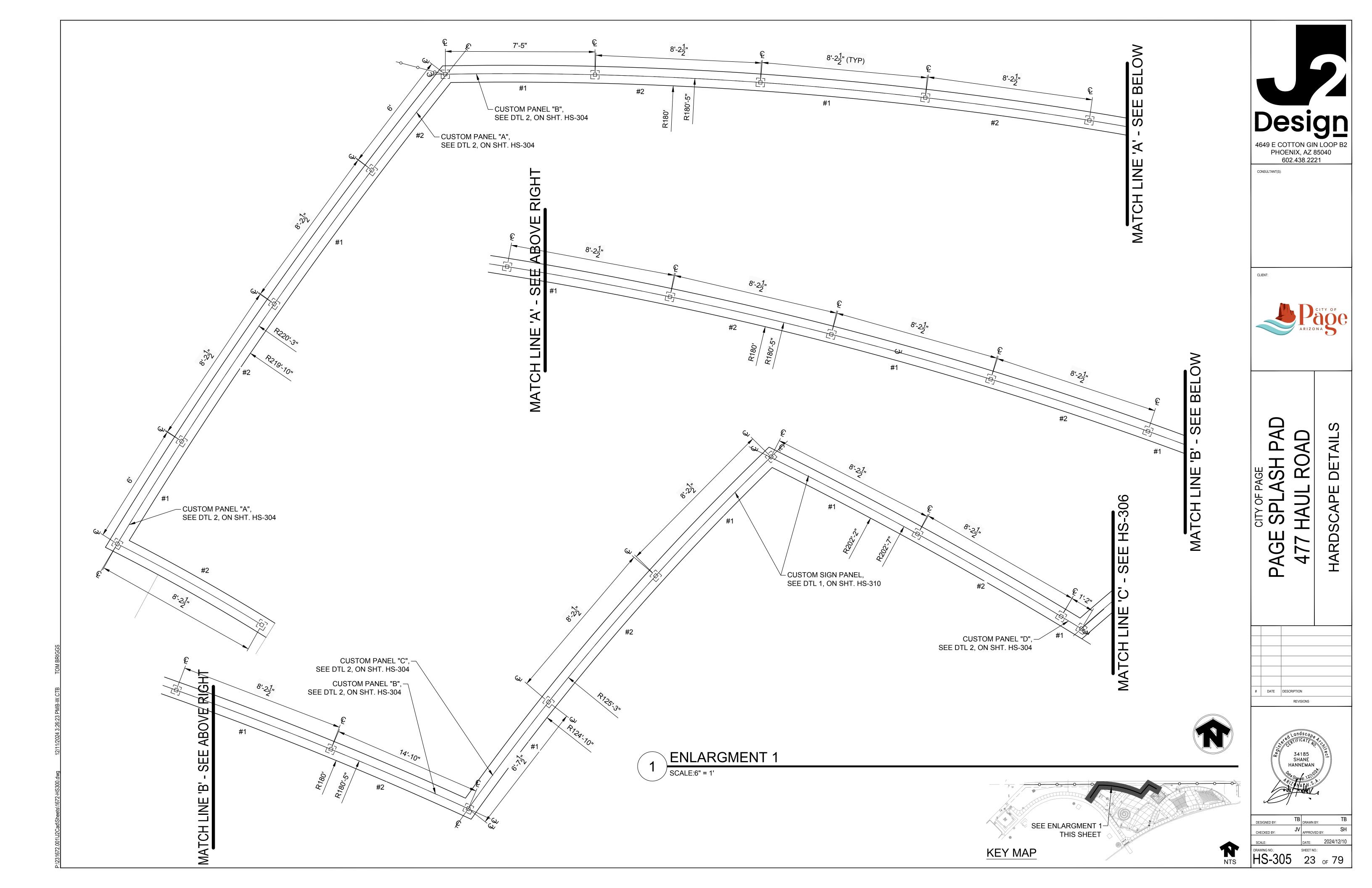


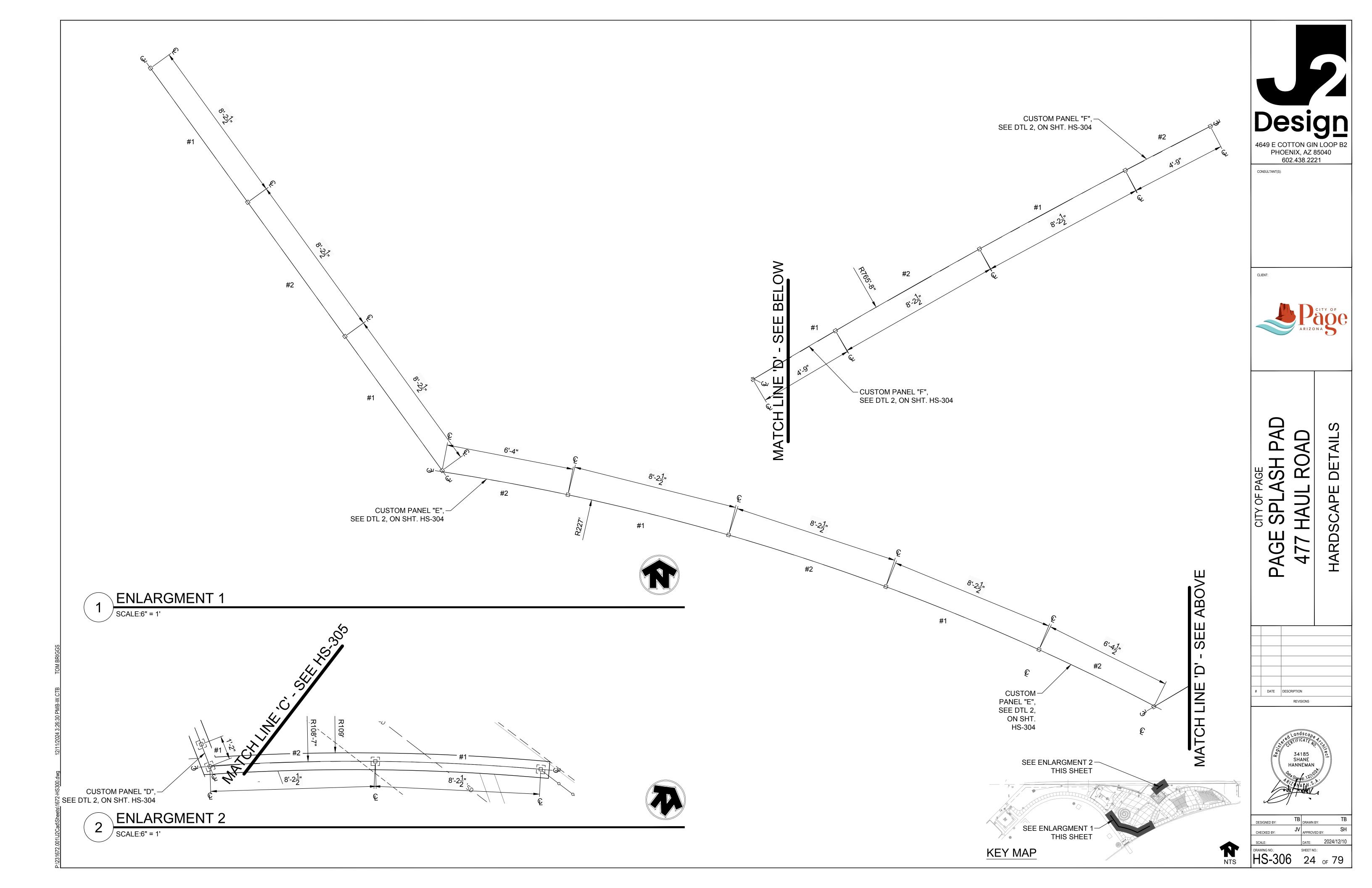
PAD SH SP H (D) 4 PA

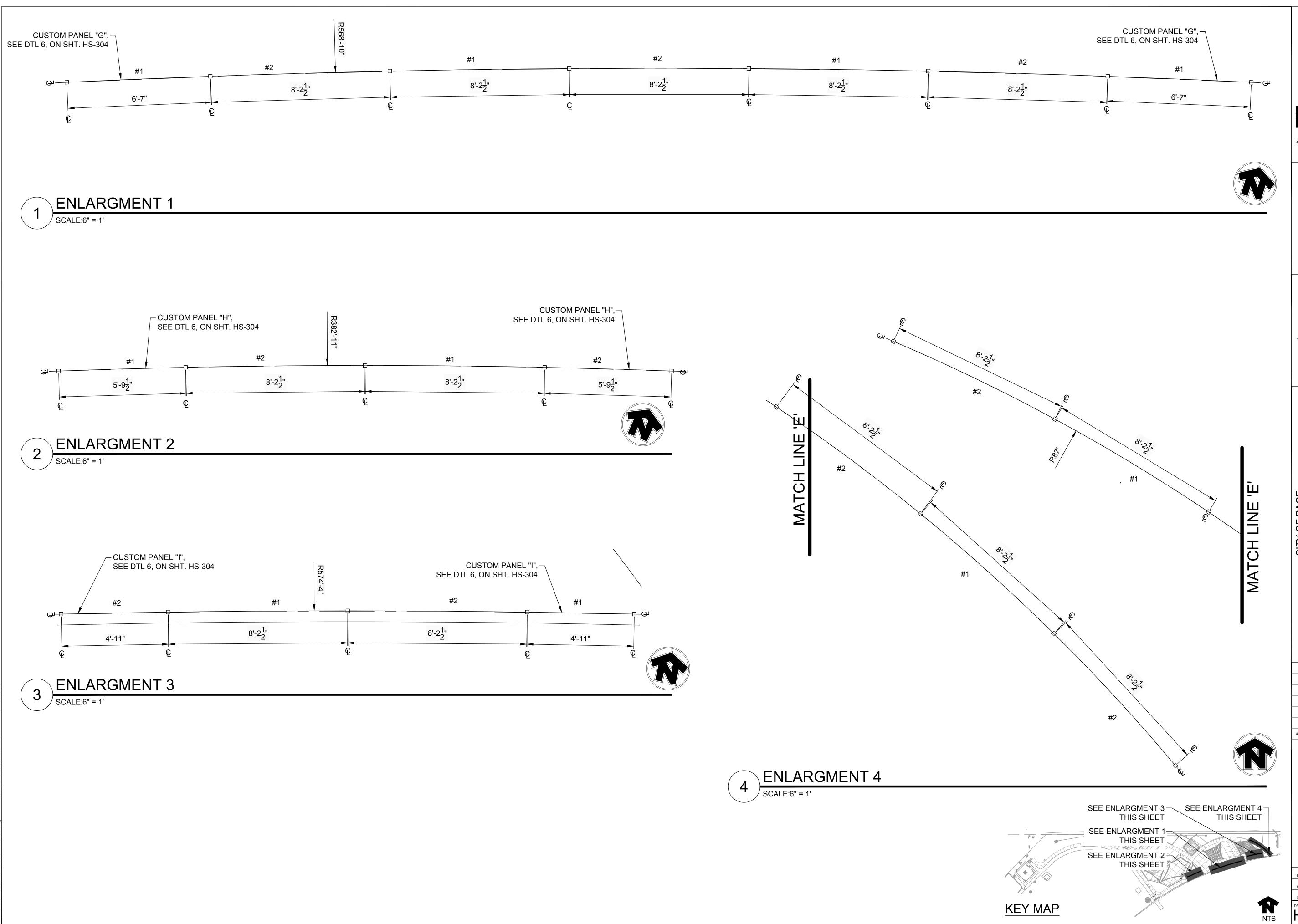
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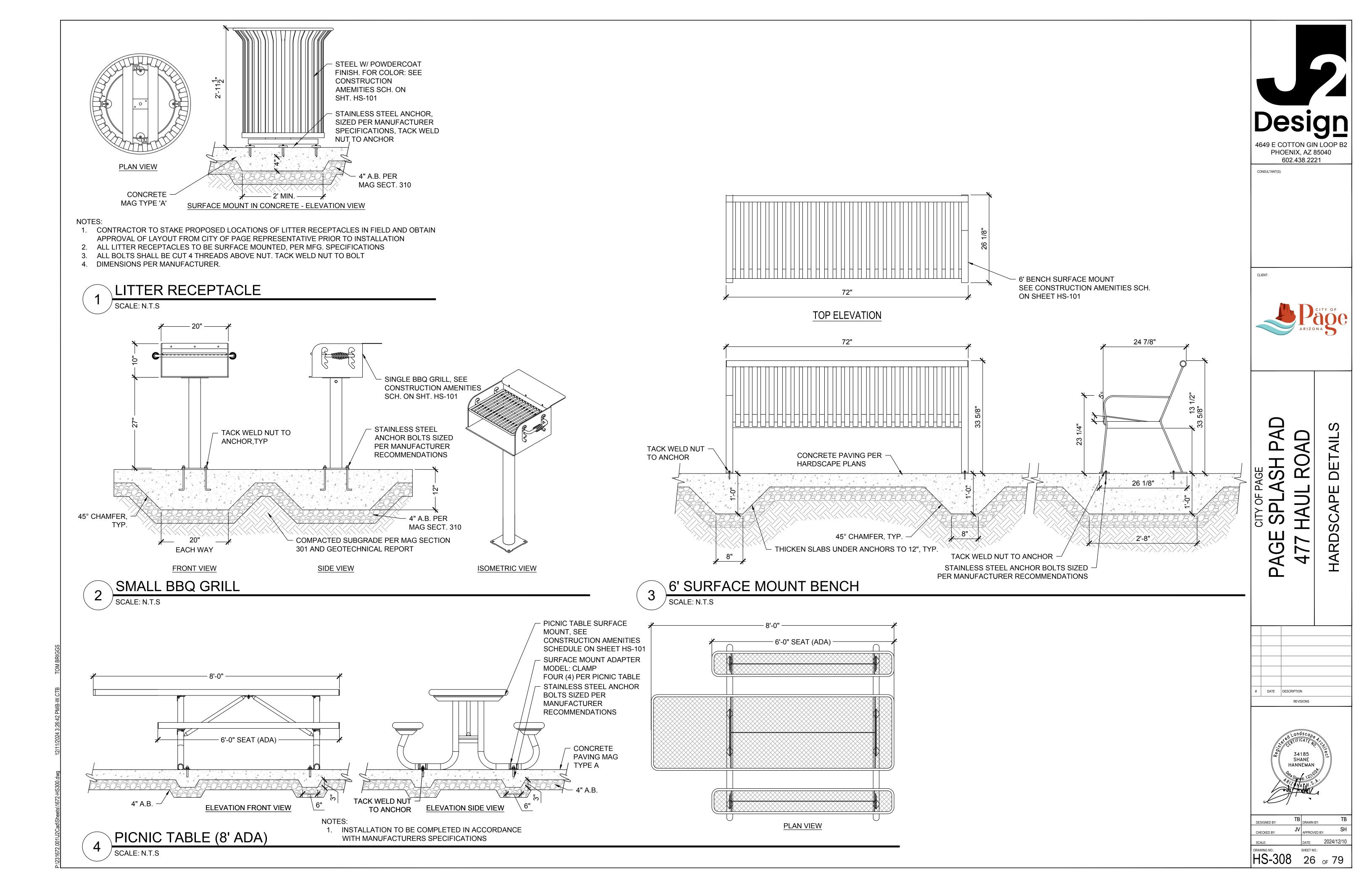
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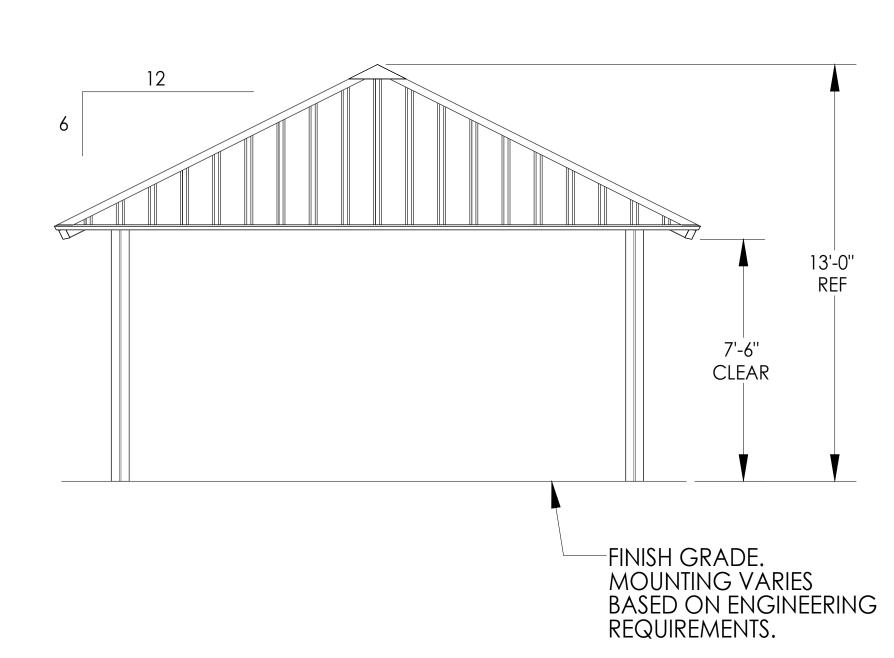
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# **GENERAL ROOF NOTES:**

- METAL ROOFING:

   24 GAUGE

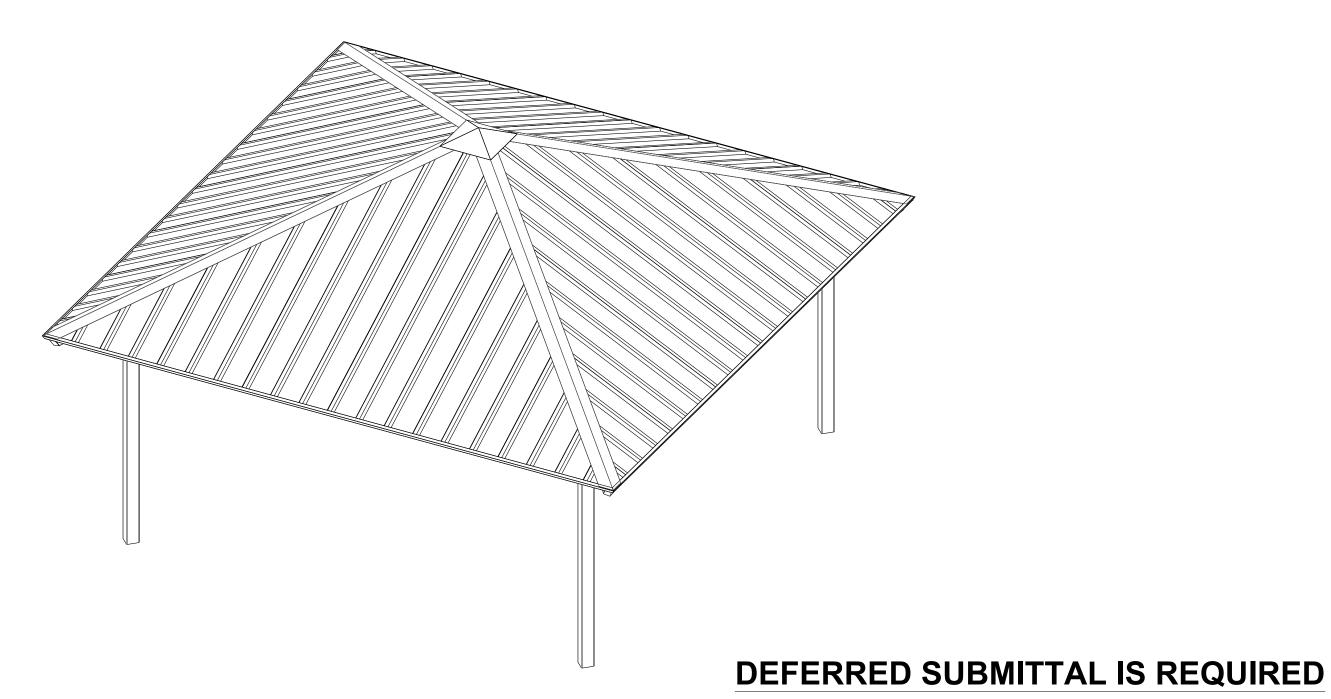
   GALVALUME COATED

   KYNAR 500 PAINTED

  TRIM COLOR MATCHES ROOF

  SEE POLIGON.COM FOR

  COLOR OPTIONS



RAMADA NOTES:

- 1. DEFERRED SUBMITTAL IS REQUIRED: CONTRACTOR SHALL PROVIDE SEALED STRUCTURAL CALCULATIONS FROM AN ARIZONA PROFESSIONAL ENGINEER AND CONSTRUCTION DETAILS TO CITY OF PAGE AND LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO FABRICATION AND INSTALLATION OF RAMADA. LANDSCAPE ARCHITECT'S REVIEW IS FOR DESIGN INTENT ONLY. THE CONTRACTOR IS RESPONSIBLE FOR ALL PERMITTING PROCESSES AND FEES.
- 2. RAMADA FRAME AND COLUMNS SHALL BE PREPARED WITH ZINC RICH PRIMER AND POWDER COATED. ENTIRE STRUCTURE TO RECEIVE ANTI -GRAFFITI COATING FROM MANUFACTURER. FINAL COLOR SELECTIONS PER CITY OF PAGE.
- 3. ROOF SHALL BE CONSTRUCTED FROM 24 GAUGE 16" CORRUGATED STEEL COATED WITH 20 YEAR WARRANTED KYNAR 500 TOP FINISH.
- 4. ALL ELECTRICAL CONDUITS TO BE CONCEALED WITHIN COLUMNS AND BEAMS OF RAMADAS.
- 5. ALL BOLTED CONNECTIONS SHALL BE HIDDEN.

# STOP!!

NOT FOR CONSTRUCTION

USE FOR PRELIMINARY PLANNING AND ESTIMATING ONLY



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CONSULTANT(S):



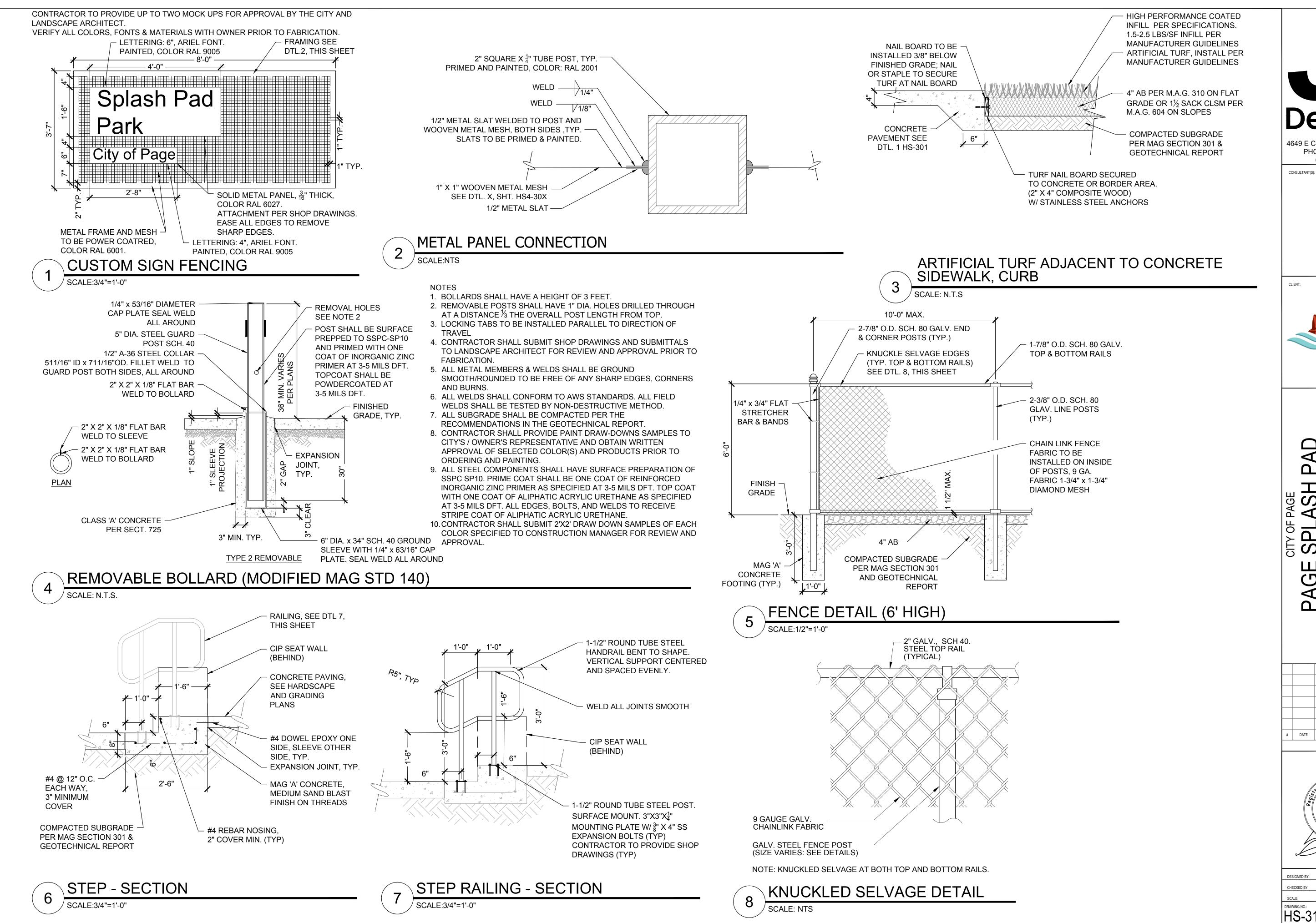
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RAMADA DETAIL



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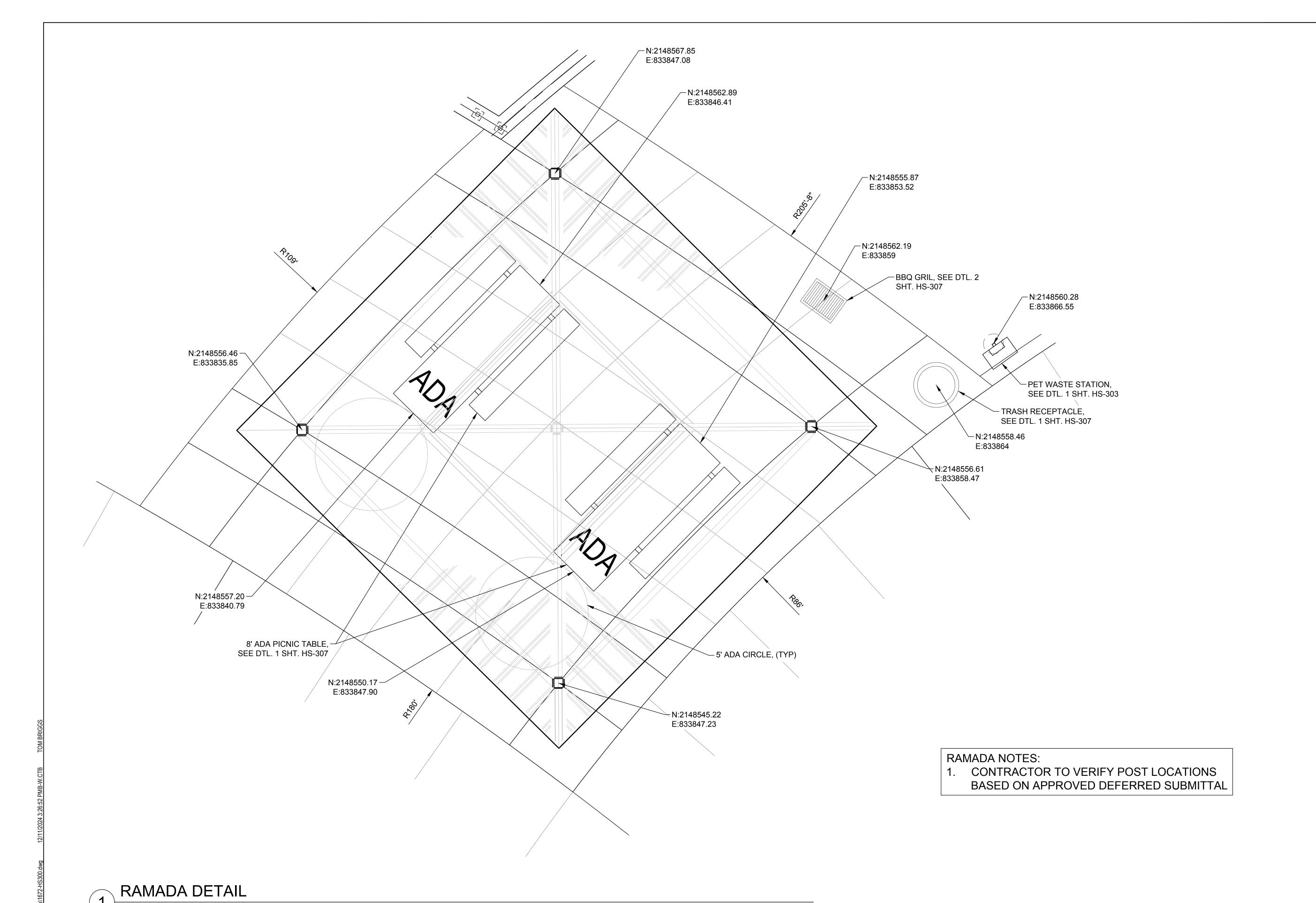
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DATE DESCRIPTION

34185

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Design

4649 E COTTON GIN LOOP B2
PHOENIX, AZ 85040
602.438.2221

CONSULTANT(S):

LIENT:



PAGE SPLASH PAD
477 HAUL ROAD

# DATE DESCRIPTION



TB DRAWN BY: TB

CHECKED BY: JV APPROVED BY: SH

SCALE: DATE: 2024/12/10

DRAWING NO.: SHEET NO.:

HS-311 29 OF 79

- 1.1 THESE DESIGN DOCUMENTS WERE PREPARED BY 'VORTEX AQUATIC STRUCTURES INTERNATIONAL' FOR THE USE OF THEIR CLIENT ONLY. THE MATERIAL USED AND IDENTIFIED IN THEM REFLECTS VORTEX AQUATIC STRUCTURES INTERNATIONAL'S BEST JUDGMENT IN LIGHT OF THE INFORMATION AVAILABLE AT THE TIME OF PREPARATION. FOR THE PURPOSE
- INTERNATIONAL' IS SYNONYMOUS WITH 'VORTEX'.

  1.2 VORTEX ACCEPTS NO RESPONSIBILITY FOR DAMAGES, IF ANY,
  SUFFERED BY ANY THIRD PARTY AS A RESULT OF DECISIONS MADE OR
  ACTIONS BASED ON THESE DESIGN DOCUMENTS WITHOUT THE PREVIOUS
  CONSULTATION TO VORTEX.

OF THESE DESIGN DOCUMENTS, 'VORTEX AQUATIC STRUCTURES

- 1.3 ALL WORK, MATERIALS AND THEIR ASSEMBLIES SHALL CONFORM TO THE STANDARDS, REGULATIONS AND CODES CURRENTLY IN FORCE FOR ALL TRADES, AISC, ACNOR, EN, OR IBC.
- 1.4 THESE DESIGN DOCUMENTS DO NOT INDICATE THE METHOD OR MEANS OF CONSTRUCTION. WHEN APPLICABLE, THE CONTRACTORS SHALL SUPERVISE AND DIRECT ALL THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, PROCEDURES AND SEQUENCES AS PER STANDARD BEST PRACTICES.
- 1.5 DO NOT SCALE DRAWINGS.

ANY UNDERGROUND SERVICES ETC.

- 1.6 USE ONLY THOSE MARKED "Issued for Bid".
- 1.7 THE CONTRACTOR SHALL REVIEW THESE DESIGN DOCUMENTS AND REPORT ANY CONFLICTS OR OMISSIONS TO THE VORTEX IMMEDIATELY.
- 1.8 TEMPORARY SUPPORTS, WHICH WILL BE REQUIRED DURING CONSTRUCTION, SUCH AS FORMWORK, BRACING, SHORING, ETC. ARE NOT SHOWN ON THESE DRAWINGS AND ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT ALL SAFE CONSTRUCTION PROCEDURES ARE FOLLOWED.
- 1.9 THE FOLLOWING SPECIFICATIONS ARE VORTEX'S MINIMUM RECOMMENDATIONS TO OBTAIN A QUALITY PRODUCT. THE CONTRACTOR SHALL FOLLOW THE LOCAL CODES IF MORE RESTRICTIVE.
- 1.10 ALL SEEFLOW COMPONENTS TO BE SNUG-TIGHT ONLY. USING POWER TOOLS OR TIGHTEN HARDWARE FULLY-TENSIONED CAN PRODUCE CRACKING ON THE PLASTIC.

#### 2 EXCAVATION

- 2.1 ANY SHORING OR TEMPORARY SHORING NOT SHOWN ON DRAWINGS WILL BE EXECUTED, IN A SAFE MANNER, BY THE GENERAL CONTRACTOR.
  2.2 IT IS THE RESPONSIBILITY OF OTHERS TO VERIFY THE EXISTENCE OF
- 2.3 IF AVAILABLE, REFER TO SOIL REPORT FOR BACKFILL REQUIREMENTS. ALL BACKFILL (FOR SLAB ON GRADE, ETC.) MUST BE DONE IN ACCORDANCE WITH THE RECOMMENDATIONS OF A QUALIFIED PROFESSIONAL. USE ONLY FREE DRAINING, GRANULAR, MINERAL, INERT AND NON- REACTIVE FILL.
- 3 FOUNDATIONS
- 3.1 REFER TO SOIL REPORT FOR RECOMMENDATIONS.
- 3.2 ALL FOOTINGS SHALL REST ON A HOMOGENEOUS LAYER OF UNDISTURBED SOIL OR ENGINEERED BACKFILL WITH A MINIMUM ALLOWABLE BEARING CAPACITY OF 100KPA (2000 PSF) AND MAXIMUM DIFFERENTIAL SETTLEMENT OF 19 MM (0.75"). ALL ORGANIC MATERIAL SHALL BE REMOVED.
- 3.3 IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE SOIL AT ALL FOOTING LOCATIONS BE VERIFIED BY A QUALIFIED SOILS EXPERT BEFORE POURING FOOTINGS TO ENSURE FOOTINGS REST ON APPROPRIATE STRATA.
- 3.4 WHEN APPLICABLE, FOLLOW GEOTECHNICAL EXPERT
  RECOMMENDATIONS FOR ALL EXTERIOR FOOTINGS TO ENSURE FROST

#### 4 CONCRETE

- 4.1 ALL CONCRETE MATERIALS, PROCEDURES, TOLERANCES & WORKMANSHIP SHALL CONFORM TO THE LATEST ISSUES OF ACI-318 AND ACI 317 OR ACNOR CAN3-A23.1 & A23.2, DEPENDING ON PROJECT LOCATION.
- 4.2 CONCRETE THAT HAS BEEN IN THE TRUCKS LONGER THAN 2 HOURS SHALL BE REJECTED. DO NOT ADD WATER TO THE CONCRETE IN THE TRUCKS OR ON THE SITE UNDER ANY CIRCUMSTANCES.
- 4.3 USE MAXIMUM 76mm (3") SLUMP, 19mm (3/4") AGGREGATE, UNLESS OTHERWISE-NOTED. USE 5-7% AIR ENTRAINMENT FOR CONCRETE EXPOSED TO WEATHER ONLY.
- 4.4 ALL GROUT SHALL BE NON-SHRINK TYPE WITH A MINIMUM 28 DAYS STRENGTH OF 35.0 MPA (5000 PSI). USE 25 MM (1") GROUT UNDER ALL STEEL COLUMN BASE PLATES.
- 4.5 CONCRETE STRENGTH @ 28 DAYS TO BE:
- 4.5.1 FOUNDATIONS (FOOTINGS): 25.0 MPA (3500 PSI), UNLESS OTHERWISE NOTED.
- 4.5.2 INTERIOR SLAB ON GRADE: 25.0 MPa (3500 PSI), UNLESS OTHERWISE NOTED.
- 4.5.3 EXTERIOR SLAB ON GRADE: 32.0 MPa (4500 PSI), UNLESS OTHERWISE NOTED.
- 4.6 MINIMAL RE-BAR COVER:
- 4.6.1 CONCRETE POURED ON-GRADE = 76mm (3") COVER
- 4.6.2 CONCRETE POURED INTO FORMWORK BUT EXPOSED TO SOIL AND WEATHER FOR REBAR 15m (#4) AND UNDER = 50mm (2") COVER
- REINFORCING STEEL
- 5.1 DEPENDING ON PROJECT LOCATION, ALL REINFORCING STEEL SHALL CONFORM TO ASTM A615 (BARS 15m (#4) TO BE GRADE 60 WITH SUPPLEMENTARY REQUIREMENTS ON S1.
- BARS SMALLER THAN 15m (#4), TO BE GRADE 40); OR TO ACNOR GRADE G30.12 [FY = 400MPA (60,000 PSI), UNLESS OTHERWISE NOTED].
- 5.2 USE CONCRETE, PLASTIC OR STEEL SUPPORT BARS, AS PER ACI (MANUAL OF STANDARD PRACTICE FOR DETAILING CONCRETE STRUCTURES). THE RE-BAR PLACER MUST REMAIN ON-SITE DURING POURS
- TO VERIFY CORRECT POSITIONING OF RE-BARS. SLANT UPPER REINFORCING STEEL IN LINE WITH THE SLOPE OF THE SLAB, IF APPLICABLE. 5.3 BARS SHALL BE SECURELY WIRED PER LATEST EDITION OF CRSI
- (RECOMMENDED PRACTICE FOR PLACING REINFORCING BARS).
  5.4 ALL REINFORCING STEEL IS TO BE KEPT CLEAN AND FREE OF MUD, SNOW, ICE, AND ANY CONTAMINANTS.

- 5.5 VERTICAL AND CONTINUOUS REBAR SHALL BE LAPPED TO DEVELOP FULL TENSILE CAPACITY OF THE BAR. FOR 15M (#4) BARS MINIMUM LAP OF 610mm (24").
- EXTERIOR / INTERIOR SLAB ON GRADE
- 6.1 FOLLOW THE GEOTECHNICAL EXPERT RECOMMENDATIONS FOR PREPARATION OF SOIL BEFORE POURING THE CONCRETE. ALL GRANULAR MATERIAL SHALL BE MOISTENED
- IMMEDIATELY BEFORE POURING THE CONCRETE. WATER AS NEEDED. DO NOT USE A VAPOR BARRIER.
- 6.2 NO TRUCKS ARE PERMITTED ON THE CONSTRUCTION SITE (OF THE SLAB) AFTER THE FINAL COMPACTION, EITHER BEFORE OR DURING, THE POUR.
- 6.3 SLAB TO BE MINIMUM 6" THICK, REINFORCED WITH 10m (#3) @ 300mm (12") C/C REBAR PLACED IN BOTH DIRECTIONS AT MID-HEIGHT OF THE SLAB, UNLESS OTHERWISE NOTED ON PLANS. FOR ELEVATION/PLAYNUK REQUIREMENT OF THICKENED SLAB/MANIFOLD LOCATION, REFER TO ELEVATION INSTALLATION PACKAGE FOR DETAILS.
- 6.4 REFER TO CONCRETE SECTION FOR MINIMUM COMPRESSIVE STRENGTH AND AIR-ENTRAINMENT REQUIREMENTS.

#### 6.5 FINISHING WILL BE MEDIUM BROOM.

- 6.6 CONTROL JOINTS (SAW-CUTS) TO BE LOCATED IN EACH DIRECTION, AT REGULAR INTERVALS, WITH A MAXIMUM DISTANCE OF 3 METERS (10 FEET). SHALL BE MINIMUM 3 MM (1/8") WIDE AND SHALL PENETRATE THE SLAB TO A MINIMUM DEPTH OF 1/3 OF THE THICKNESS OF THE SLAB. CONTROL JOINTS SHOULD BE DONE AS SOON AS POSSIBLE WITHOUT DAMAGING THE CONCRETE, BUT NO LATER THAN 18 HOURS AFTER POURING. 6.7 WHEN POSSIBLE AND TO AVOID SHRINKAGE CRACKING, HUMIDITY SHALL BE MAINTAINED FOR 7 DAYS DURING THE CURING PERIOD OF THE SLAB. WATER AND USE POLYETHYLENE CLOTH OR BAG. THE CONCRETE MUST DRY UNIFORMLY.
- 7 CONCRETE WORK IN COLD OR HOT WEATHER (MINIMUM REQUIREMENTS)
- 7.1 COLD WEATHER REQUIREMENTS APPLY WHEN THE MEAN AIR IS LESS THAN 5 DEGREES CELSIUS (40 DEGREES FAHRENHEIT).
- 7.2 GENERAL REQUIREMENTS FOR COLD WEATHER CONCRETE WORK SHALL BE AS PER ACI 306R-88; OR AS PER THE NBC'S LATEST REQUIREMENTS INCLUDING THE LATEST ISSUE OF CSA STANDARD CAN3-A23.1.
- 7.3 ALL SNOW AND ICE SHALL BE REMOVED FROM FORMS AND REBAR WITH STEAM AND COMPRESSED AIR BEFORE POURING. DO NOT USE DE-ICING SALT (CALCIUM CHLORIDE) OR ANY OTHER SALTS UNDER ANY CIRCUMSTANCES.
- 7.4 CONCRETE SHALL HAVE A MINIMUM TEMPERATURE OF 20 DEGREES CELSIUS AND A MAXIMUM TEMPERATURE OF 25 DEGREES CELSIUS WHILE POURING. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THESE REQUIREMENTS ARE SATISFIED. ANY CONCRETE THAT DOES NOT CONFORM MUST BE REJECTED.
- 7.5 THE SURFACE OF POURED CONCRETE SHALL BE PROTECTED BY MEANS OF SUITABLE COVERINGS AND INSULATION (TO BE DETERMINED BY TEMPERATURE) DURING THE CURING PROCESS.
- 7.6 GENERAL REQUIREMENTS FOR HOT WEATHER CONCRETE WORK SHALL BE AS PER ACI 305R-99; OR AS PER LOCAL CODE REQUIREMENTS.

#### B PIPING

- 8.1 WDS CONFIGURATION ARE SCHEMATIC AND MAY BE MOVED OR ADJUSTED ON SITE BY VORTEX CERTIFIED INSTALLER TO ADJUST FOR SITE CONDITIONS
- 8.2 ANY REQUIRED WATER METER ON THE CITY WATER MAIN SHALL BE PROVIDED BY INSTALLER. PRESSURE REGULATOR AND BACKFLOW PREVENTER WILL BE PROVIDED BY VORTEX.
- 8.3 ALL PIPE LINES TO FEATURES TO HAVE A 1% MINIMUM RECOMMENDED SLOPE FOR PROPER WINTERIZATION.
- 8.4 ALL LINE SIZING (FEATURE CONNECTION TABLE) ASSUMES A MAXIMUM DISTANCE OF 100 FEET BETWEEN THE WATER DISTRIBUTION MANIFOLD AND THE FURTHEST PLAY PRODUCT. DISTANCES ABOVE 100 FEET MAY REQUIRE AN INCREASE IN LINE SIZING. PLEASE CONTACT VORTEX.

  8.5 QUANTITY AND LOCATION OF DRAINS BASED ON MAXIMUM FLOW FOR THE INDICATED PIPE DIAMETER AT 1% SLOPE. MODIFICATIONS MAY BE REQUIRED DUE TO SPECIFIC SITE CONDITIONS AND LOCAL CODE.
- 8.6 PRESSURE LINES ARE RECOMMENDED TO BE SCHEDULE 80 PVC OR PEX, AND NON-PRESSURE LINES TO BE SCHEDULE 40, UNLESS OTHERWISE REQUESTED BY LOCAL CODE.
- 8.7 DRAINAGE LINES ARE RECOMMENDED TO BE SDR 35, UNLESS OTHERWISE REQUESTED BY LOCAL CODE.
- 8.8 PIPING SHOULD BE INSPECTED AFTER TRANSPORTATION FOR CUTS, SCRATCHES, GOUGES OR SPLITS; DAMAGED SECTIONS MUST BE DISCARDED OR CUT OUT.
- 8.9 PIPE SHALL BE INSTALLED BELOW THE FROST LEVEL NOT LESS THAN
  12" (ASTM F-645) UNLESS OTHERWISE REQUESTED BY LOCAL CODE.
  8.10 PIPE INSTALLATION MINIMUM COVER SHOULD BE EVALUATED
  ACCORDING TO ASTM D-2774, UNLESS OTHERWISE REQUESTED BY LOCAL
- 8.11 SPECIAL CONSIDERATIONS SHOULD BE TAKEN FOR THERMAL CONDITIONS, EXPANSION AND CONTRACTIONS DUE TO TEMPERATURE SHOULD BE EVALUATED BEFORE THE INSTALLATION BY THE CONTRACTOR. 8.12 VALVE NUMBER 1 IS LOCATED TO THE LEFT OF THE MANIFOLD FACING THE

#### SOLENOID.

- 8.13 MINIMUM 50 PSI REQUIRED AT THE INLET OF THE BACKFLOW PREVENTER AND PRESSURE REGULATING DEVICE.
- 8.14 MAXIMUM FLOW CAPACITY OF MANIFOLD IS 144 GPM. 8.15 TOTAL FLOW OF FEATURE IS 102 GPM.
- 8.15 TOTAL FLOW OF FEATURE IS 102 GPM.

  8.16 FACTORY MAYIMUM SEQUENCING FLOW
- 8.16 FACTORY MAXIMUM SEQUENCING FLOW IS 71.5 GPM ACTUAL FLOW MAY VARY DUE TO SITE CONDITIONS.

#### 9 ELECTRICAL

9.1 <u>EQUIPMENT BONDING</u>; FEATURES SHALL BE CONNECTED TO AN EQUIPOTENTIAL BONDING GRID WITH A SOLID RIGID COPPER CONDUCTOR, THE MINIMUM SIZE OF BONDING CONDUCTORS NOT BE SMALLER THAN #6



AMERICAN WIRE GAUGE (AWG) (16mm²) COPPER. BOND TO ALL METALLIC PARTS LOCATED IN THE SPLASHPAD/POOL AND TO THE REBAR, TO RUN CONTINUOUS TO THE WATER PUMP AND ELECTRICAL SUPPLY PANELS. SEE ELEVATION INSTALLATION DRAWING FOR BONDING DETAILS (BY INSTALLER).SPRAYLINKS FEATURE DO NOT REQUIRE BONDING.

9.2 GRID STRUCTURE; THE EQUIPOTENTIAL BONDING GRID SHALL COVER THE CONTOUR OF THE WATER BODY AREA AND ANY DECK EXTENDING 3FT (1m). HORIZONTALLY FROM THE INSIDE WALLS OF THE SPLASHPAD/WATER BODY. THE EQUIPOTENTIAL BONDING GRID SHALL BE ARRANGED IN A 12 IN (300mm). BY 12 IN (300mm). NETWORK OF CONDUCTORS IN A UNIFORMLY SPACED PERPENDICULAR GRID PATTERN WITH TOLERANCE OF 4 IN (100mm). A J-JUNCTION BOND CLAMP (DIRECT BURIAL CERTIFIED) CLAMPED TO A REBAR WITH WIRE LOOPED THROUGH CONNECTOR AND CLAMPED TO STEEL AND TO THE SPLASHPAD/POOL PUMP WATER

9.3 ALL ELECTRICAL EQUIPMENT SHALL BE GROUNDED; THE FOLLOWING EQUIPMENT SHALL BE GROUNDED. ALL ELECTRICAL EQUIPMENT LOCATED WITHIN 5FT (1.5 m) OF THE INSIDE WALL OF THE SPECIFIED BODY OF WATER." THIS EQUIPMENT ALSO INCLUDES (BUT NOT LIMITED TO): FEATURES, ELEVATIONS, DRAIN, REBAR, WATER INLET, SKIMMER, LADDER, SLIDES, DIVING STRUCTURE, UNDERWATER LIGHTING, JUNCTION BOXES, AND WATER CIRCULATING/HEATING EQUIPMENT.

ALL BONDING AND GROUNDING MUST COMPLY WITH NEC, CEC, AND LOCAL CODES.

9.4 <u>ALTERNATE MEANS</u>; WHERE STRUCTURAL REINFORCING STEEL IS NOT AVAILABLE OR IS ENCAPSULATED IN A NONCONDUCTIVE COMPOUND, A COPPER CONDUCTOR(S) SHALL BE UTILIZED WHERE THE FOLLOWING REQUIREMENTS ARE MET: (1) AT LEAST ONE MINIMUM 6 AWG BARE SOLID COPPER CONDUCTOR SHALL BE PROVIDED. (2) THE CONDUCTORS SHALL FOLLOW THE CONTOUR OF THE PERIMETER SURFACE. (3) ONLY LISTED SPLICES SHALL BE PERMITTED. (4) THE REQUIRED CONDUCTOR SHALL BE 450 TO 18 TO 24 IN (600mm) FROM THE INSIDE WALLS OF THE POOL. (5) THE REQUIRED CONDUCTOR SHALL BE SECURED WITHIN OR UNDER THE PERIMETER SURFACE (4 IN TO 6 IN (100mm TO 150mm). BELOW THE SUBGRADE.

9.5 <u>SPLASHPAD/POOL WATER</u>; WHERE NONE OF THE BONDED PARTS IS IN DIRECT CONNECTION WITH THE POOL WATER, THE POOL WATER SHALL BE IN DIRECT CONTACT WITH AN APPROVED CORROSION-RESISTANT CONDUCTIVE SURFACE THAT EXPOSED NOT LESS THAN 9 IN.2 (5800mm²) OF SURFACE AREA TO THE POOL WATER AT ALL TIMES. THE CONDUCTIVE SURFACE SHALL BE LOCATED WHERE IT IS NOT EXPOSED TO PHYSICAL DAMAGE OR DISLODGEMENT DURING USUAL POOL ACTIVITIES, AND IT SHALL BE BONDED IN ACCORDANCE WITH NEC, CEC, AND LOCAL CODES.

9.6 WIRING FROM THE CONTROLLER TO EACH ACTIVATOR SHALL BE #22 AWG. A TOTAL OF TWO (2) CONDUCTORS PER ACTIVATOR.CABLE LENGTH UP TO 300' (100m), PROVIDED BY INSTALLER.

9.7 ALL CONNECTIONS TO THE CONTROLLER AND OTHER VORTEX ELECTRICAL PANEL SHALL BE PERFORMED USING AN APPROVED NEMA 4X CONNECTOR.

9.8 WIRE FROM MAIN POWER TO VORTEX PANEL TO BE DETERMINED BY OTHERS RESPECTING THE LOCAL CODE.

9.9 MAINTAIN A MINIMUM CLEARANCE ZONE OF 36" IN FRONT OF ELECTRICAL PANEL, UNLESS OTHERWISE REQUESTED BY LOCAL CODE.
9.10 AS PER ELECTRICAL CONSTRUCTION AND SAFETY CODES: CONTROLLER AND ANY OTHER ELECTRICAL ENCLOSURES MUST BE HARD-WIRED TO A GROUND FAULT CIRCUIT INTERRUPTER (GFCI) FROM THE INPUT POWER SOURCE.

9.11 ALL ELECTRICAL WORK SHOULD BE PERFORMED BY A LICENCE ELECTRICIAN IN ACCORDANCE TO LOCAL ELECTRICAL CONSTRUCTION AND SAFETY CODES.

9.12 THE MAESTROPRO CONTROL PANEL IS POWERED THROUGH A MAESTROPRO POWER BOX.

9.13 THE POWER CABLE TO MAESTROPRO POWER BOX IS SUPPLIED BY INSTALLER.

WITH 24 VAC AND 12 DIGITAL INPUTS.
9.15 FOR REMOTE ACCESS ABILITY, A HARD CONNECTION TO AN EXISTING NETWORK IS REQUIRED USING A CAT 5 CABLE OR A CELLULAR NANO-SIM CARD WITH DATA-PLAN.

9.14 THE MAESTROPRO CONTROL PANEL INTEGRATES 24 DIGITAL OUTPUTS

# NOT FOR CONSTRUCTION. CONTRACTOR TO SUBMIT SHOP DRAWINGS

Drawing #	Drawing Name
SP-100	Cover Sheet
SP-201	Spray Zone Layout - Phase 1
SP-202	Site Layout - Phase 1
SP-203	Anchor Plan - Phase 1
SP-204	Spray Zone Layout - Phase 2
SP-205	Site Layout - Phase 2
SP-206	Anchor Plan - Phase 2
SP-301	Embed Details - Phase 1
SP-302	Embed Details - Phase 1
SP-303	Embed Details - Phase 1
SP-304	Embed Details - Phase 2
SP-305	Embed Details - Phase 2
SP-401	Plumbing & Electrical Layout - Phase 1
SP-402	Plumbing Details - Phase 1
SP-403	Plumbing & Electrical Layout - Phase 2
SP-404	Plumbing Details - Phase 2
SP-501	Bonding Layout - Phase 1
SP-502	Electrical Details - Phase 1
SP-503	Bonding Layout - Phase 2
SP-504	Electrical Details - Phase 2
SP-601	Feature Drawings - Phase 1
SP-602	Feature Drawings - Phase 2

Design

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602.438.2221

CONSULTANT(S):



PAGE SPLASH PAD
477 HAUL ROAD
PLASH PAD COVER SHEET

# DATE DESCRIPTION

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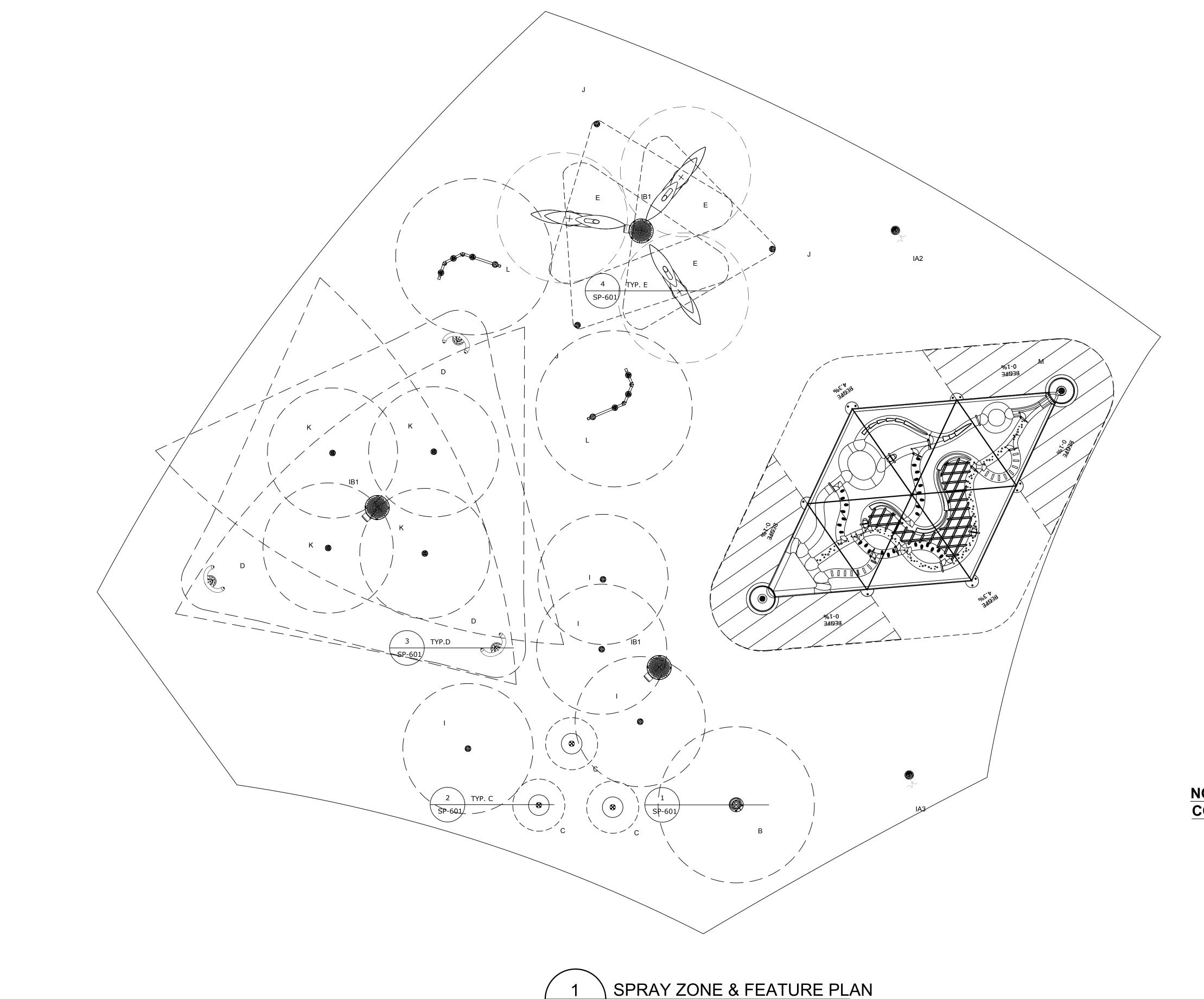
SCALE:

DATE: 2024/12/10

DRAWING NO.:

SHEET NO.:

SP-100 30 OF 79



1. 5'[1.5M] SPRAY FREE AREA ALL AROUND THE SPLASHPAD 2. RECOMMENDED SLOPE: 1-2% TOWARDS DRAINAGE.

3. COORDINATE THESE DRAWINGS WITH ARCHITECTURAL, CIVIL, PLUMBING & ELECTRICAL SECTIONS.

REF	PRODUCT	QTY
IXLI		۷.,
A2,IA	Activator N°4	2
, , , , , ,	VOR 0622	
В	Aqua Dome N°1	1
	VOR 0555	
С	Aqualien Flower N°3	3
	VOR 7389 Bamboo Twin Cannon	
D		3
	VOR 7786 Bamboo Tree N°1	
Е	VOR 7725	3
F	Water Journey™ - Drain	1
	Basin VOR 7126	
IB1	Playsafe Drain N°4	3
101	VOR 1004	
	Water Journey™ - Press &	_
Н	Flow VOR 7138	1
	Spraylink™ Jet N°1	
I	VOR 3000	4
-	Spraylink™ Split	_
J	VOR 3003	3
K	Spraylink™ Geyser	4
Κ	VOR 3005	4
L	Spraylink™ Team N°3	2
	VOR 3061	
М	Water Journey™ - Labyrinth	1
	VOR 7120	匸

Design

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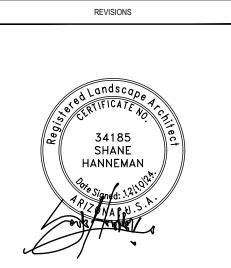
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AGE SPLASH PAD
477 HAUL ROAD
RAY ZONE LAYOUT

# DATE DESCRIPTION



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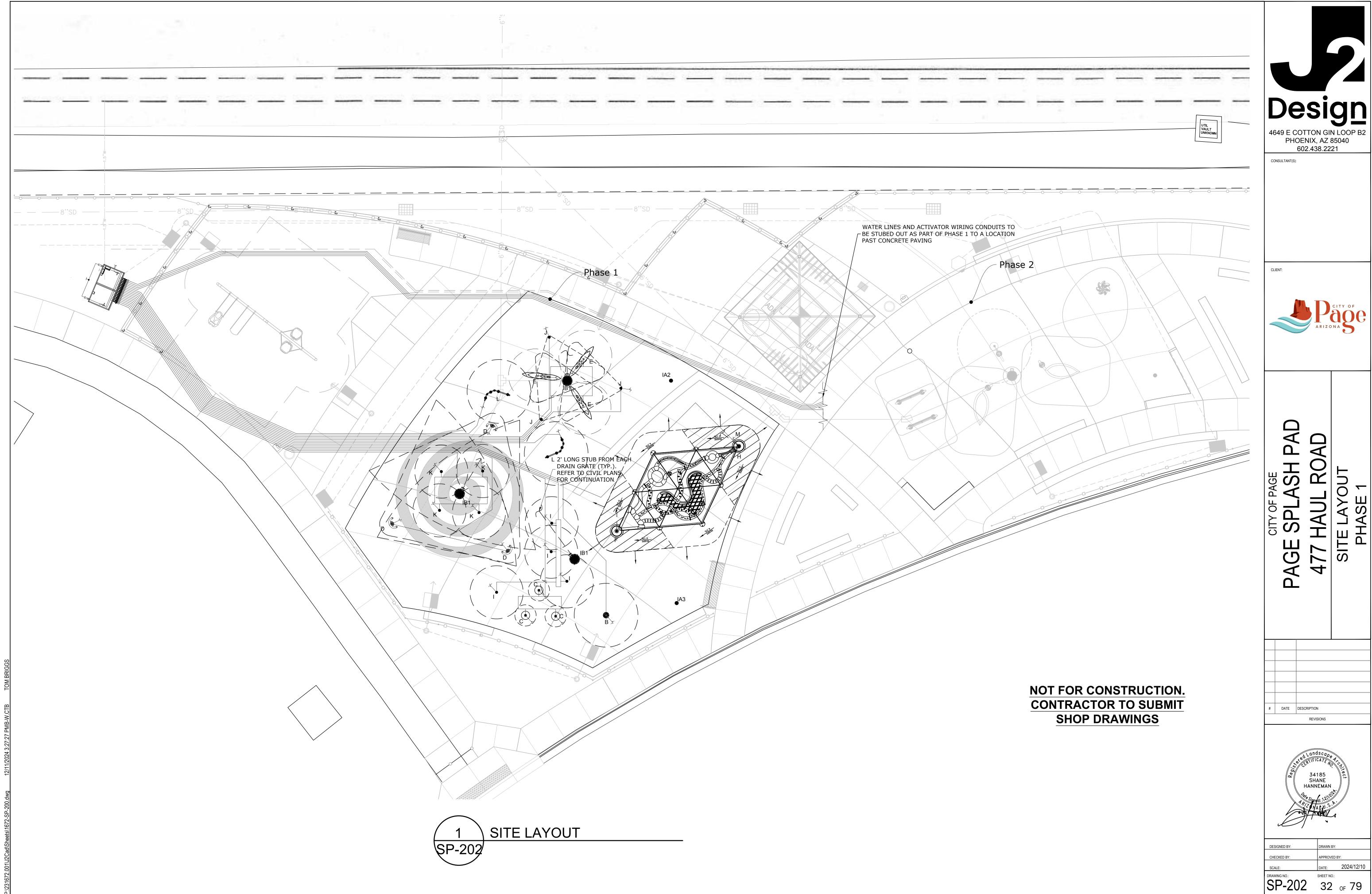
DATE: 2024/12/10

DRAWING NO.:

SP-201

31 OF 79

NOT FOR CONSTRUCTION.
CONTRACTOR TO SUBMIT
SHOP DRAWINGS





REF	PRODUCT	QTY
A2,IA	Activator N°4 VOR 0622	2
В	Aqua Dome N°1 VOR 0555	1
С	Aqualien Flower N°3 VOR 7389	3
D	Bamboo Twin Cannon	3
Е	VOR 7786 Bamboo Tree N°1 VOR 7725	3
F	Water Journey™ - Drain Basin VOR 7126	1
IB1	Playsafe Drain N°4 VOR 1004	3
Н	Water Journey™ - Press & Flow VOR 7138	1
I	Spraylink™ Jet N°1 VOR 3000	4
J	Spraylink™ Split VOR 3003	3
K	Spraylink™ Geyser VOR 3005	4
L	Spraylink™ Team N°3 VOR 3061	2
М	Water Journey™ - Labyrinth VOR 7120	1





CONSULTANT(S):

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PAGE SPLASH PAD
477 HAUL ROAD
ANCHOR PLAN

#	DATE	DESCRIPTION		
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CHECKED BY: APPROVED BY:

SCALE: DATE: 2024/12/10

DRAWING NO.: SHEET NO.:

SP-203 33 OF 79

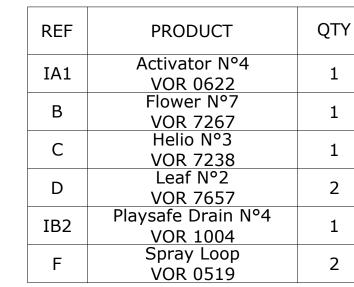
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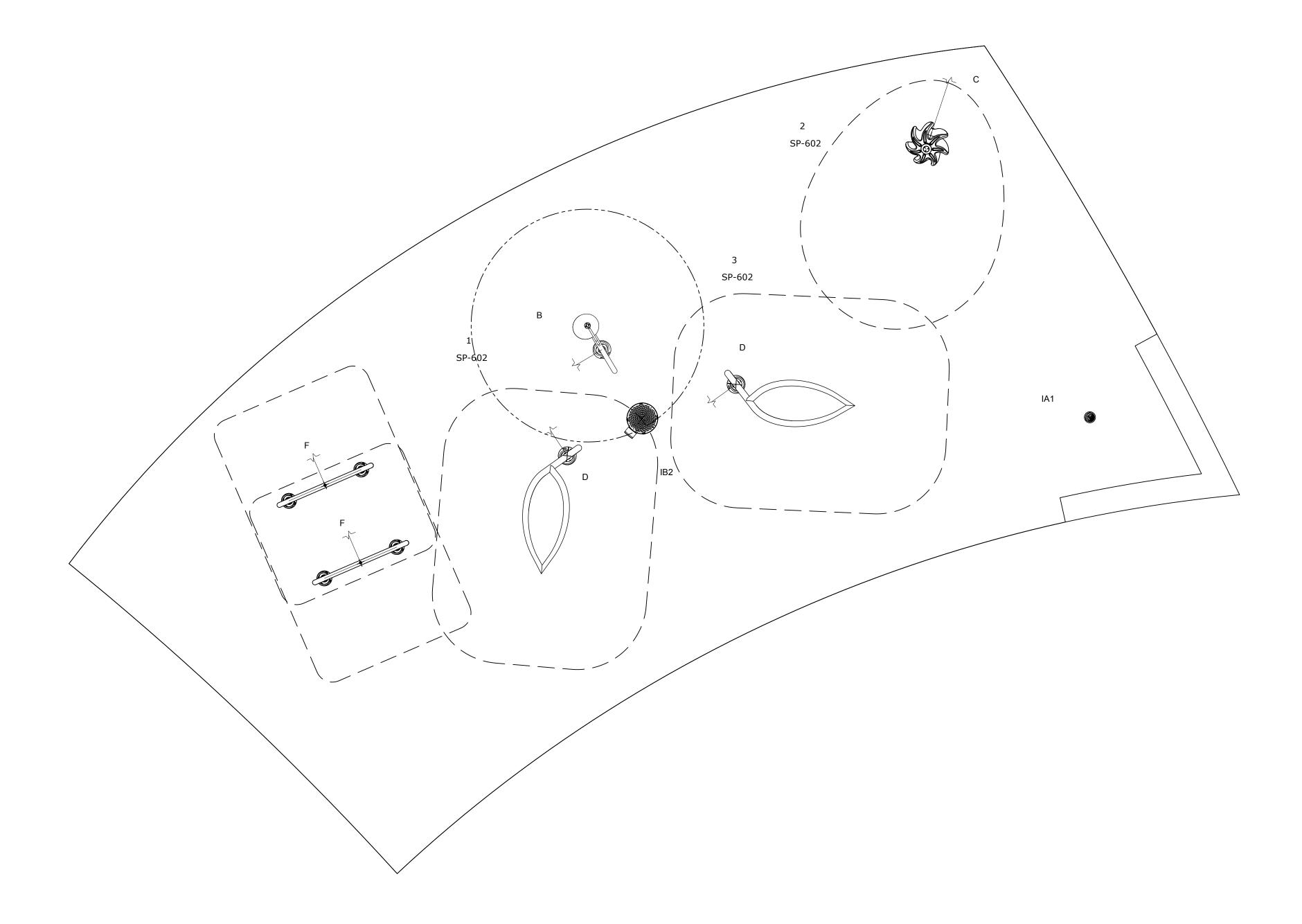
1 SP-203

ANCHOR PLAN

1. REFER TO SPECIFICATIONS ON COVER PAGE
2. COORDINATE THESE DRAWINGS WITH
ARCHITECTURAL, CIVIL, PLUMBING & ELECTRICAL SECTIONS.

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	REF	PRODUCT	QTY
	IA1	Activator N°4 VOR 0622	1
	В	Flower N°7 VOR 7267	1
	С	Helio N°3 VOR 7238	1
	D	Leaf N°2 VOR 7657	2
	IB2	Playsafe Drain N°4 VOR 1004	1
	F	Spray Loop VOR 0519	2





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Design

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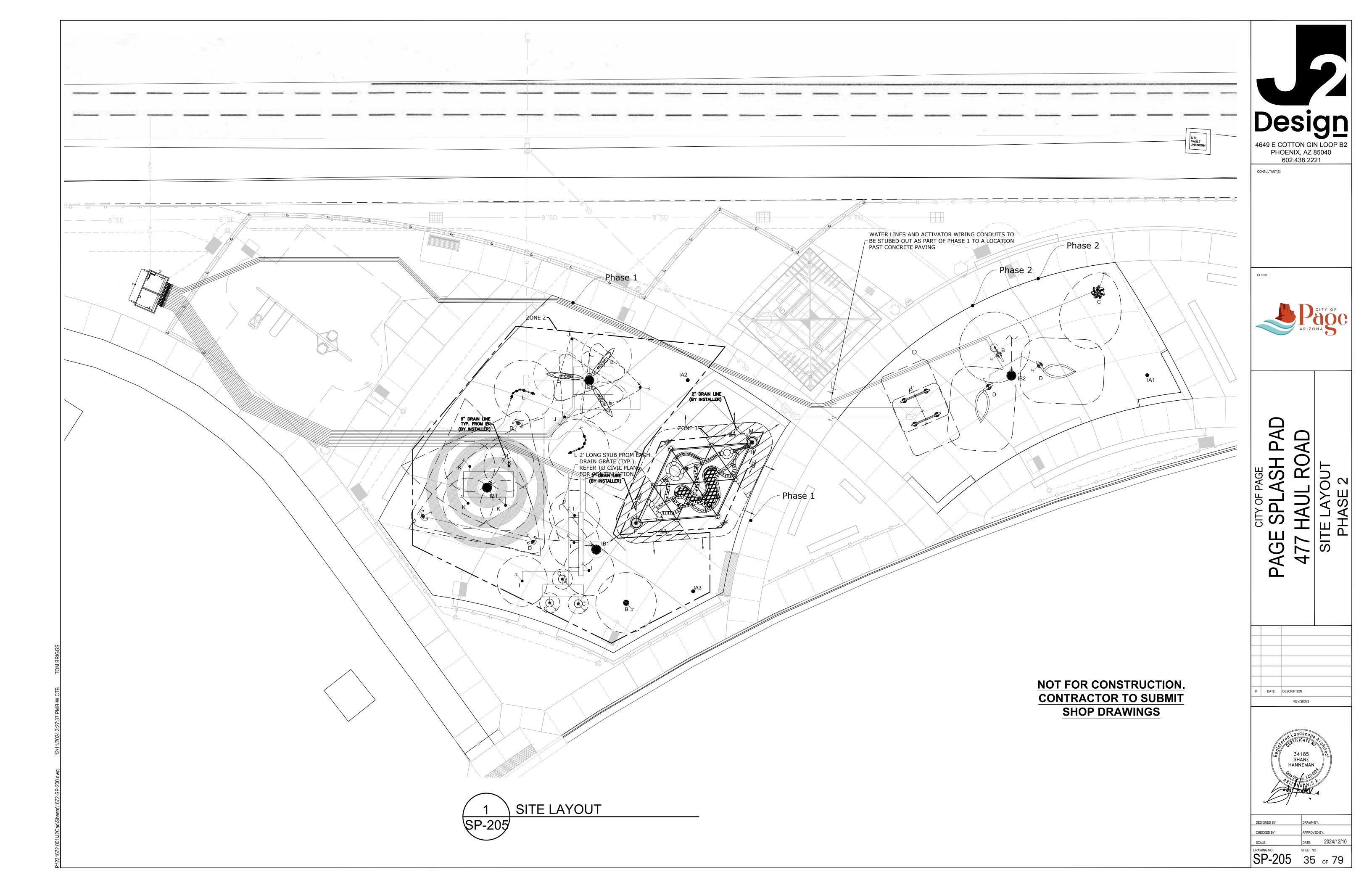
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SP-204	34 of 79
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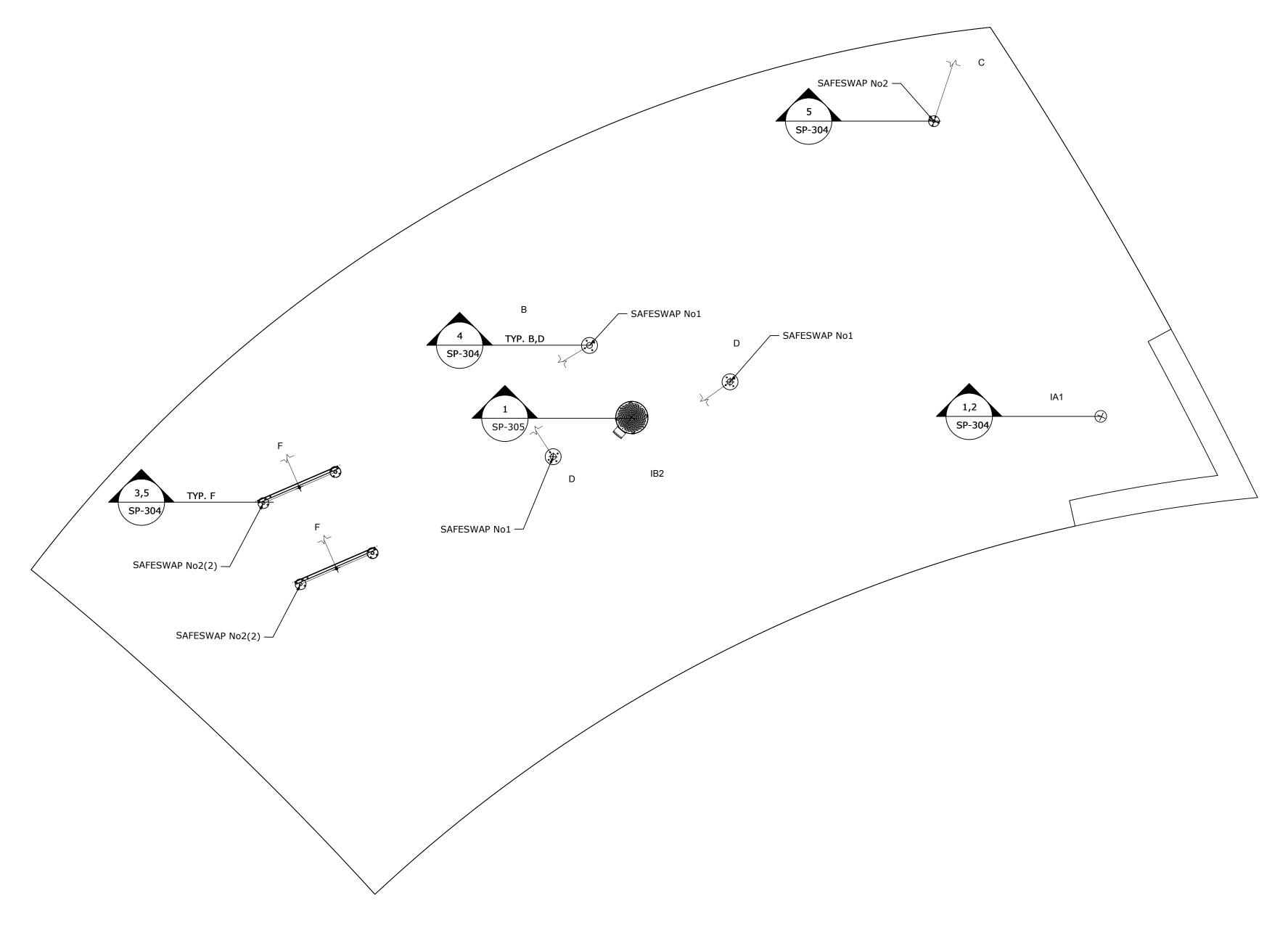
1	SPRAY ZONE & FEATURE PLAN
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1. 5'[1.5M] SPRAY FREE AREA ALL AROUND THE SPLASHPAD 2. RECOMMENDED SLOPE: 1-2% TOWARDS DRAINAGE.

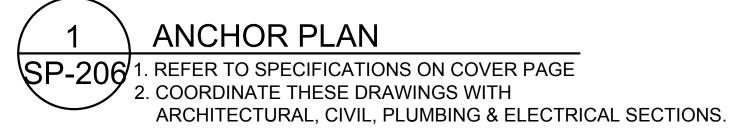
3. COORDINATE THESE DRAWINGS WITH ARCHITECTURAL, CIVIL, PLUMBING & ELECTRICAL SECTIONS.



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В	Flower N°7 VOR 7267	1
С	Helio N°3 VOR 7238	1
D	Leaf N°2 VOR 7657	2
IB2	Playsafe Drain N°4 VOR 1004	1
F	Spray Loop VOR 0519	2



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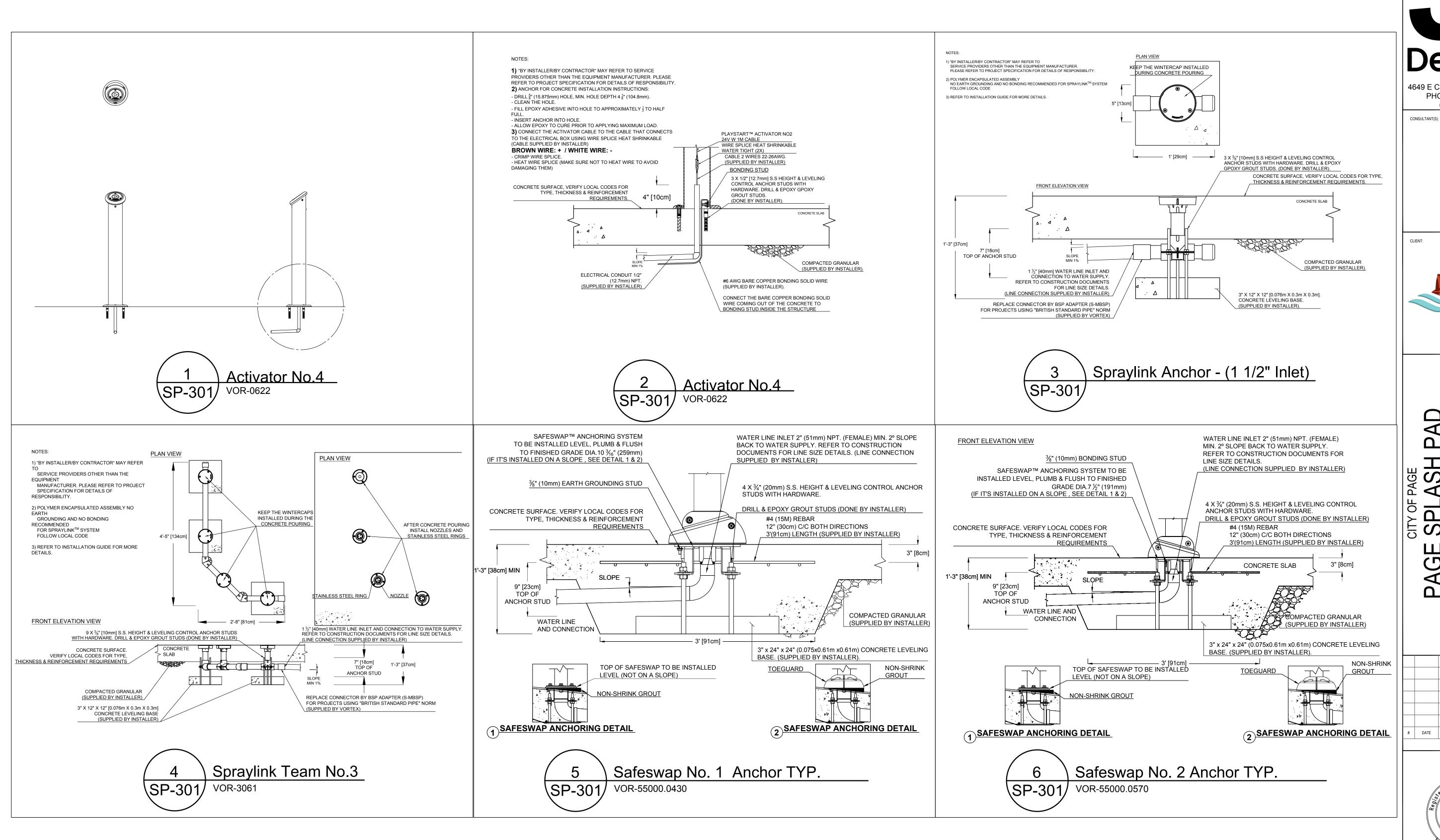
SP-206 36 of 79

PAGE

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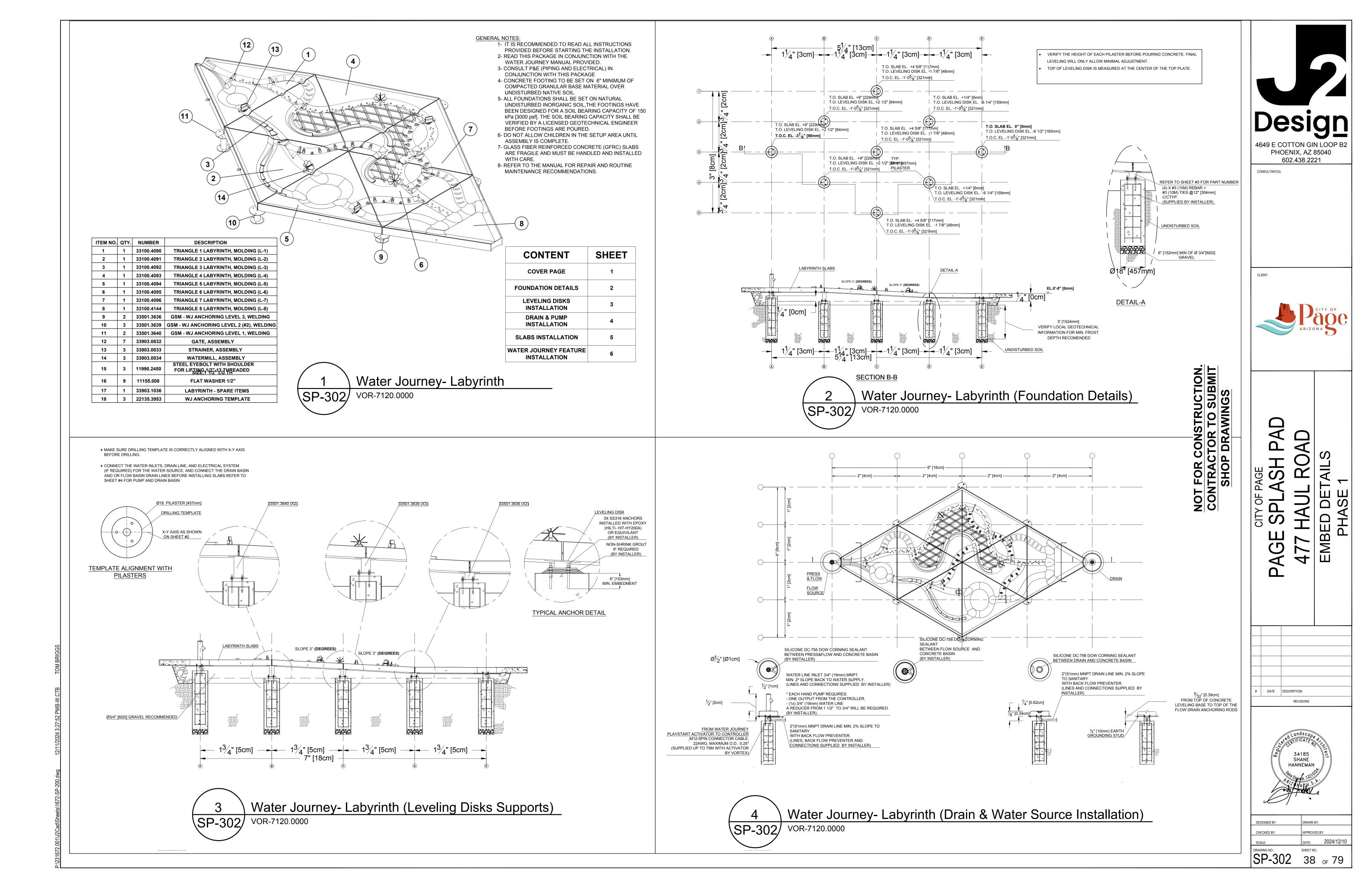
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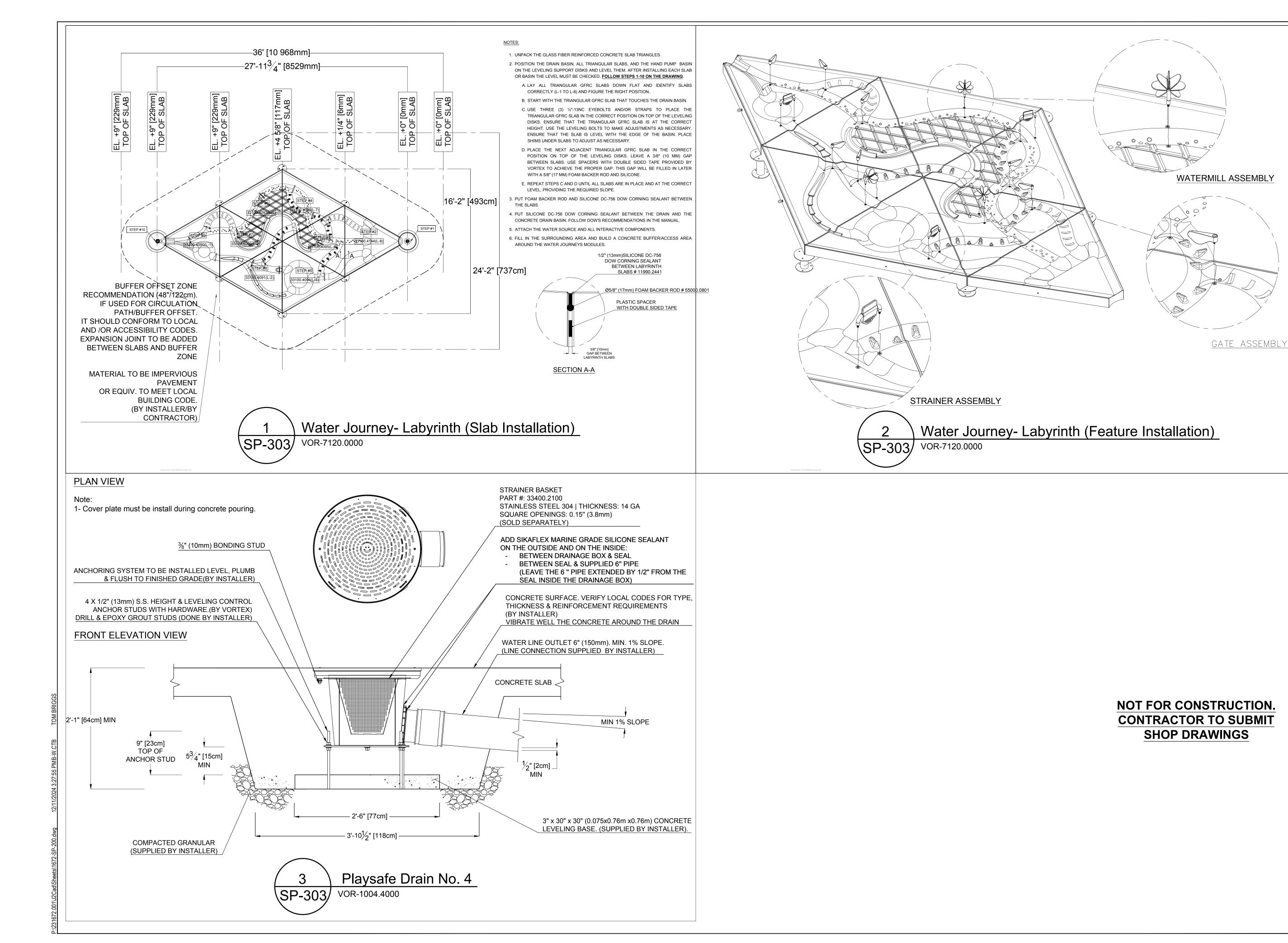
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SP-301 37 OF 79







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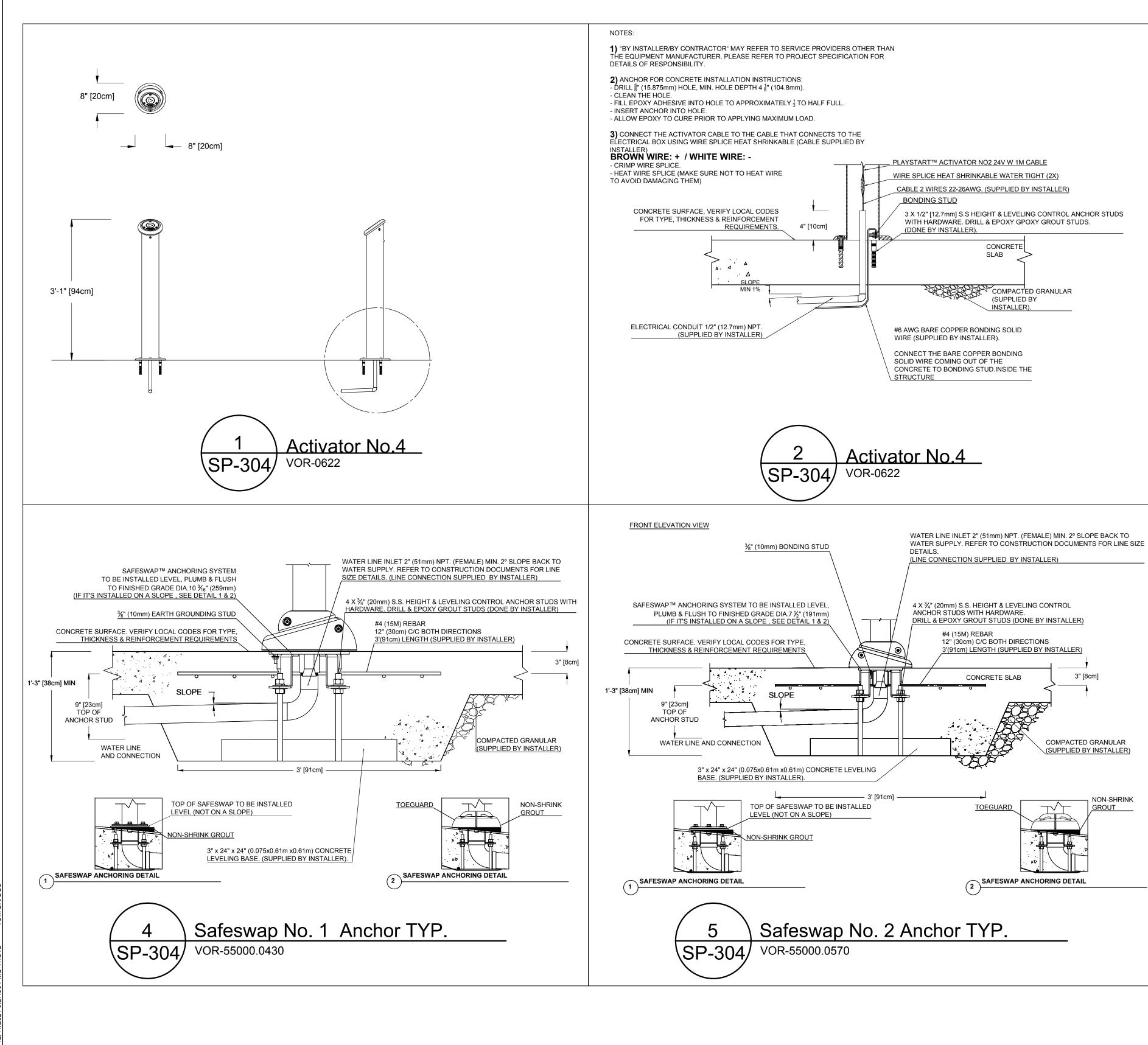
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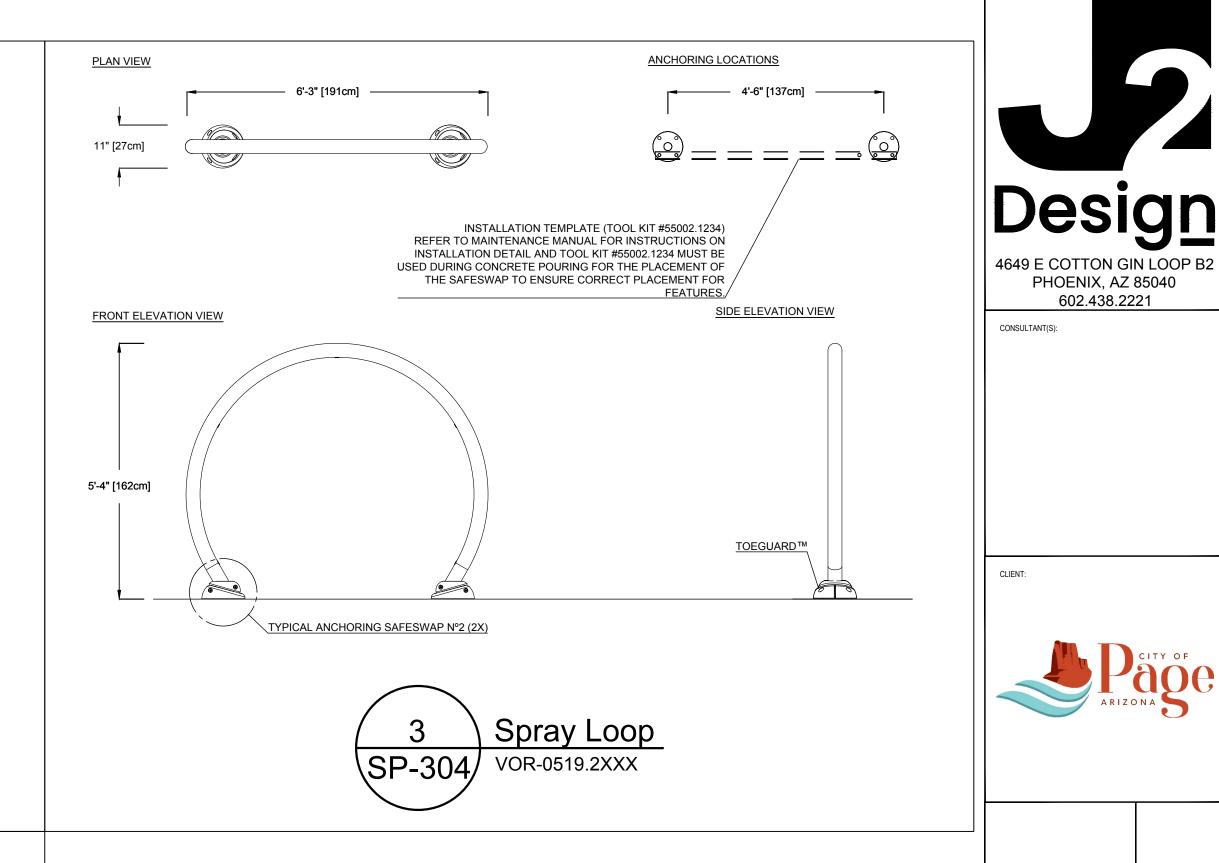
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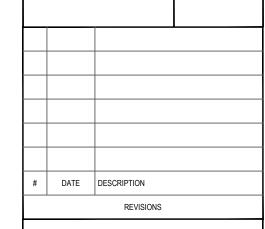
SP-303 39 OF 79





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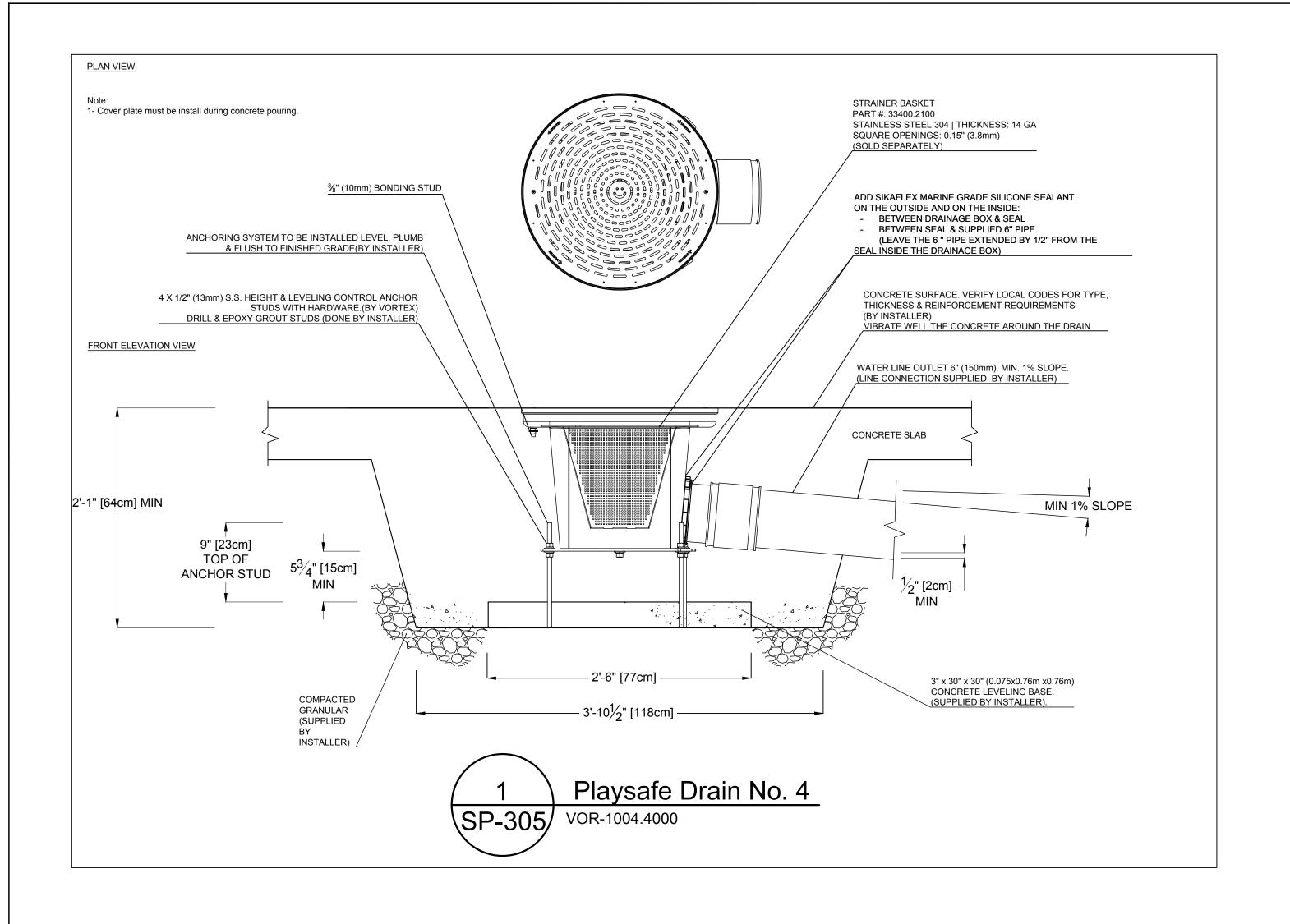


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SP-304 40 of 79



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AGE SPLASH PAD
477 HAUL ROAD
EMBED DETAILS

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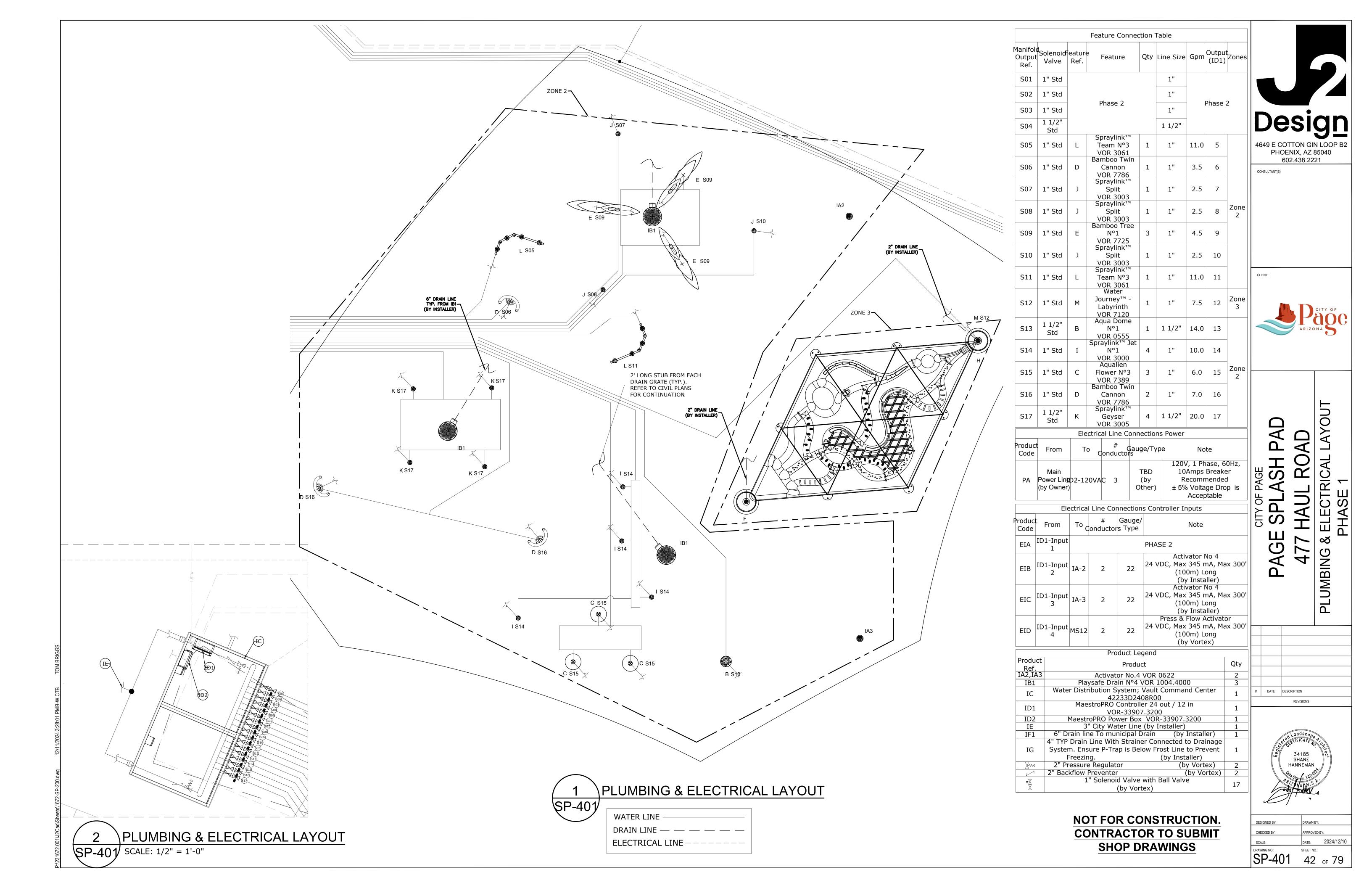
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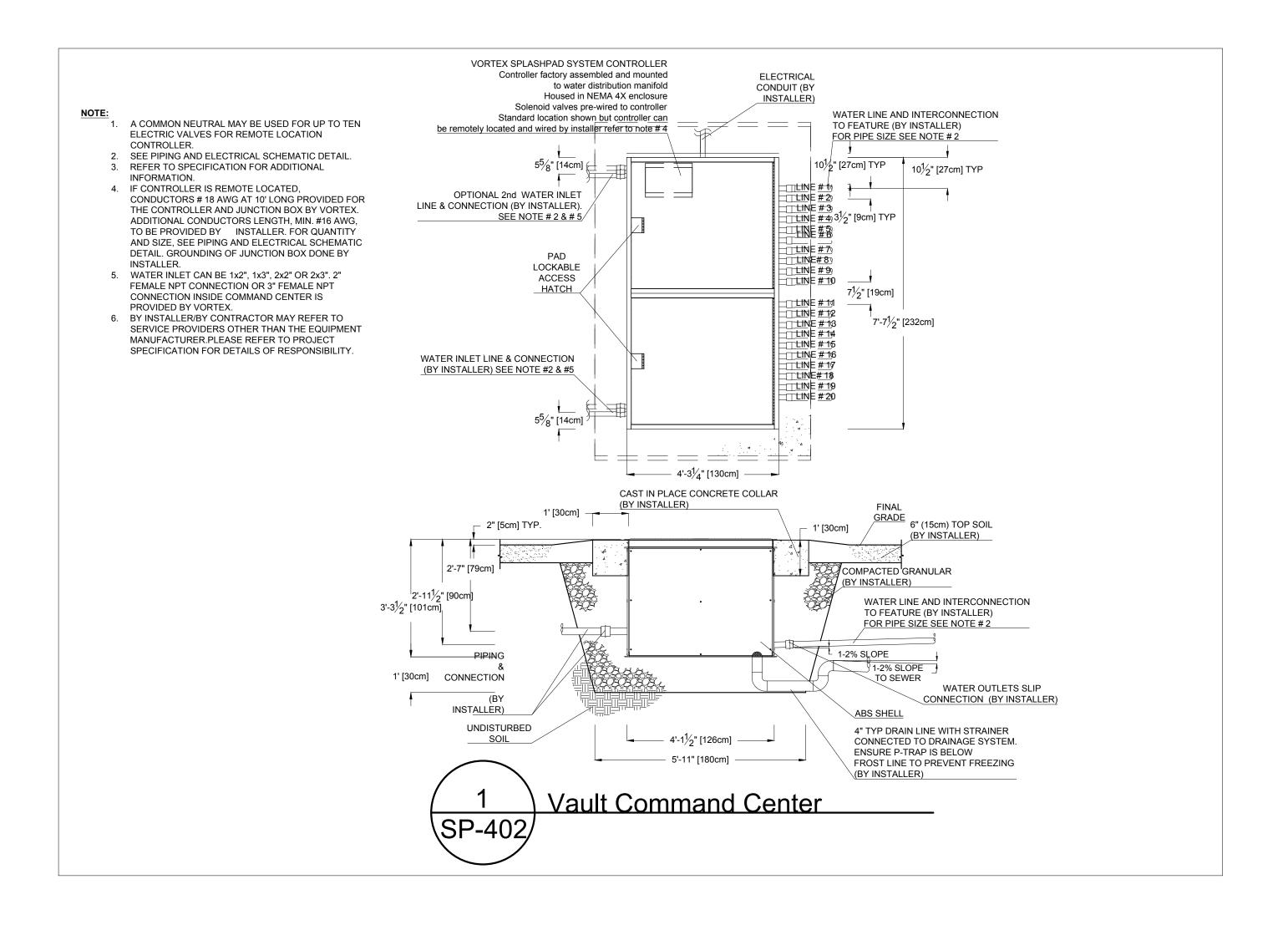
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41 OF 79





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PLUMBING DETAILS

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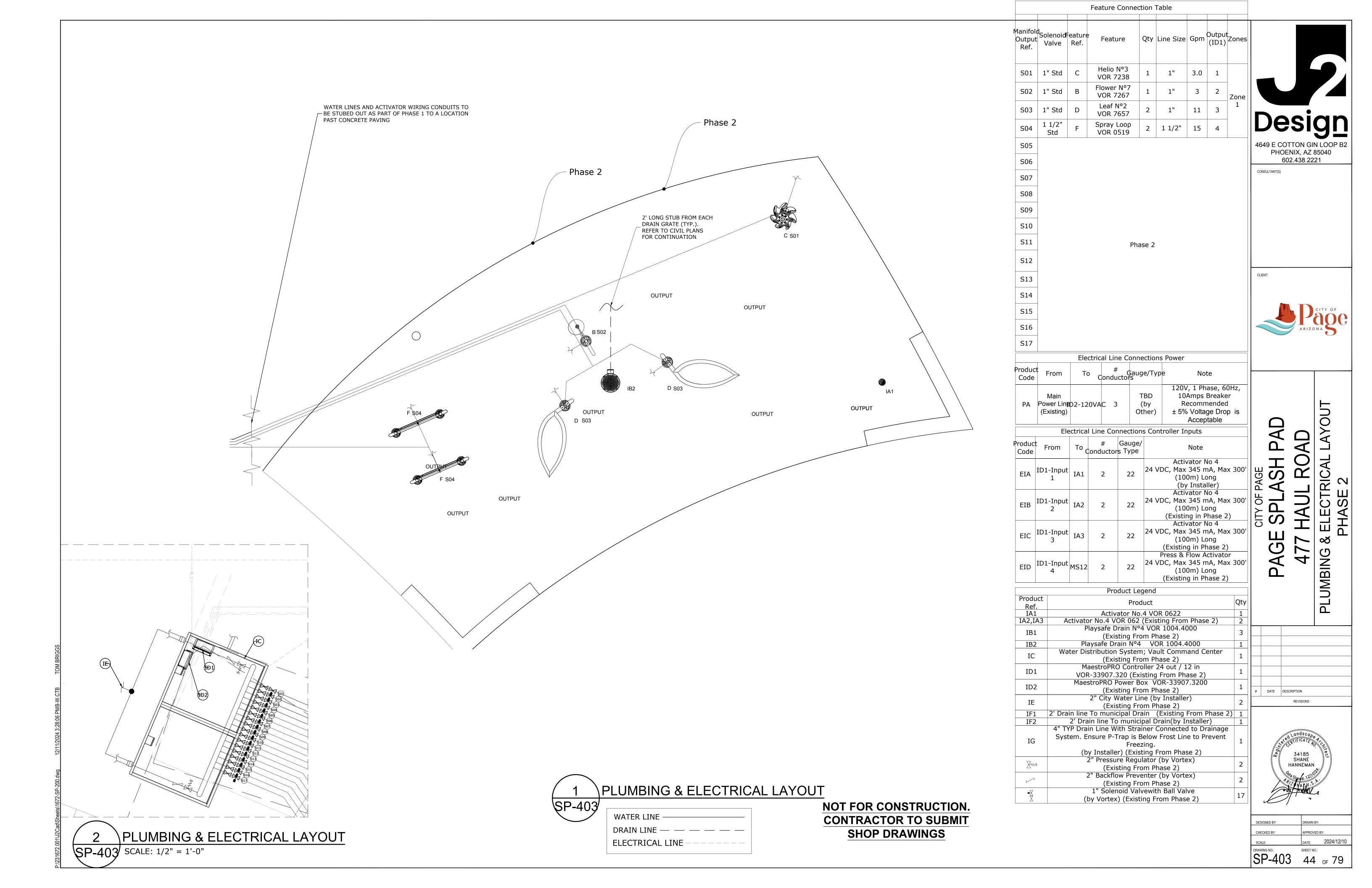
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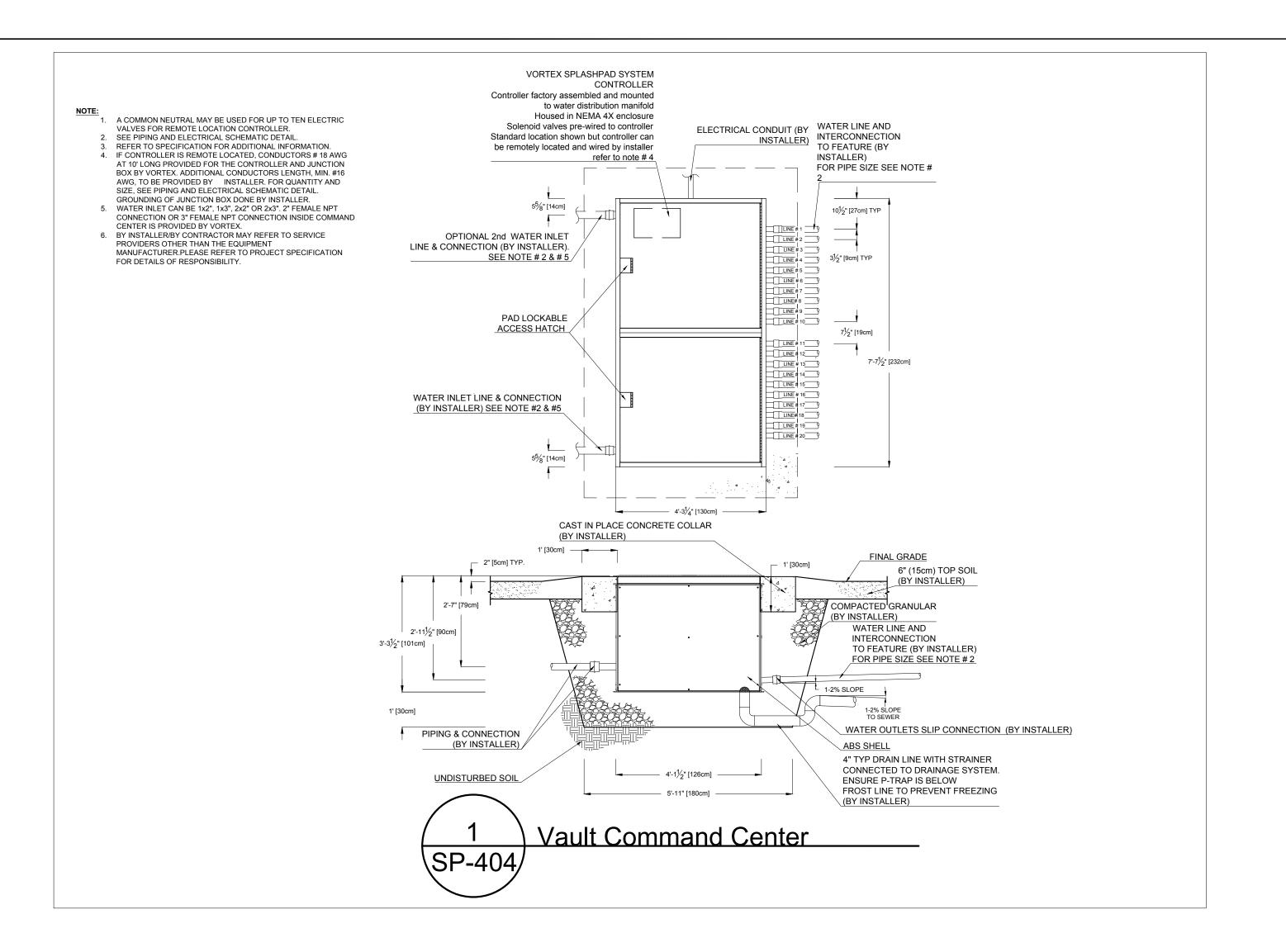
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OF 79





Design

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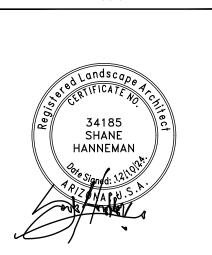
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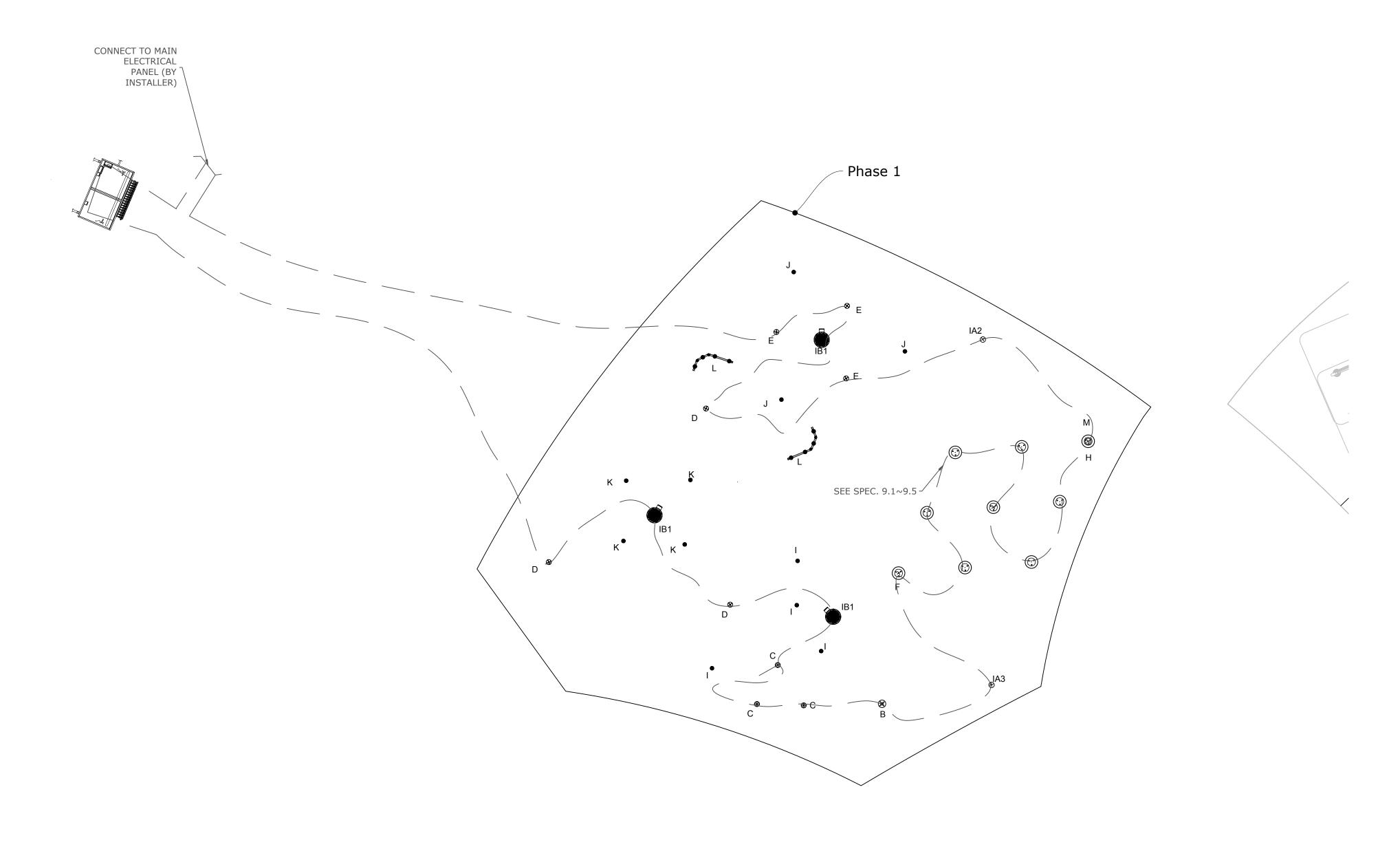
DATE: 2024/12/10

DRAWING NO.:

SHEET NO.:

SP-404 45 OF 79

REF	PRODUCT	QTY
A2,IA	VOR 0622	2
В	Aqua Dome N°1 VOR 0555	1
C	Aqualien Flower N°3 VOR 7389	3
D	Bamboo Twin Cannon VOR 7786	3
Е	Bamboo Tree N°1 VOR 7725	3
F	Water Journey™ - Drain Basin VOR 7126	1
IB1	Playsafe Drain N°4 VOR 1004	3
Н	Water Journey™ - Press & Flow VOR 7138	1
I	Spraylink™ Jet N°1 VOR 3000	4
J	Spraylink™ Split VOR 3003	3
K	Spraylink™ Geyser VOR 3005	4
L	Spraylink™ Team N°3 VOR 3061	2
М	Water Journey™ - Labyrinth VOR 7120	1



**BONDING LAYOUT** 

1. REFER TO SPECS ON COVER PAGE
2. COORDINATE THIS DRAWING WITH
ARCHITECTURAL, CIVIL, PLUMBING & ELECTRICAL.

Bonding wire -----

NOT FOR CONSTRUCTION. **CONTRACTOR TO SUBMIT SHOP DRAWINGS** 

4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

CONSULTANT(S):



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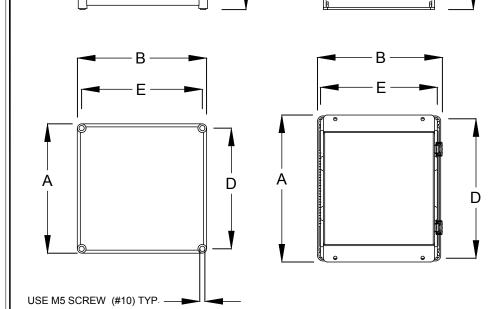


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1 - ENSURE ENOUGH CLEARANCE FOR THE DOOR OPENING

MAESTROPRO CONTROL MAESTROPRO POWER BOX **ENCLOSURE ENCLOSURE** SEE NOTE #1



#### MAESTROPRO ENCLOSURES DIMENSIONS

REFERENCE No.	DESCRIPTION	DIM "A"	DIM "B"	DIM "C"	DIM "D"	DIM "E"
33907.12B2	MAESTROPRO CTRL 24OUT/12IN 120VAC/240HZ	11.88"	11.88"	6.85"	11.08"	11.08"
33907.22B2	MAESTROPRO CTRL EXP 24OUT/12IN 120VAC/240HZ	11.88"	11.88"	6.85"	11.08"	11.08"
33907.13B0	MAESTROPRO POWERBOX 24OUT/12IN 120VAC/60HZ	12.308"	10.215"	5.57"	12.058"	9.965"
33907.13B1	MAESTROPRO POWERBOX 240UT/12IN 240VAC/50HZ	12.308"	10.215"	5.57"	12.058"	9.965"

#### INSTALLATION DRAWING - MAESTROPRO CTRL 33907.12B2 AND MAESTROPRO POWER BOX 33907.13BX CONNECTIONS

CIRCUIT BREAKER

FUSE 1; 5 AMPS

FUSE 2; 5 AMPS

FUSE 3; 5 AMPS

& FUSE

MAX

NOT FOR CONSTRUCTION.

**CONTRACTOR TO SUBMIT** 

**SHOP DRAWINGS** 

1 - A MAXIMUM OF 1 ETHERNET CAT 5 CONNECTIONS IS AVAILABLE PER MAESTROPRO.

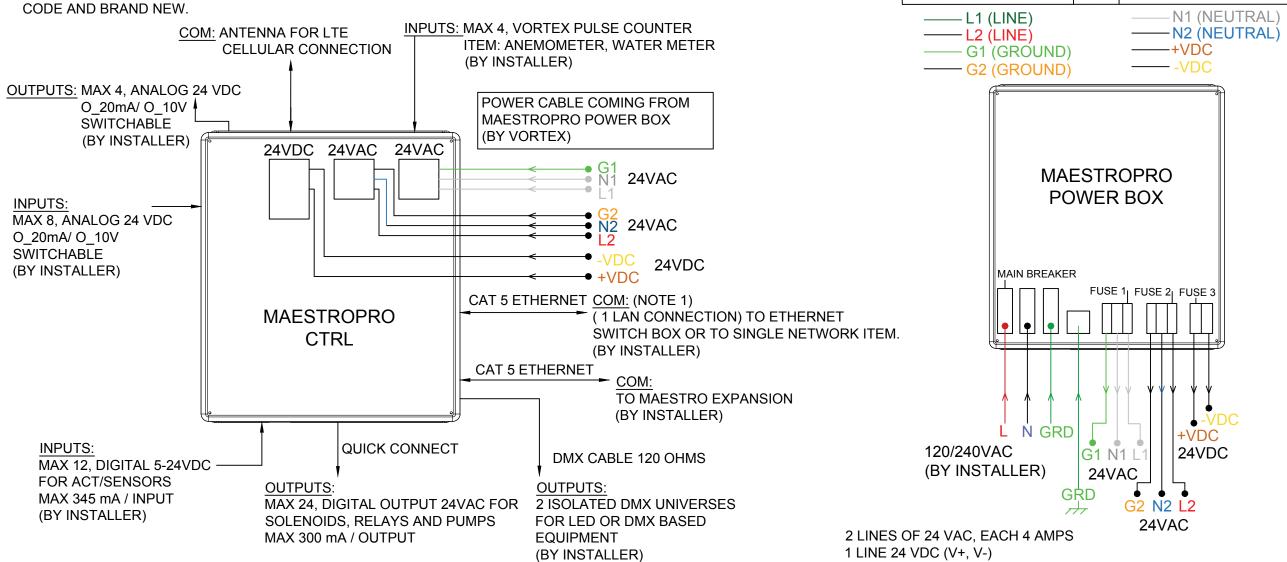
IF MORE ETHERNET LAN CONNECTIONS ARE NEEDED, THEN IT REQUIRES AN ETHERNET SWITCH BOX ( SOLD SEPARATELY ).

2 - FOR DIGITAL INPUT, 5-24 VDC SUPPLIED BY MAESTROPRO. REFER TO THE CORRESPONDING SCHEMATIC DRAWING MANUAL FOR WIRING DETAILS.

3 - MAESTROPRO IS DHCP ADDRESSED BY CONNECTED LAN DEVICE.

4- WHEN USED WITH EXPANSION UNITS, AN ETHERNET CAT 5 CABLE IS REQUIRED BETWEEN EACH UNIT.

5- WATER TIGHT CONNECTIONS WITH MAESTROPRO DONE BY INSTALLER. 6- ALL WIRES AND CABLES ELECTRICAL CALCULATION ARE BY INSTALLER AND SHALL BE APPROVED ACCORDING TO LOCAL CODE AND BRAND NEW.



MaestroPro Controller VOR- 33907.3200

MAIN BREAKER; 3 AMPS 4 MAX PRIMARY 120/240 VAC 5 MAX POWER SUPPLY 24 VDC 4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

CIRCUIT

5 MAX SECONDARY 24 VAC

5 MAX SECONDARY 24 VAC

CONSULTANT(S):



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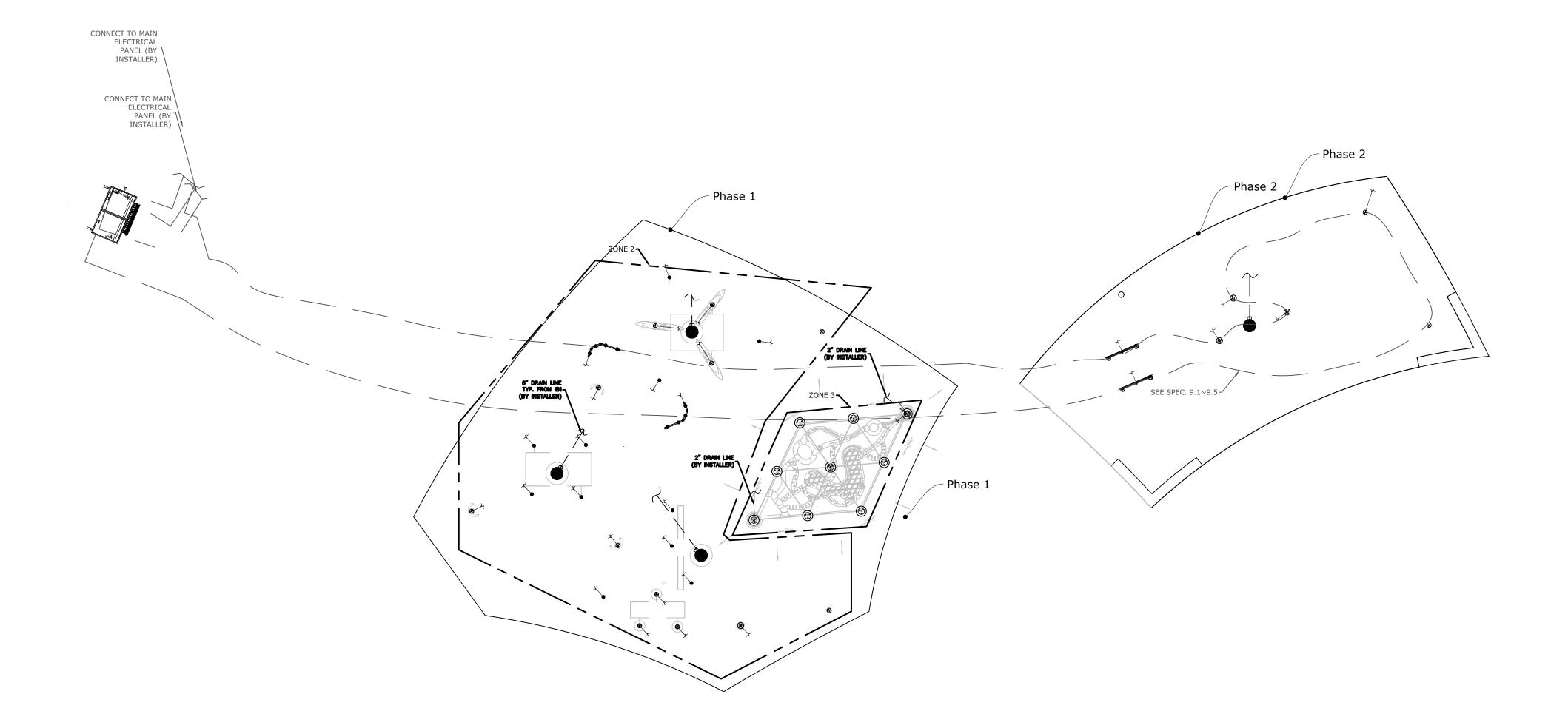


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REFER TO THE PIPING AND ELECTRICAL SHEET FOR THE CONTROLLER NUMBER

> MaestroPro Controller VOR- 33907.3200

REF	PRODUCT	QTY
IA1	Activator N°4 VOR 0622	1
В	Flower N°7 VOR 7267	1
С	Helio N°3 VOR 7238	1
D	Leaf N°2 VOR 7657	2
IB2	Playsafe Drain N°4 VOR 1004	1
F	Spray Loop VOR 0519	2



**BONDING LAYOUT** 

1. REFER TO SPECS ON COVER PAGE
2. COORDINATE THIS DRAWING WITH
ARCHITECTURAL, CIVIL, PLUMBING & ELECTRICAL.

Bonding wire -----

NOT FOR CONSTRUCTION. **CONTRACTOR TO SUBMIT SHOP DRAWINGS** 



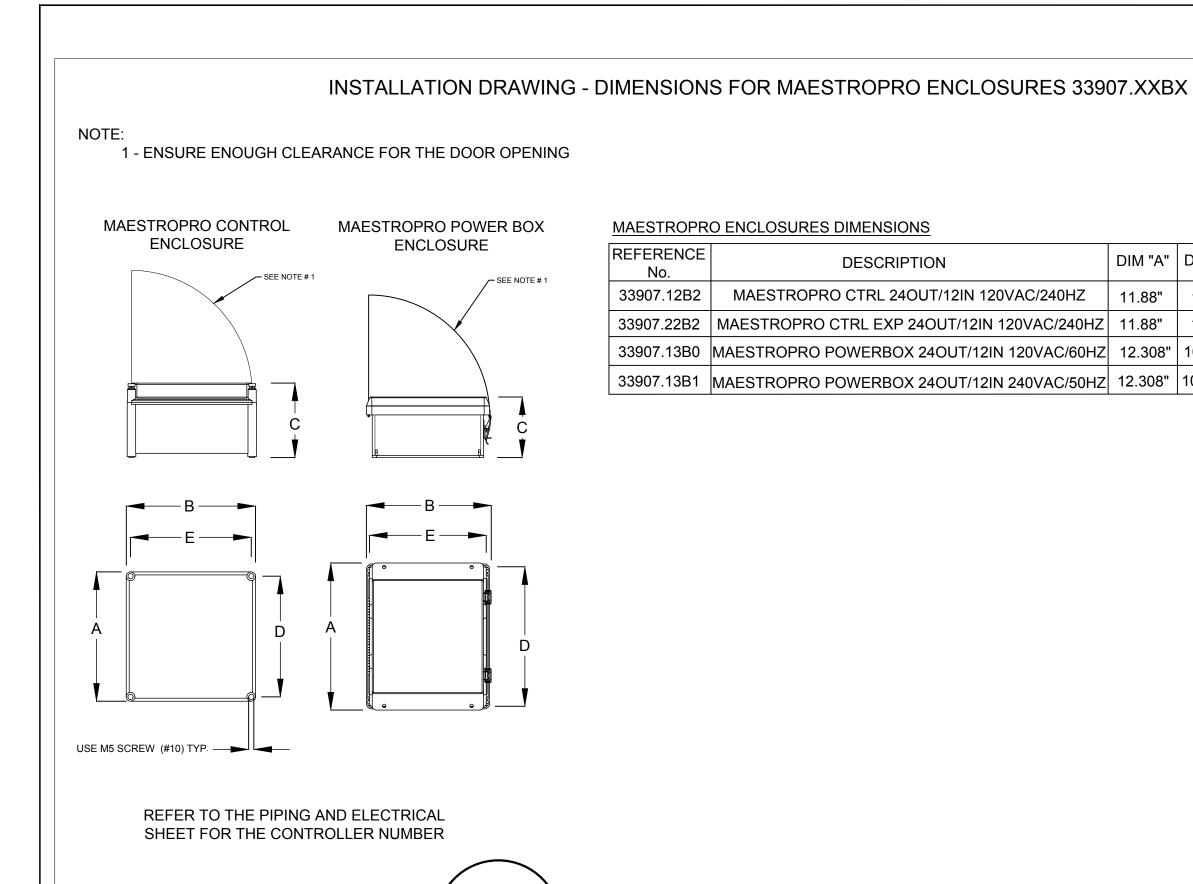
CONSULTANT(S):



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DRAWING NO.: SHEET NO.: 48 OF 79



#### MAESTROPRO ENCLOSURES DIMENSIONS

MaestroPro Controller

SP-504/ VOR- 33907.3200

REFERENCE No.	DESCRIPTION	DIM "A"	DIM "B"	DIM "C"	DIM "D"	DIM "E"
33907.12B2	MAESTROPRO CTRL 24OUT/12IN 120VAC/240HZ	11.88"	11.88"	6.85"	11.08"	11.08"
33907.22B2	MAESTROPRO CTRL EXP 24OUT/12IN 120VAC/240HZ	11.88"	11.88"	6.85"	11.08"	11.08"
33907.13B0	MAESTROPRO POWERBOX 24OUT/12IN 120VAC/60HZ	12.308"	10.215"	5.57"	12.058"	9.965"
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2 - FOR DIGITAL INPUT, 5-24 VDC SUPPLIED BY MAESTROPRO. REFER TO THE CORRESPONDING SCHEMATIC DRAWING MANUAL FOR WIRING DETAILS. FUSE 1; 5 AMPS 3 - MAESTROPRO IS DHCP ADDRESSED BY CONNECTED LAN DEVICE. 4- WHEN USED WITH EXPANSION UNITS, AN ETHERNET CAT 5 CABLE IS REQUIRED BETWEEN EACH UNIT. FUSE 2; 5 AMPS 5- WATER TIGHT CONNECTIONS WITH MAESTROPRO DONE BY INSTALLER. FUSE 3; 5 AMPS 6- ALL WIRES AND CABLES ELECTRICAL CALCULATION ARE BY INSTALLER AND SHALL BE APPROVED ACCORDING TO LOCAL CODE AND BRAND NEW. —— L1 (LINE) INPUTS: MAX 4, VORTEX PULSE COUNTER COM: ANTENNA FOR LTE —— L2 (LINE) ITEM: ANEMOMETER, WATER METER CELLULAR CONNECTION ----+VDC —— G1 (GROUND) (BY INSTALLER) —— G2 (GROUND) -VDC OUTPUTS: MAX 4, ANALOG 24 VDC POWER CABLE COMING FROM O\_20mA/ O\_10V MAESTROPRO POWER BOX SWITCHABLE (BY VORTEX) (BY INSTALLER) 24VDC 24VAC 24VAC G1 24VAC MAESTROPRO **POWER BOX** INPUTS: \_\_\_\_\_ MAX 8, ANALOG 24 VDC O\_20mA/ O\_10V SWITCHABLE (BY INSTALLER) MAIN BREAKER FUSE 1| FUSE 2| FUSE 3 CAT 5 ETHERNET COM: (NOTE 1) MAESTROPRO (1 LAN CONNECTION) TO ETHERNET SWITCH BOX OR TO SINGLE NETWORK ITEM. CTRL (BY INSTALLER) CAT 5 ETHERNET TO MAESTRO EXPANSION (BY INSTALLER) INPUTS: MAX 12, DIGITAL 5-24VDC — QUICK CONNECT 120/240VAC 24VDC DMX CABLE 120 OHMS (BY INSTALLER) 24VAC FOR ACT/SENSORS OUTPUTS: 2 ISOLATED DMX UNIVERSES MAX 345 mA / INPUT MAX 24, DIGITAL OUTPUT 24VAC FOR (BY INSTALLER) SOLENOIDS, RELAYS AND PUMPS FOR LED OR DMX BASED 24VAC 2 LINES OF 24 VAC, EACH 4 AMPS MAX 300 mA / OUTPUT **EQUIPMENT** 1 LINE 24 VDC (V+, V-) (BY INSTALLER)

INSTALLATION DRAWING - MAESTROPRO CTRL 33907.12B2 AND MAESTROPRO POWER BOX 33907.13BX CONNECTIONS

1 - A MAXIMUM OF 1 ETHERNET CAT 5 CONNECTIONS IS AVAILABLE PER MAESTROPRO.

IF MORE ETHERNET LAN CONNECTIONS ARE NEEDED, THEN IT REQUIRES AN ETHERNET SWITCH BOX ( SOLD SEPARATELY ).

MaestroPro Controller VOR- 33907.3200

MAIN BREAKER; 3 AMPS 4 MAX PRIMARY 120/240 VAC 5 MAX SECONDARY 24 VAC 5 MAX SECONDARY 24 VAC 5 MAX POWER SUPPLY 24 VDC ——N1 (NEUTRAL) ----N2 (NEUTRAL) 4649 E COTTON GIN LOOP B2 CONSULTANT(S):

CIRCUIT

MAX

CIRCUIT BREAKER

& FUSE

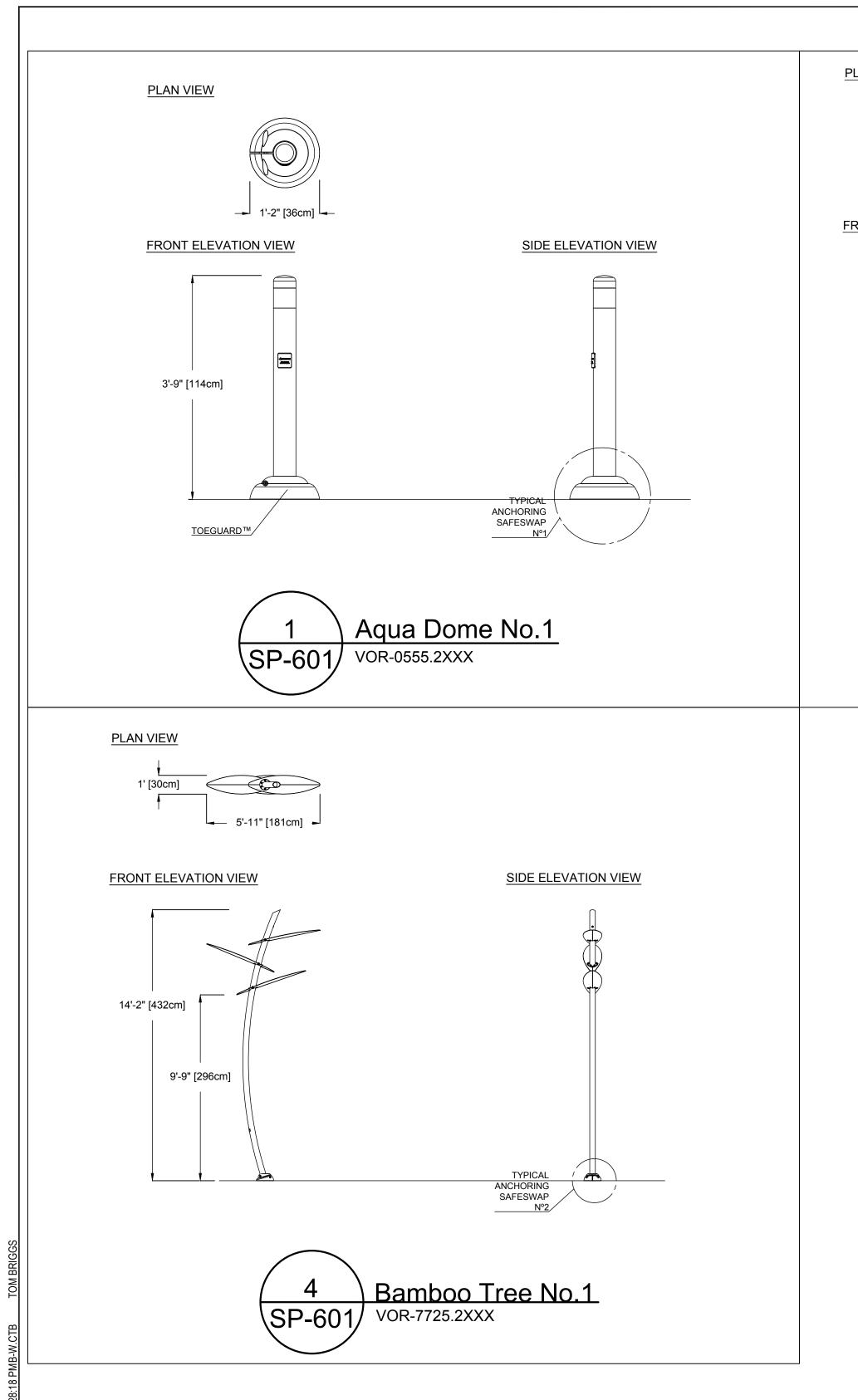
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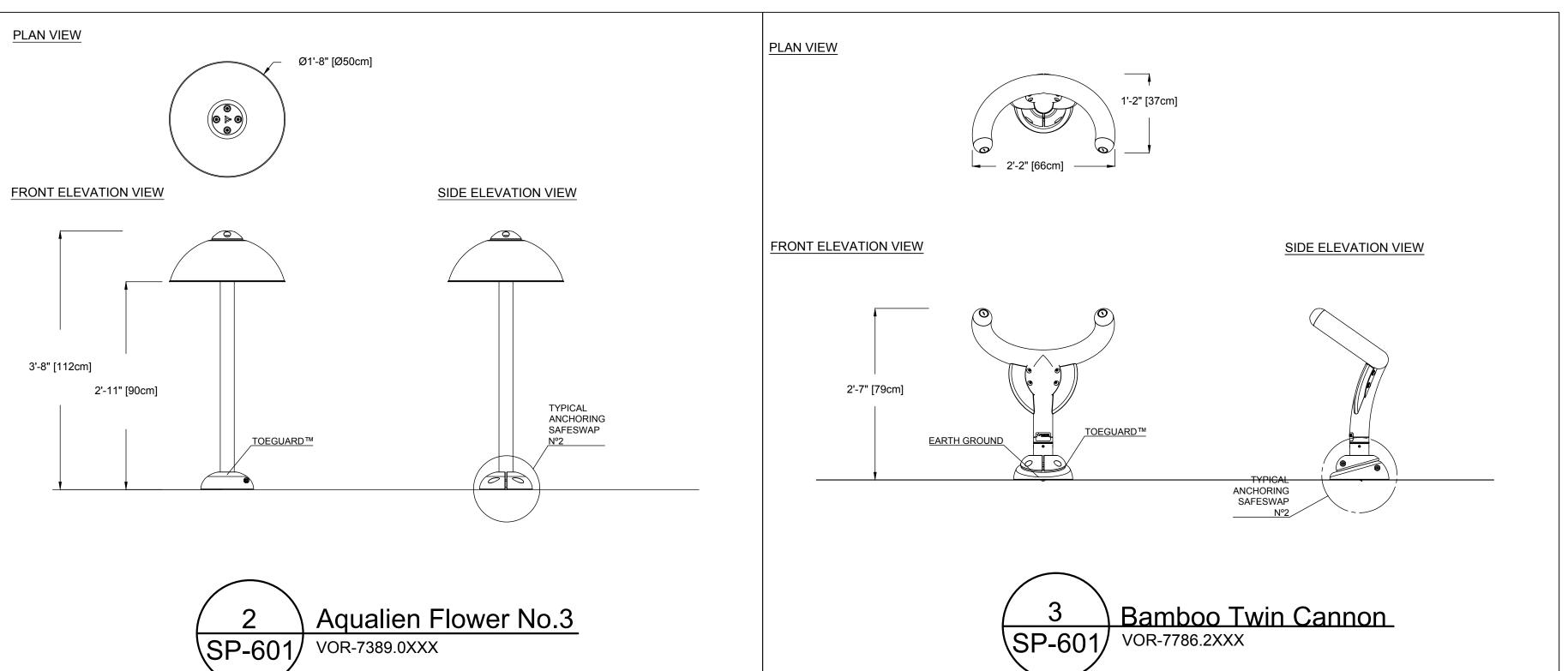
PHOENIX, AZ 85040

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CLIENT:

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PAGE SPLASH PAD
477 HAUL ROAD
FEATURE DETAILS
PHASE 1

# DATE DESCRIPTION

REVISIONS



DESIGNED BY:

CHECKED BY:

APPROVED BY:

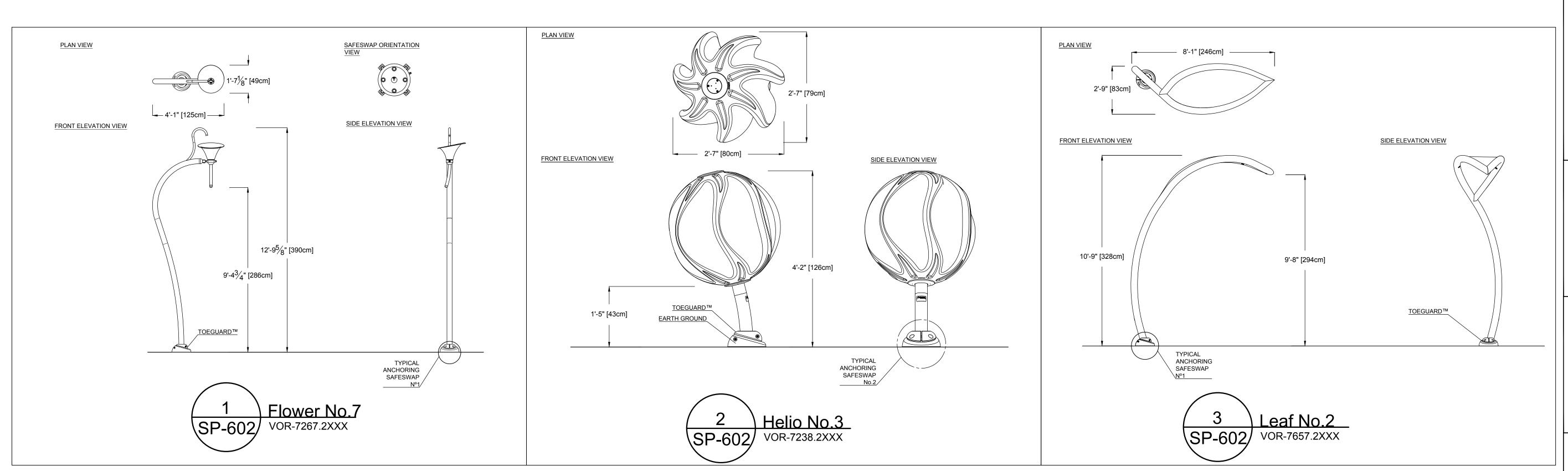
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SP-601 50 OF 79





CONSULTANT(S):



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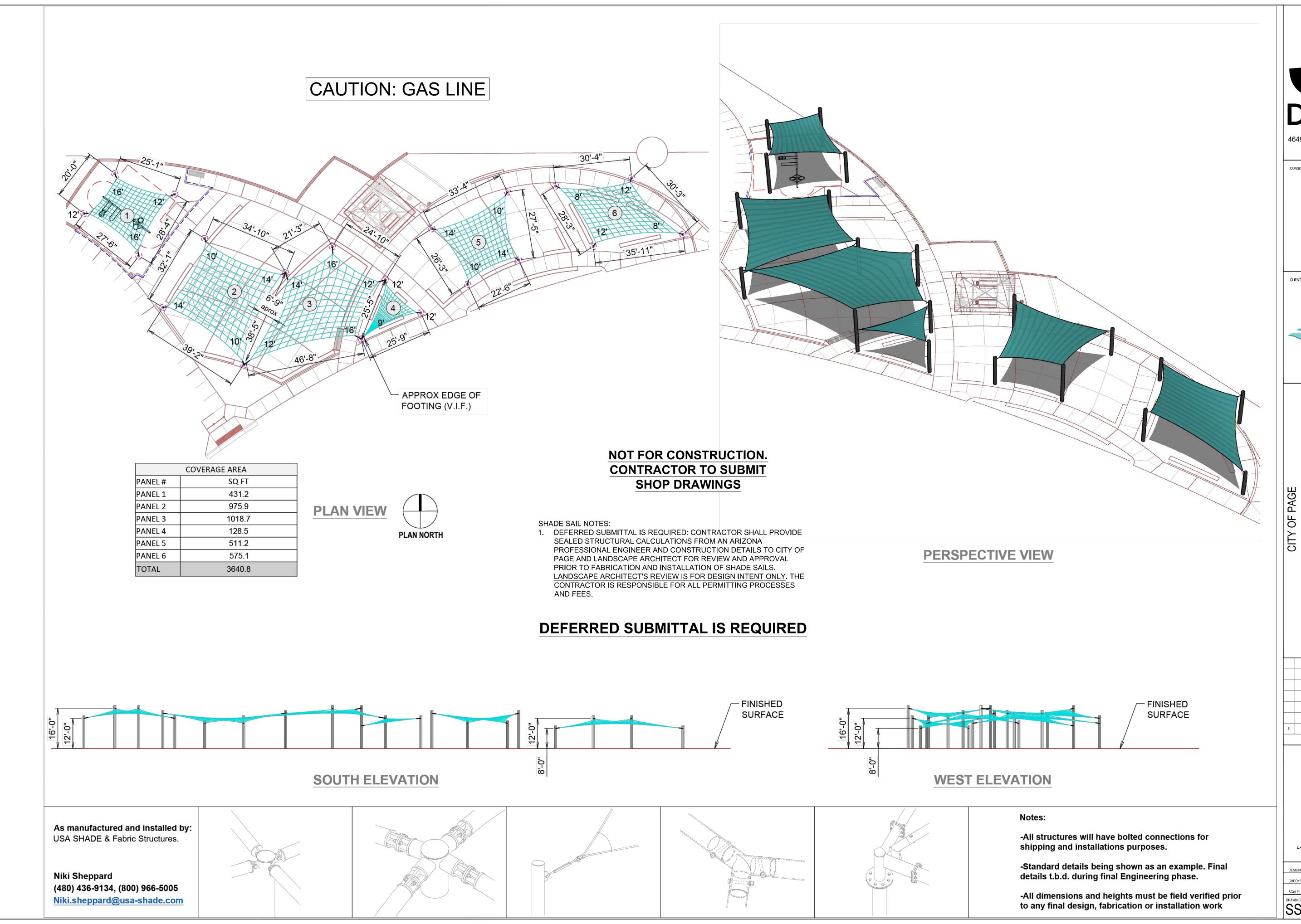
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PHOENIX, AZ 85040
602.438.2221

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DATE DESCRIPTION



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- 2. PERMITS ARE REQUIRED FOR ELECTRICAL CONNECTIONS, INCLUDING ELECTRIC METER INSTALLATION, BACKFLOW PREVENTERS AND WORK WITHIN THE CITY RIGHT-OF-WAY OR CITY DEDICATED PROPERTY. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING THESE PERMITS PRIOR TO THE COMMENCEMENT OF ANY WORK.
- 3. ALL LANDSCAPE PROJECTS REQUIRING CITY MAINTENANCE OR WITHIN THE CITY RIGHT-OF-WAY SHALL BE INSPECTED FOR THE FOLLOWING:
- 3.1. PLANT LOCATIONS: THESE LOCATIONS SHALL BE STAKED IN THE FIELD WITH IDENTIFICATION AS TO TREES OR SHRUBS, OR HOLES FOR THE PLANT MATERIALS MAY BE DUG WITH IDENTIFICATION OF PLANT TYPE. USE OF THIS METHOD DOES NOT RELIEVE THE CONTRACTOR OF ANY PLANT RELOCATIONS MADE BY THE CITY.
- 3.2. SUBSTANTIAL COMPLETION: AN INSPECTION AT COMPLETION OF THE LANDSCAPE AND IRRIGATION INSTALLATION WILL BE MADE. ANY DEFICIENCIES IN THE INSTALLATION WILL BE NOTED AND CORRECTED BY THE CONTRACTOR DURING THE MAINTENANCE PERIOD.
- 3.3. FINAL ACCEPTANCE: A FINAL INSPECTION IS REQUIRED PRIOR TO CITY ACCEPTANCE OF THE LANDSCAPE AND IRRIGATION IMPROVEMENTS.
- 4. SEPARATE INSPECTIONS ARE REQUIRED FOR THE WATER TAP, METER INSTALLATION, BACKFLOW PREVENTER AND ELECTRICAL CONNECTIONS. CALL CITY A MINIMUM OF 24 HOURS PRIOR TO ARRANGE FOR THESE INSPECTIONS.
- 5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MATERIALS, INSTALLATION, AND REQUIRED PERMIT FEE COST FOR THE WATER METER(S) DESIGNATED TO SERVE THE IRRIGATION SYSTEM.
- 6. PLANTINGS SHALL NOT INTERFERE WITH ANY TRAFFIC CONTROL SIGNS AND SHALL MAINTAIN A MAXIMUM HEIGHT OF 24" WITHIN ANY VISIBILITY TRIANGLES.
- 7. INSTALLATION OF THE LANDSCAPE INCLUDING ADDITION OF GROUND PLANE MATERIALS SHALL NOT IMPEDE THE FLOW OF DESIGNED DRAINAGE FACILITIES NOR DECREASE THE DESIGN VOLUME OF ANY DETENTION/RETENTION BASINS.
- 8. THE CONTRACTOR IS RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL UNDERGROUND UTILITIES DURING THE LANDSCAPE INSTALLATION.
- 9. ALL TREES SHALL MAINTAIN A MINIMUM OF 6'-0" CLEARANCE FROM ANY CITY WATER OR SEWER LINE. ALL PLANTINGS SHALL MAINTAIN A SUFFICIENT DISTANCE TO ANY SANITARY AND STORM SEWER MANHOLES TO ALLOW ACCESS BY MAINTENANCE VEHICLES.
- 10. ALL ROCK GROUNDCOVER AREAS SHALL BE SPRAYED WITH PRE-EMERGENT HERBICIDE BY A LICENSED APPLICATOR AS PART OF INSTALLATION AS FOLLOWS (A MINIMUM OF THREE (3) APPLICATIONS ARE REQUIRED):
- 10.1. PRIOR TO THE APPLICATION OF GRANITE: PER MANUFACTURER'S RECOMMENDED
- 10.2. AFTER GRANITE APPLICATION: PER MANUFACTURER'S RECOMMENDED RATES.
- 10.3. PRIOR TO FINAL ACCEPTANCE: PER MANUFACTURER'S RECOMMENDED RATES THE CITY SHALL BE FURNISHED WITH WRITTEN DOCUMENTATION OF THE SCHEDULE OF APPLICATION DATES.
- 11. AS-BUILT DRAWINGS OF THE LANDSCAPE AND IRRIGATION SYSTEM ARE REQUIRED PRIOR TO ACCEPTANCE BY THE CITY AND FOR PROJECTS WITHIN THE CITY RIGHT-OF-WAY OR CITY OWNED PROPERTY. THE AS-BUILT DRAWINGS SHALL BE HARD COPY BOND SCANNED TO PDF SHOWING THE LOCATIONS OF ALL PLANTINGS AND THE DIMENSIONS TO FIXED POINTS OF ALL IRRIGATION EQUIPMENT, PIPING ETC.
- 12. ALL TREES WITHIN VEHICULAR SIGHT DISTANCE/VISIBILITY CLEAR ZONES SHALL HAVE A VERTICAL CANOPY CLEARANCE/CLEAR TRUNK TO 7' ABOVE THE NEAREST CURB.
- 13. SUBSTANTIAL INSPECTION AN INSPECTION AT COMPLETION OF THE LANDSCAPE AND IRRIGATION INSTALLATION WILL BE MADE BY THE CITY OF PAGE. ANY DEFICIENCIES IN THE INSTALLATION WILL BE NOTED AND CORRECTED BY THE CONTRACTOR PRIOR TO THE START OF THE MAINTENANCE PERIOD.
- 14.LANDSCAPE MAINTENANCE PERIOD THE CONTRACTOR SHALL NOTIFY THE CITY MANAGER WHEN ALL LANDSCAPING IS COMPLETED AND READY FOR A LANDSCAPE AND IRRIGATION INSPECTION. THE CITY SHALL ISSUE A LETTER TO BEGIN THE LANDSCAPE MAINTENANCE PERIOD. THE LANDSCAPE MAINTENANCE PERIOD SHALL BE FOR A MINIMUM OF NINETY (90) DAYS AND EXTEND UNTIL ALL PLANT MATERIAL IS ESTABLISHED AND ACCEPTED BY THE CITY FOR ONE FULL GROWING SEASON. IF NOT HEALTHY AT THE END OF THE MAINTENANCE PERIOD, MAINTENANCE SHALL BE CONTINUED UNTIL THE PLANT MATERIAL IS APPROVED BY THE CITY.
- 15.FINAL ACCEPTANCE A FINAL INSPECTION IS REQUIRED AT THE END OF THE LANDSCAPE MAINTENANCE PERIOD TO DETERMINE FINAL ACCEPTANCE.
- 16. CONTRACTOR MUST SUBMIT A DECOMPOSED GRANITE SAMPLE TO LANDSCAPE ARCHITECT OR CITY REPRESENTATIVE PRIOR TO ORDERING.
- 17. THE JOB SITE, AT THE COMPLETION OF THE CONSTRUCTION, SHALL BE CLEANED OF ANY DEBRIS OR SPOIL RESULTING FROM THE CONSTRUCTION. NO JOB WILL BE CONSIDERED COMPLETE UNTIL ALL CURBS, PAVEMENT, AND SIDEWALKS HAVE BEEN SWEPT CLEAN OF ALL DIRT AND DEBRIS, AND ALL SURVEY MONUMENTS ARE INSTALLED ACCORDING TO THE PLANS AND SPECIFICATIONS.
- 18. ALL EQUIPMENT AND MATERIALS NOT SHOWN OR SPECIFIED ON THE PLANS OR IN THE SPECIFICATIONS BUT WHICH ARE REQUIRED TO COMPLETE THIS INSTALLATION, SHALL BE SUPPLIED BY THE CONTRACTOR AS PART OF THIS CONTRACT WORK.
- 19. ALL LANDSCAPE SHALL COMPLY WITH CITY STANDARDS, MAG SPECIFICATIONS AND THESE SPECIFICATIONS.
- 20.LANDSCAPE REMOVAL IS A NON PAY ITEM (N.P.I.) AND THE COST FOR VEGETATIVE REMOVAL SHOULD BE INCLUDED IN SITE PREPARATION WORK ASSOCIATED WITH EACH ITEM OF WORK.

### LANDSCAPING GENERAL NOTES CONT.

- 21. ALL EXISTING TREES AND SHRUBS UNLESS NOTED ARE TO BE PROTECTED IN PLACE. THE REMAINDER OF EXISTING VEGETATION (WEEDS, ETC.) UNLESS NOTED OTHERWISE SHALL BE REMOVED AND DISPOSED OF AS PART OF THE DEMOLITION PHASE OF THIS CONTRACT (NPI). ALL MATERIALS ARE TO BE REMOVED FROM PROJECT AREA AND DISPOSED OF PROPERLY OFF-SITE AT THE CONTRACTOR'S EXPENSE UNLESS OTHERWISE NOTED. (COMPACT THOSE AREAS DESIGNATED FOR PAVEMENT TO 95% OR AS SPECIFIED IN THE SOILS REPORT AND SCARIFY EXISTING SUBGRADE A MINIMUM OF 6-INCH DEPTH IN AREAS TO BE PLANTED).
- 22. ALL PLANT MATERIAL, OTHER THAN TREES, SHALL CONFORM TO GRADING, TYPE, ETC., AS SET FORTH IN "THE AMERICAN STANDARD FOR NURSERY STOCK" BY THE AMERICAN ASSOCIATION OF NURSERYMEN. ALL TREES SHALL CONFORM TO THE CURRENT "ARIZONA NURSERY ASSOCIATION TREE SPECIFICATIONS" AND M.A.G. SPEC 795.7. SHOULD ANY CONFLICTS IN SPECIFICATIONS OCCUR, THE ARIZONA NURSERY ASSOCIATION'S SPECIFICATIONS SHALL PREVAIL.
- 23. LANDSCAPE ARCHITECT AND CITY REPRESENTATIVE RESERVES THE RIGHT TO INSPECT SHRUBS AND CONTAINERIZED TREES FOR CONDITION OF ROOT BALLS. FOR ANY SUCH INSPECTION WHICH MAY DESTROY ROOT BALL, CONTRACTOR SHALL SUPPLY ADDITIONAL PLANTS AT NO COST TO THE CITY.
- 24. THE CONTRACTOR SHALL HAVE THE PLANT PITS INSPECTED AND APPROVED BY THE LANDSCAPE ARCHITECT AND CITY REPRESENTATIVE PRIOR TO PLANTING. CONTRACTOR SHALL REQUEST INSPECTION 48 HOURS IN ADVANCE.
- 25. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSPECT THE JOB SITE TO BECOME FAMILIAR WITH ALL EXISTING CONDITIONS THAT COULD AFFECT THE INSTALLATION OF ANY WORK SET FORTH IN THESE PLANS PRIOR TO SUBMITTING A BID.
- 26. THE CONTRACTOR IS ADVISED THAT DAMAGE TO ANY PORTION OF THIS PROJECT'S EXISTING PAVEMENT, CURBING AND SURROUNDING AREA THAT IS NOT NOTED ON THE PLANS TO BE REMOVED, AS A RESULT OF THIS PROJECT, IS TO BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- 27. THE CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL AND DISPOSAL OF ANY DEBRIS RESULTING FROM THE DEMOLITION AND CONSTRUCTION. AT NO TIME SHALL ANY OF THIS MATERIAL OBSTRUCT THE NORMAL OPERATION OF ANY ADJOINING STREET OR ANY AREAS ASSOCIATED WITH THIS PROJECT.
- 28. QUANTITIES ARE GIVEN ONLY FOR REFERENCE PURPOSES. CONTRACTOR TO VERIFY ALL LANDSCAPE QUANTITIES AND REPORT ANY DISCREPANCIES IMMEDIATELY. IN CASE OF A DISCREPANCY BETWEEN THE NUMBER OF PLANTS OF ANY SPECIES QUANTITIES OF TURF, RIVER RUN ROCK, DECOMPOSED GRANITE, CONCRETE HEADER AND ALL OTHER MATERIALS INDICATED ON THE DRAWINGS AND THE TOTAL NUMBER INDICATED ON THE MATERIALS LIST OR BID TAB, THE DRAWINGS SHALL BE ACCEPTED AS CORRECT.
- 29. CONTRACTOR SHALL VERIFY THE EXISTENCE AND LOCATION OF ALL EXISTING AND PROPOSED UNDERGROUND UTILITIES AND STRUCTURES PRIOR TO STARTING ANY WORK. REPORT IMMEDIATELY TO THE OWNER ANY CASES WHERE PLANT MATERIAL SHALL BE RELOCATED TO AVOID THE UTILITIES. DAMAGE BY THE CONTRACTOR TO ANY WORK SHALL BE REPLACED AND/OR REPAIRED BY THE CONTRACTOR AT THEIR EXPENSE.
- 30. ALL LANDSCAPE AREAS SHALL HAVE AN APPLIED TOPPING OF EITHER DECOMPOSED GRANITE. FINISH GRADE AREAS ARE TO BE RAKED AND COMPACTED AS SPECIFIED IN MAG SECTIONS 430 AND LEFT SMOOTH AND EVEN.
- 31. FOR SITE OBSERVATIONS DURING THE CONSTRUCTION PHASE OF PROJECT REFER TO THE PLANS AND SPECIFICATIONS.
- 32. FOR ADDITIONAL CONSTRUCTION NOTES REFER TO LANDSCAPE, HARDSCAPE, AND IRRIGATION PLANS AND THE SPECIFICATIONS.

#### NOTE

CONTRACTOR SHALL REFER TO SPECIFICATIONS FOR SOIL ANALYSIS, SOIL AMENDMENTS / SUPPLEMENTS, FERTILIZERS, ETC.

#### GENERAL NOTES TO CONTRACTOR

- PRIOR TO ANY LANDSCAPE OR IRRIGATION CONSTRUCTION IN THE PUBLIC RIGHT-OF-WAY, THE CONTRACTOR SHALL NOTIFY THE CITY AT LEAST 48 HOURS IN ADVANCE OF INSTALLATION WORK.
- PRIOR TO ANY CONSTRUCTION OR UTILITY WORK STARTING WITHIN A CITY RIGHT-OF-WAY, WHICH WILL AFFECT EXISTING CITY-OWNED AND MAINTAINED LANDSCAPING OR IRRIGATION SYSTEMS, THERE WILL BE A MEETING ON SITE TO SHOW THAT THE EXISTING SYSTEMS OR LANDSCAPED AREAS ARE IN PROPER REPAIR AND FUNCTION. AT THE COMPLETION OF THE CONSTRUCTION WORK THERE WILL BE ANOTHER MEETING AND INSPECTION ON SITE. THE SAME AREAS AND SYSTEMS WILL AGAIN BE REVIEWED. ANY DAMAGE TO THE LANDSCAPING OR TO THE IRRIGATION SYSTEM WILL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR OR UTILITY COMPANY AND MUST BE REPAIRED TO THE SATISFACTION OF THE CITY WITHIN FIVE (5) WORKING DAYS. IF THIS WORK IS NOT COMPLETED WITHIN THE ALLOTTED TIME, THE CITY WILL MAKE THE REPAIRS OR CORRECTIONS AND MONEY WILL BE DEDUCTED OR BILLED TO THE GENERAL CONTRACTOR ON THE PROJECT. THE INDIVIDUALS WHICH SHOULD BE REPRESENTED AT THESE ON-SITE MEETINGS SHALL BE: A REPRESENTATIVE FROM THE CONTRACTOR, A REPRESENTATIVE FROM THE CITY RESPONSIBLE FOR THE CONSTRUCTION INSPECTION, A REPRESENTATIVE FROM THE CITY ENGINEER'S OFFICE, AND A REPRESENTATIVE FROM THE DESIGN TEAM.
- 3. SEE DEMOLITION PLANS FOR REMOVALS AND PROTECTED IN PLACE PLANT MATERIALS. SEE SHEETS D-101 & D-102.

#### PLANT SCHEDULE

SYMBOL: BOTANICAL / COMMON:	PHASE 1 F	FULL BUILD OUT	
TREES:	QTYS:	QTYS:	SIZE:
Fraxinus velutina Arizona Ash	9	9	24" BOX
+ E— <i>Quercus virginiana</i> Southern Live Oak	2	2	24" BOX
SHRUBS:			
Calliandra eriophylla Pink Fairy Duster	18	29	5 GAL.
Leucophyllum zygophyllum Cimarror Cimarron Sage	n 9	9	5 GAL.
GROUNDCOVERS:			
Rosmarinus officinalis 'Prostratus' Trailing Rosemary	15	15	1 GAL.
ACCENTS:			
— Hesperaloe parviflora	25	20	5 GAL.

#### NOTE:

1. SEE DEMOLITION PLANS FOR REMOVALS AND PROTECTED IN PLACE PLANT MATERIALS.

Brakelights Yucca



4649 E COTTON GIN LOOP E PHOENIX, AZ 85040 602.438.2221

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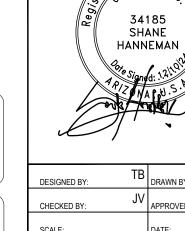
# SURFACE MATERIAL LEGEND

SYMBOL:	MATERIAL/DESCRIPTION:	DETAILS:	PHASE 1 QTYS:	FULL BUILD QTYS:
	4" CONCRETE PAVING - MEDIUM BROOM FINISH	SEE DTL 2 SHEET HS-301	2,340 SQ. FT.	4,050 SQ. FT.
Δ Δ Δ Δ Δ Δ Δ Δ Δ Δ Δ Δ Δ Δ Δ Δ Δ Δ Δ	6" CONCRETE PAVING - MEDIUM BROOM FINISH	SEE DTL 2 SHEET HS-301	1,780 SQ. FT.	1,780 SQ. FT.
	6" CONCRETE PAVING AT SPLASH PAD - HEAVY BROOM FINISH	SEE DTL 2 SHEET HS-302	3,590 SQ. FT.	5,345 SQ. FT.
	DECOMPOSED GRANITE  SIZE: ½" SCREENED  COLOR: PALOMINO GOLD	SEE DTL 2 SHEET LS-401	8,325 SQ. FT.	7,860 SQ. FT.
	COMPACTED DECOMPOSED GRANITE: SIZE: ¼" MINUS COLOR: PALOMINO GOLD	SEE DTL 6 SHEET LS-401	320 SQ. FT.	1,100 SQ. FT.
\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	TURF SOD TIFWAY 419 ON NATIVE	SEE SPECIFICATIONS	4,575 SQ. FT.	0 SQ. FT.
	ARTIFICIAL TURF	SEE SPECIFICATIONS	0 SQ. FT.	590 SQ. FT.
	ENGINEERED WOOD FIBER SAFETY SURFACE	SEE DTL 5 SHEET HS-301	1,550 SQ. FT.	1,550 SQ. FT.
	ANGULAR GRANITE RIP RAP: SIZE: 3-6" COLOR: PALOMINO GOLD	SEE DTL 4 SHEET LS-401	54 SQ. FT.	54 SQ. FT.

#### CONCRETE MOCK-UP NOTES:

- 1. CONCRETE SPLASH PAD PAVING WILL REQUIRE A 3'-0" X 3'-0" MOCK-UP TO BE COMPLETED BY CONTRACTOR FOR CITY REVIEW AND APPROVAL PRIOR TO FURTHER INSTALLATION.
- MOCK-UP CAN NOT BE PART OF FINAL INSTALLATION.





DATE DESCRIPTION

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

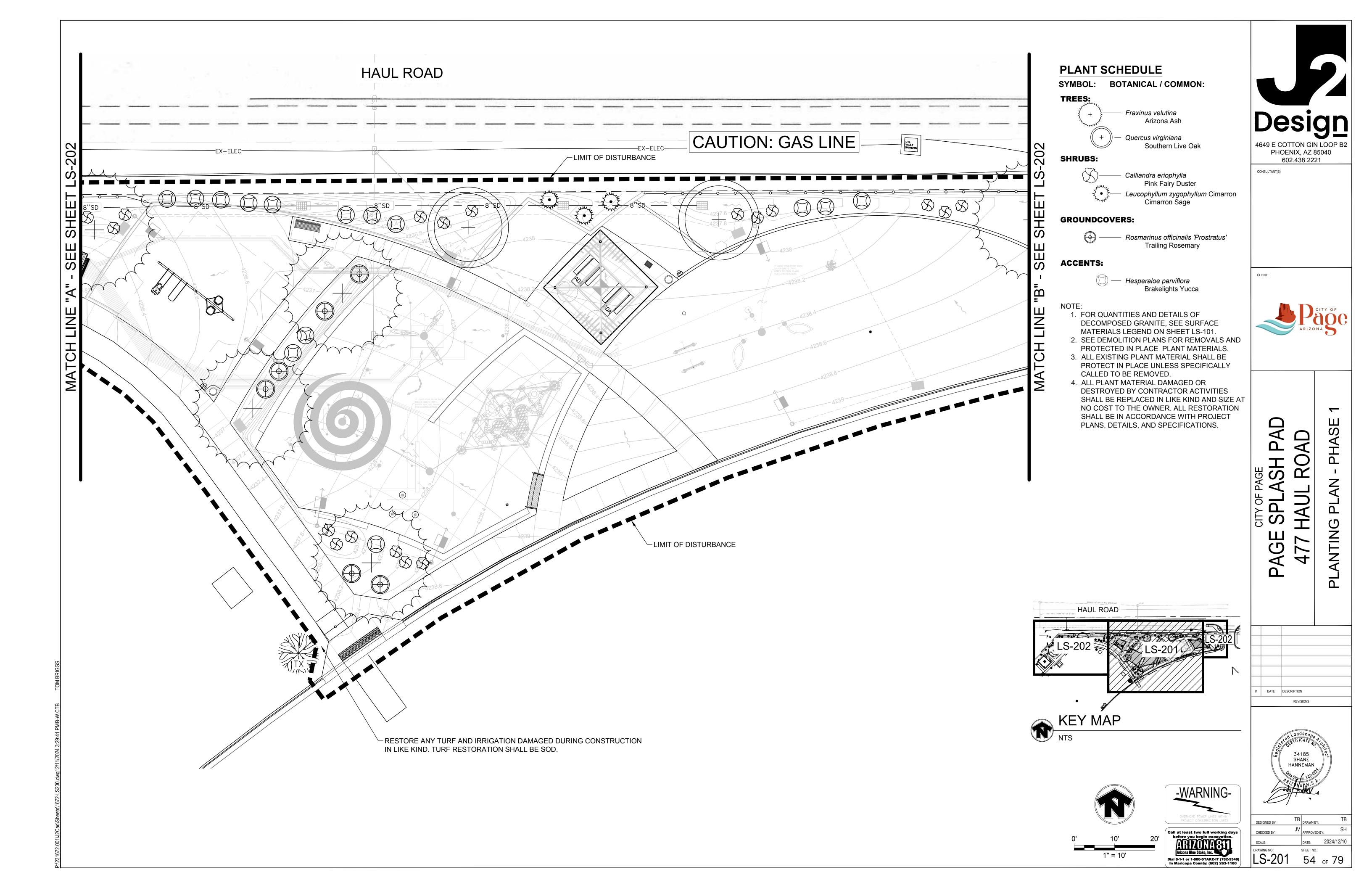
Arizona Blue Stake, Inc.

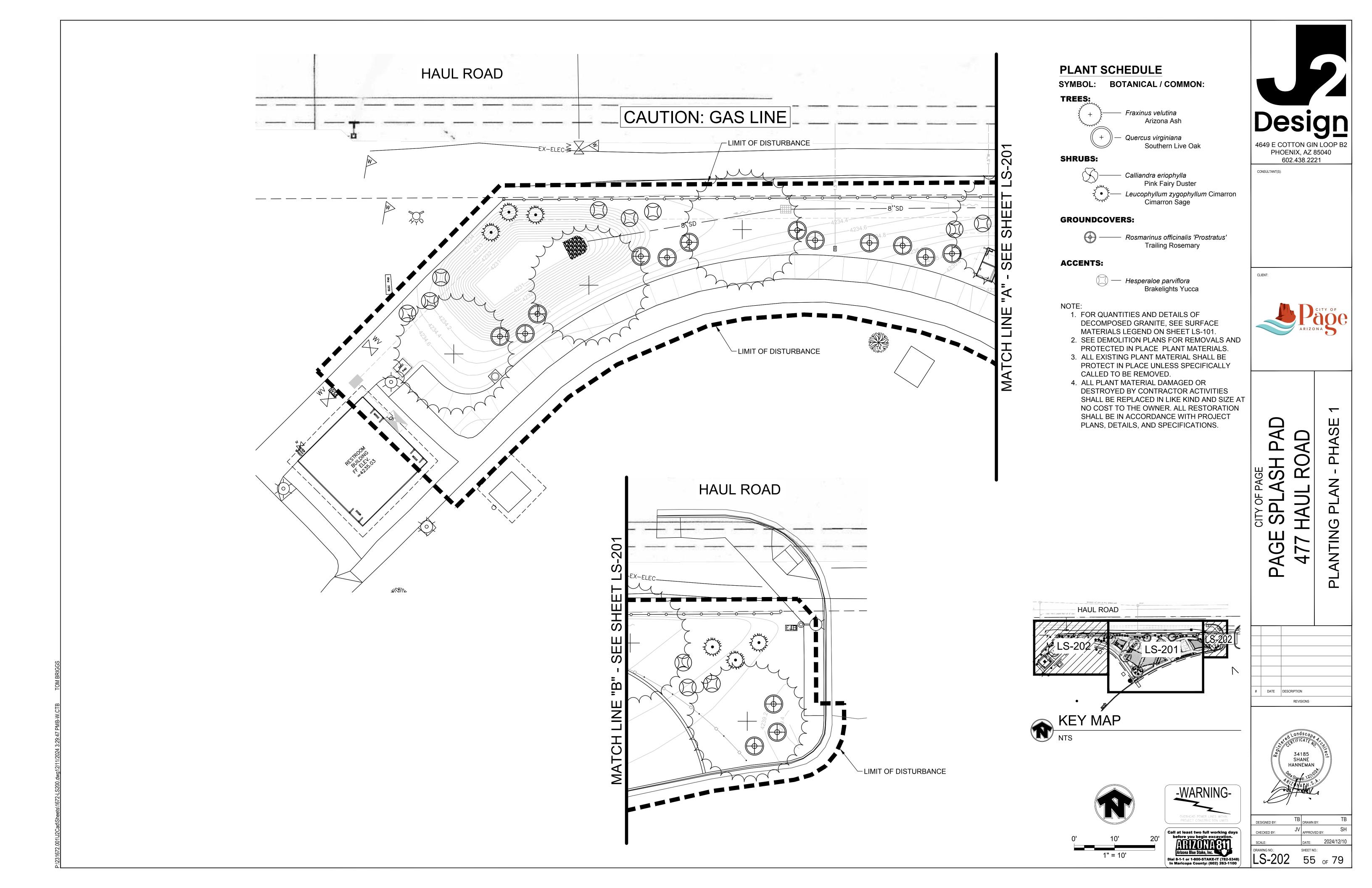
Dial 8-1-1 or 1-800-STAKE-IT (782-5348) In Maricopa County: (602) 263-1100

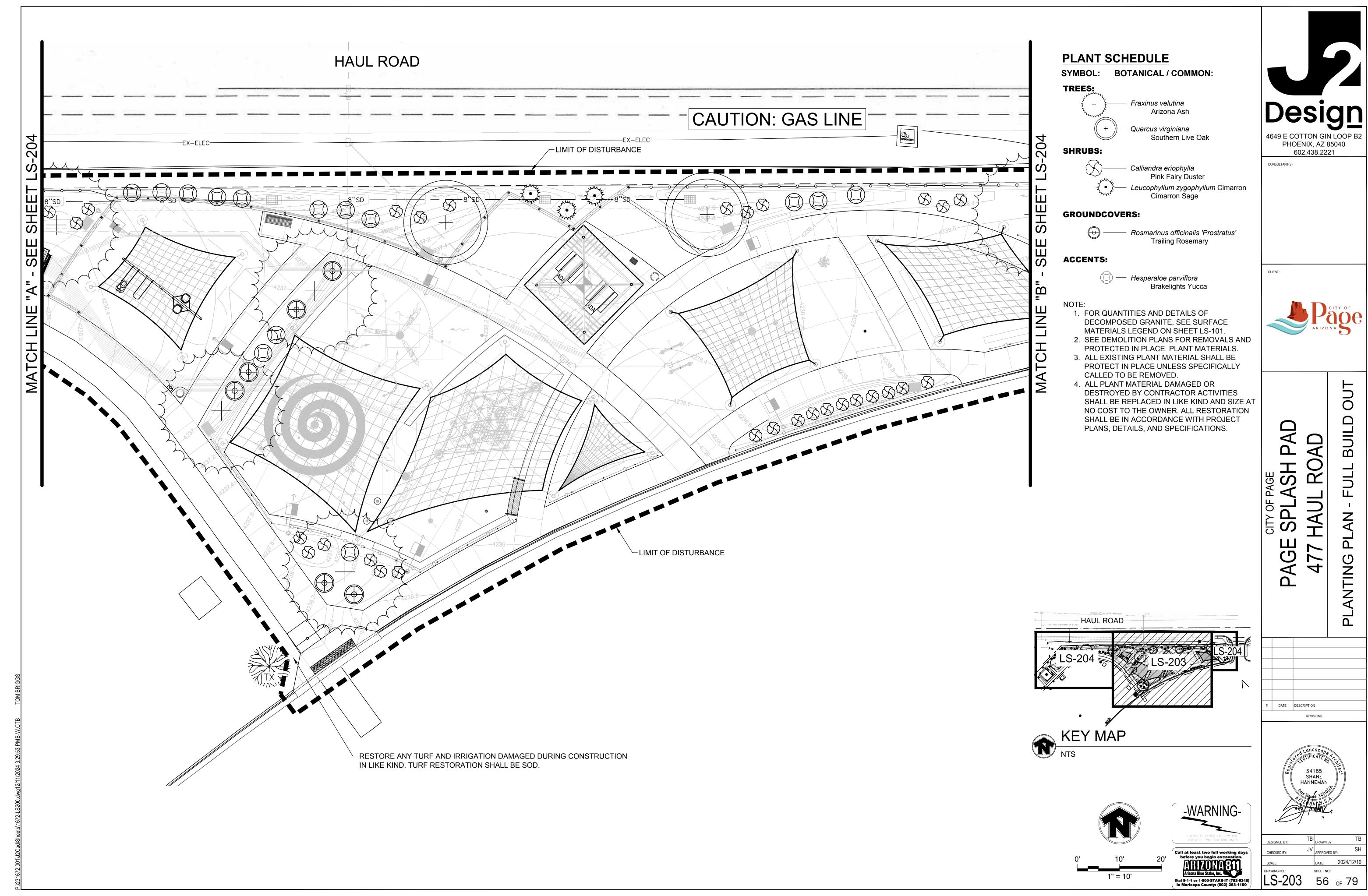
DIAL STAKE-IT (782-5348) In Maricopa County: (602) 263-1100

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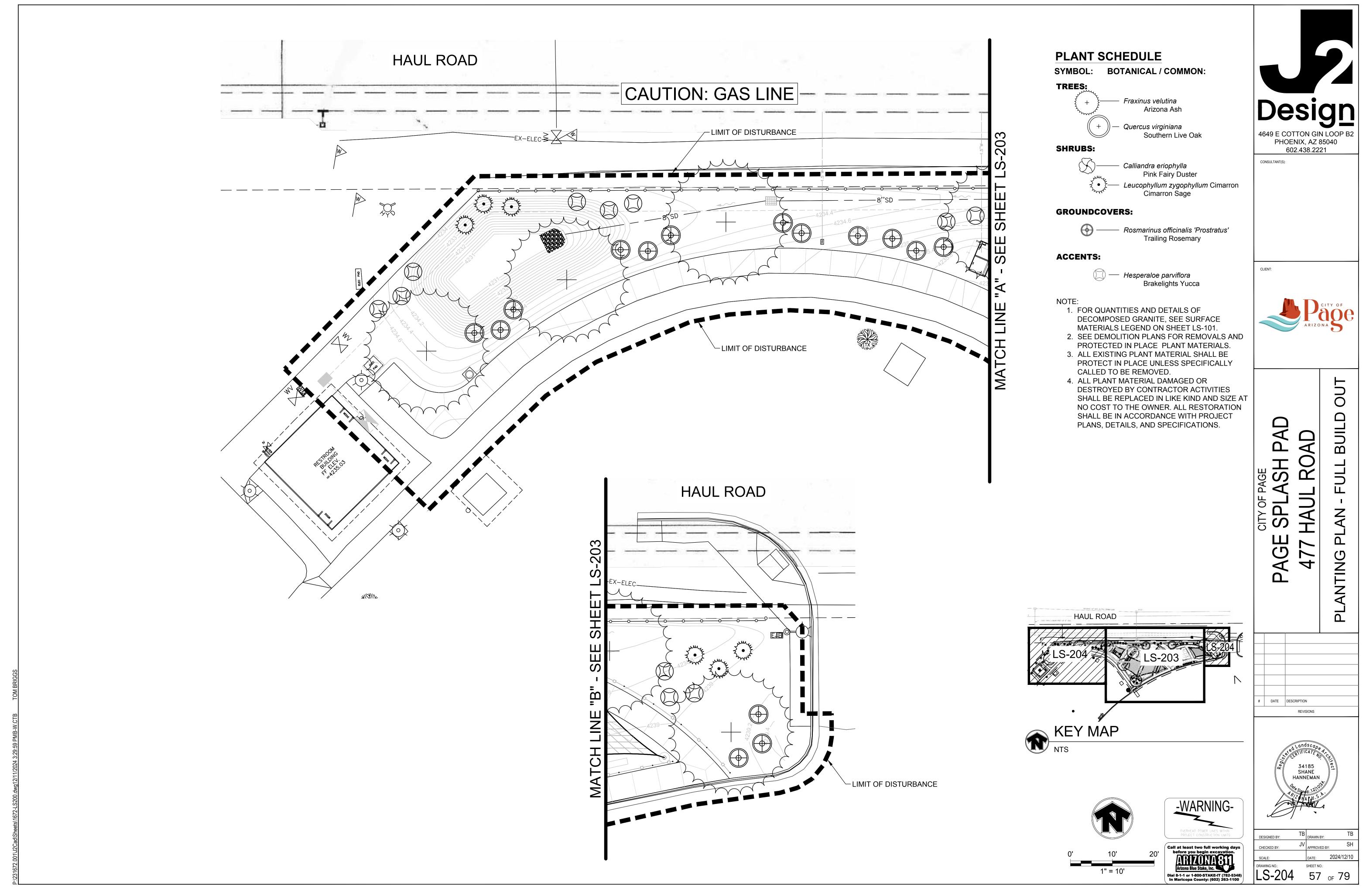
DIAL STAKE-IT (782-5348) In Maricopa County: (602) 263-1100

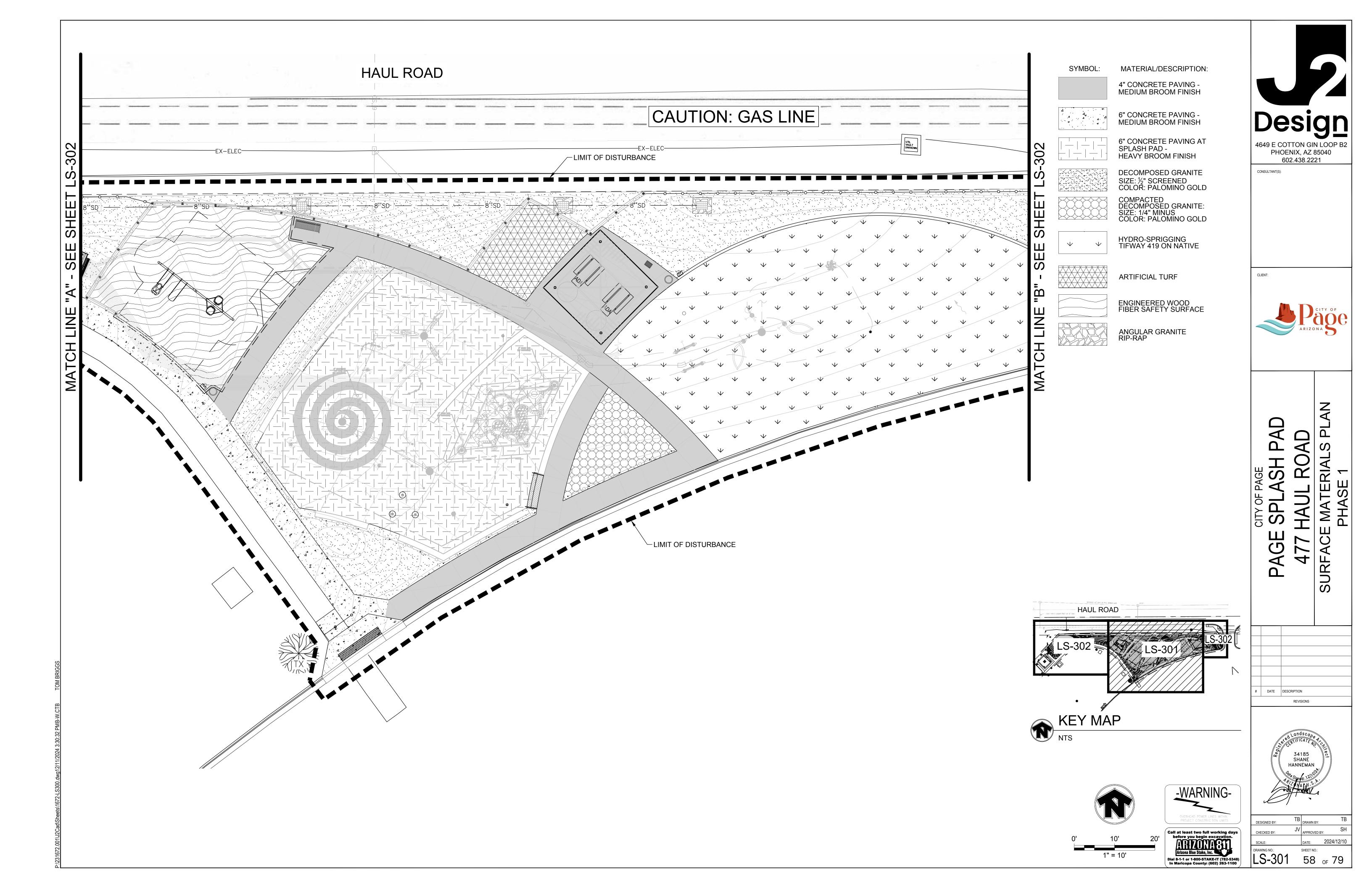


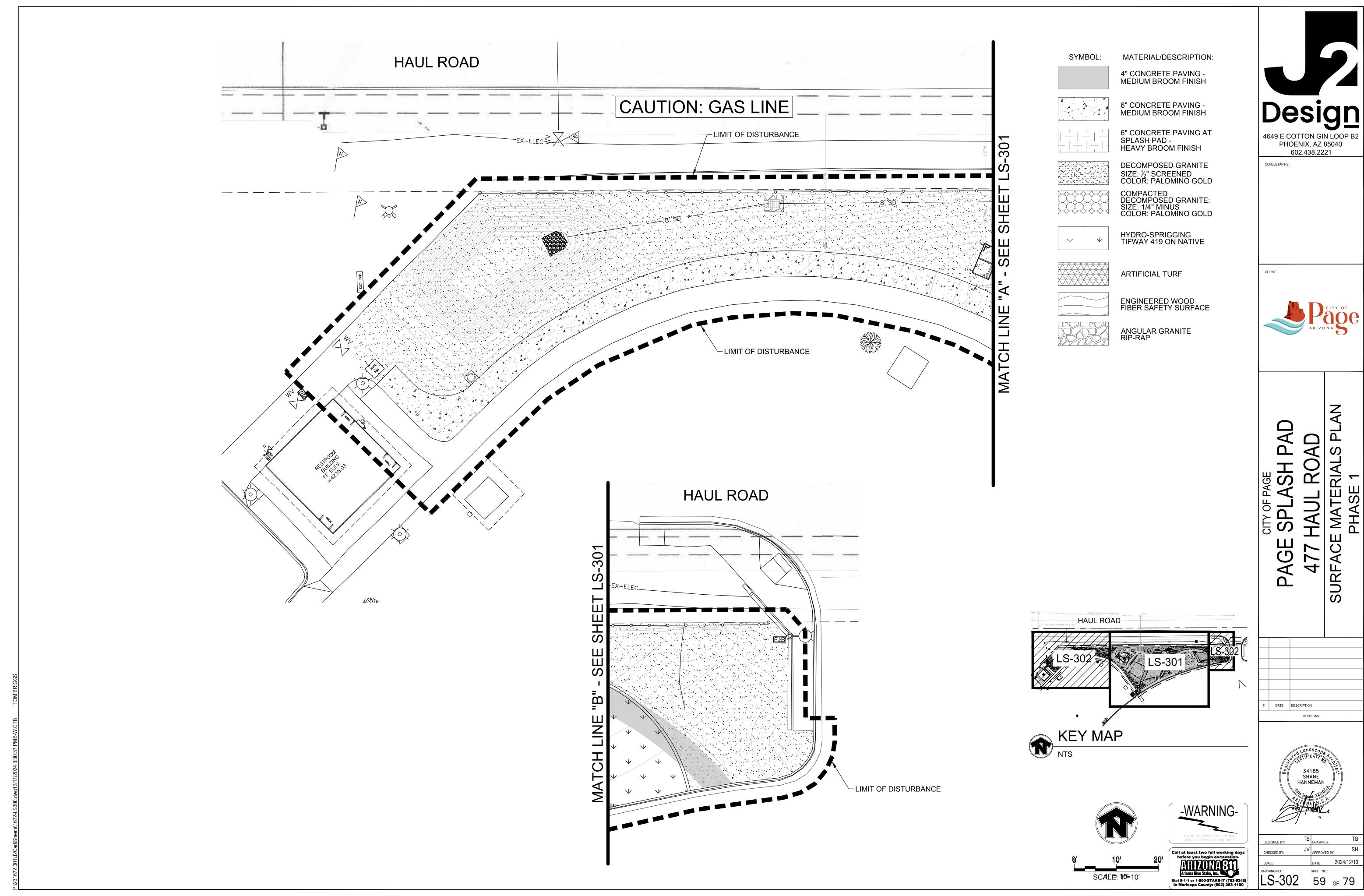




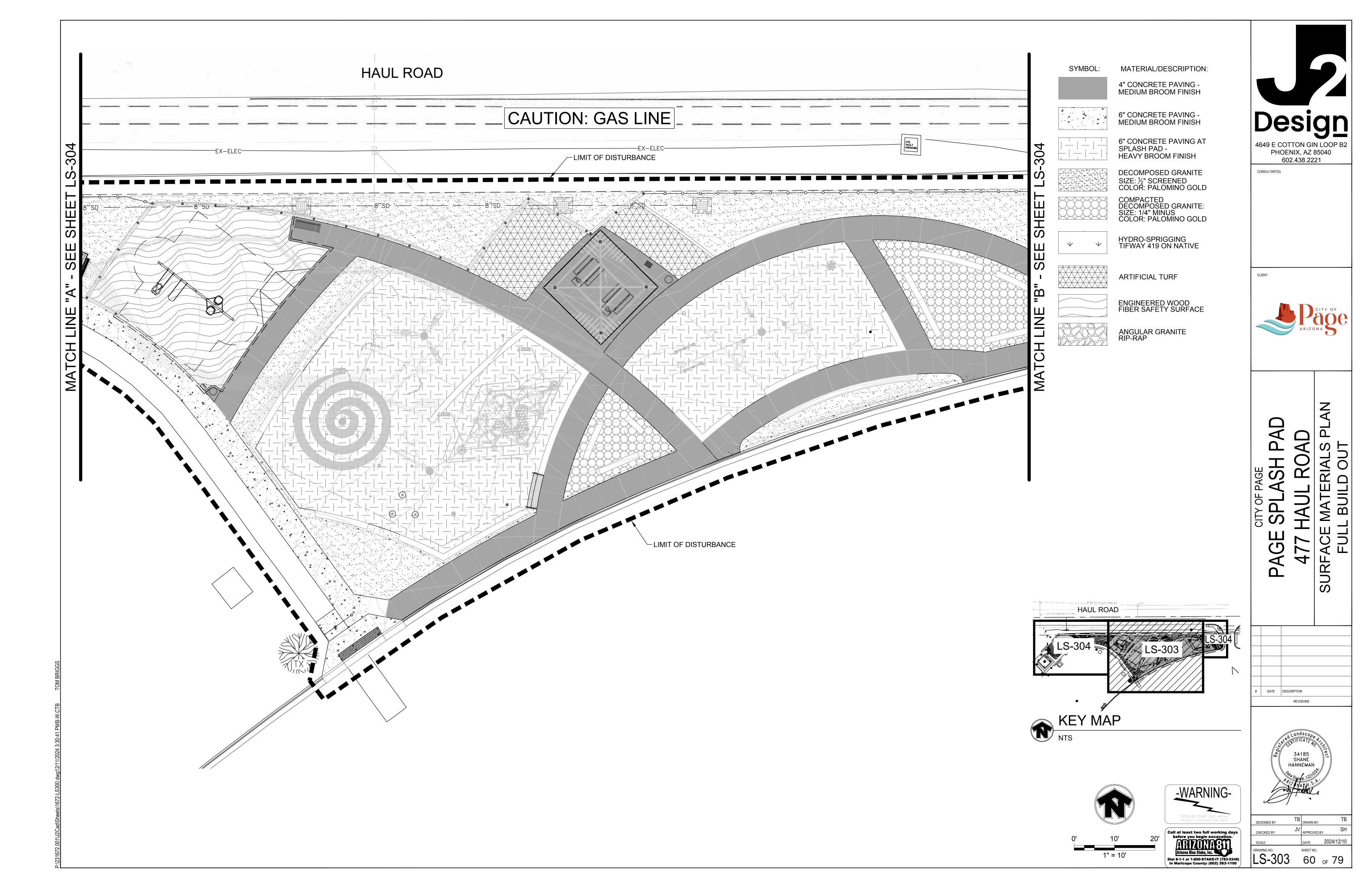
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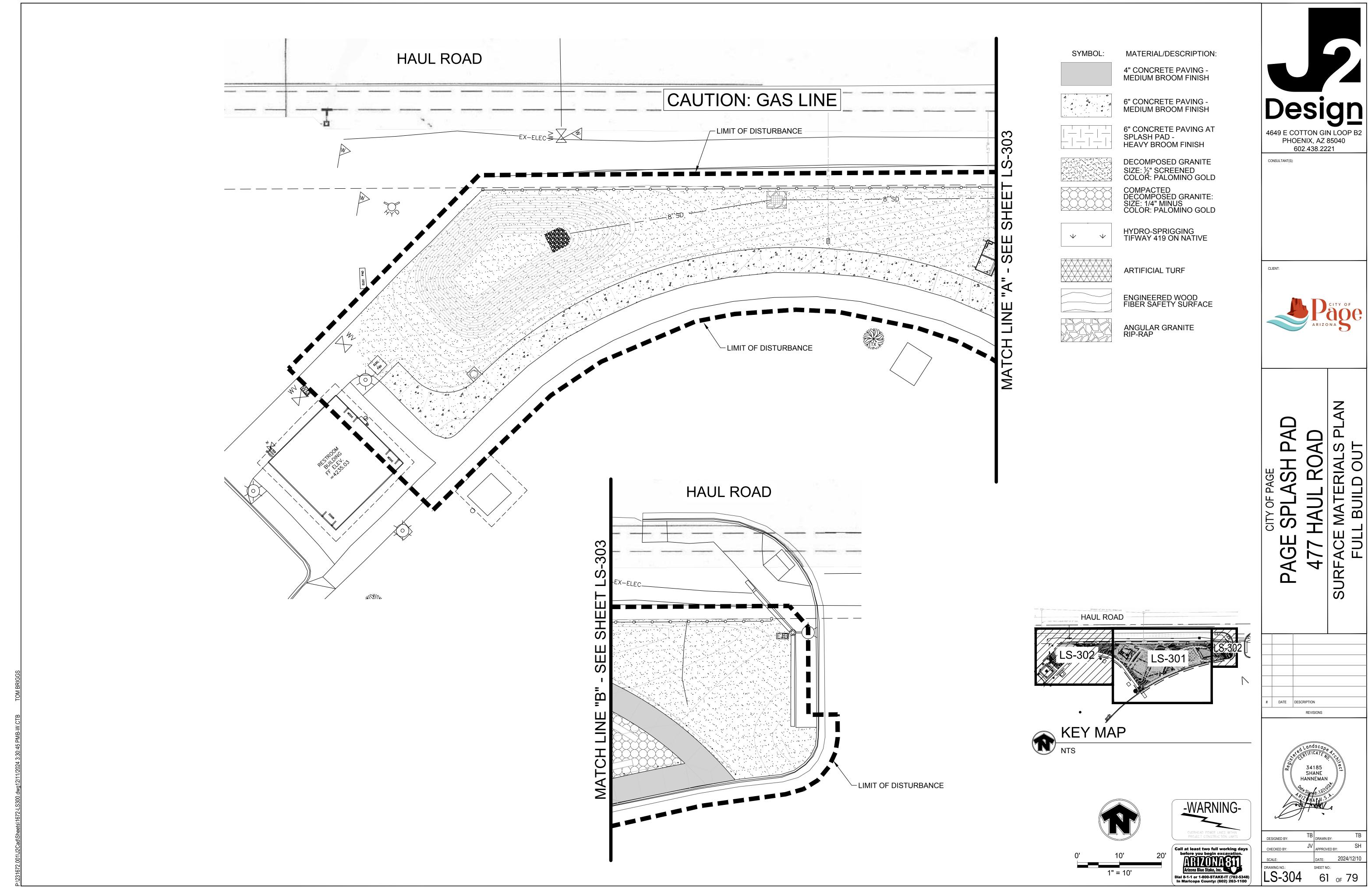


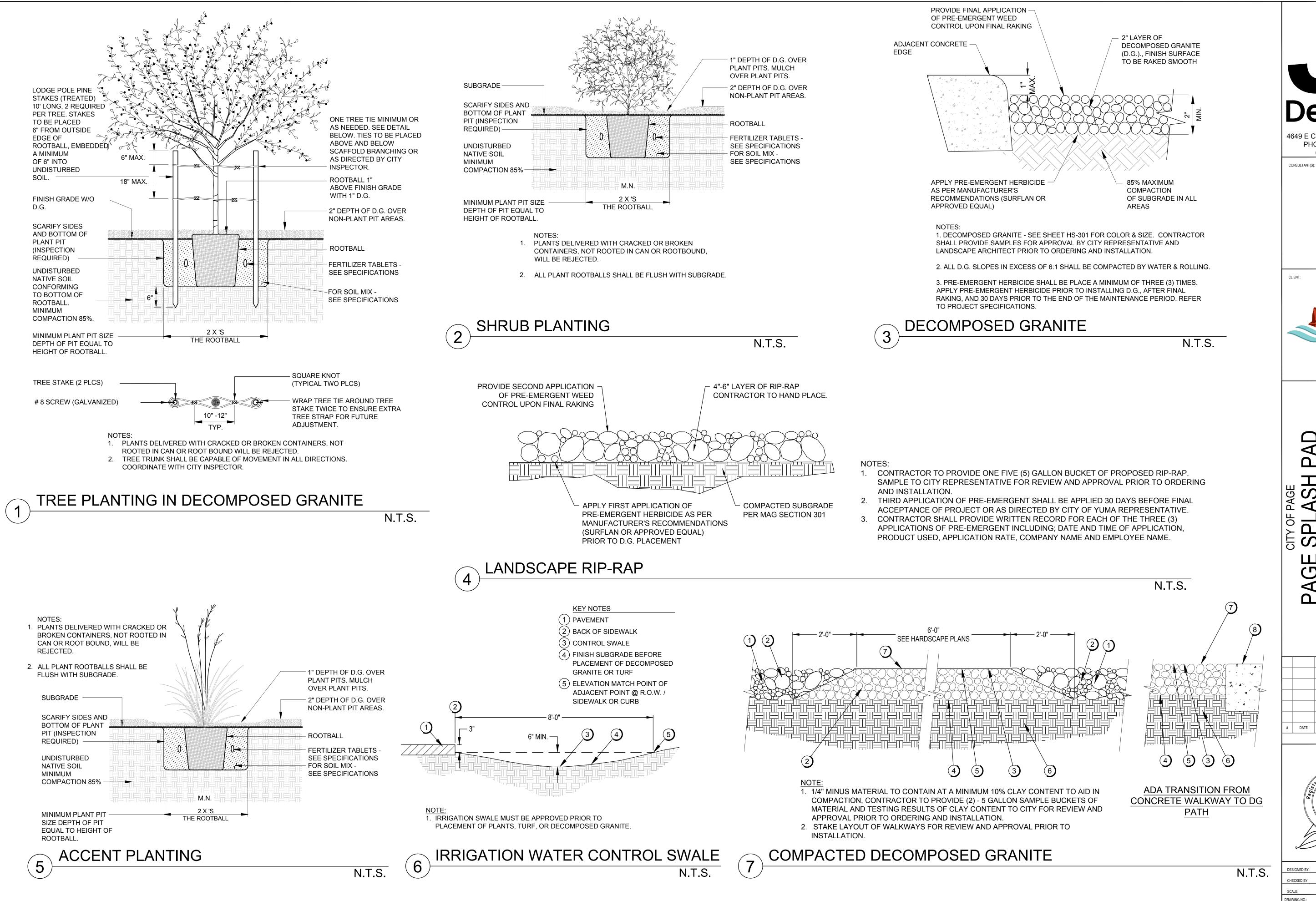




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- 2. PRIOR TO ANY CONSTRUCTION OR UTILITY WORK STARTING WITHIN A CITY RIGHT-OF-WAY, WHICH MAY AFFECT EXISTING CITY OWNED AND MAINTAINED LANDSCAPING OR IRRIGATION SYSTEMS, THERE WILL BE A MEETING ON SITE TO SHOW THAT THE EXISTING SYSTEMS OR LANDSCAPED AREAS ARE IN PROPER REPAIR AND FUNCTIONING. AT THE COMPLETION OF THE CONSTRUCTION WORK THERE WILL BE ANOTHER MEETING AND INSPECTION ON SITE. THE SAME AREAS AND SYSTEMS WILL AGAIN BE REVIEWED. ANY DAMAGE TO THE LANDSCAPING OR TO THE IRRIGATION SYSTEM WILL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AND MUST BE REPAIRED TO THE SATISFACTION OF THE CITY WITHIN FIVE (5) WORKING DAYS. IF THIS WORK IS NOT COMPLETED WITHIN THE ALLOTTED TIME, THE CITY WILL MAKE THE REPAIRS OR CORRECTIONS AND MONEY WILL BE DEDUCTED OR BILLED TO THE GENERAL CONTRACTOR ON THE PROJECT. THE INDIVIDUALS WHICH SHOULD BE REPRESENTED AT THESE ON-SITE MEETINGS SHALL BE: A REPRESENTATIVE FROM THE CONTRACTOR AND A REPRESENTATIVE FROM THE ENGINEERING FIRM AND/OR CITY RESPONSIBLE FOR THE CONSTRUCTION INSPECTION.
- 3. PRIOR TO ANY WORK, THE CONTRACTOR SHALL PERFORM A SURVEY TO ESTABLISH THE WORK LIMITS.
- 4. PRIOR TO COMMENCEMENT OF ANY WORK, THE CONTRACTOR SHALL CONTACT ARIZONA 811 BLUE STAKE (1-800-782-5348) TO VERIFY LOCATIONS AND DEPTHS OF UNDERGROUND UTILITIES THAT MAY BE AFFECTED BY THIS WORK AND SHALL BE RESPONSIBLE FOR DAMAGES TO SUCH UTILITIES CAUSED AS A RESULT OF THE WORK.
- 5. CONTRACTOR SHALL READ THOROUGHLY AND BECOME FAMILIAR WITH THE PLANS, INSTALLATION DETAILS, PROJECT SPECIFICATIONS, AND ANY APPLICABLE CITY STANDARD DETAILS & SPECIFICATIONS FOR THIS AND RELATED WORK PRIOR TO CONSTRUCTION
- 6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND COMPLYING WITH ALL PERMITS REQUIRED TO COMPLETE THE WORK COVERED BY THESE PLANS.
- 7. THE CONTRACTOR SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL LAWS, CODES AND REGULATIONS APPLICABLE TO THE WORK COVERED BY THESE PLANS.
- 8. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT ADJACENT PROPERTIES FROM DAMAGE THROUGHOUT CONSTRUCTION
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION MEANS. METHODS, COORDINATION, AND SEQUENCING DURING CONSTRUCTION UNLESS SPECIFICALLY ADDRESSED OTHERWISE IN THESE PLANS AND SPECIFICATIONS.
- 10. ONCE CONSTRUCTION OPERATIONS HAVE COMMENCED, IT IS THE INTENTION OF THIS PROJECT THAT THE JOB SITE BE FULLY MANNED / STAFFED UNTIL THE COMPLETION OF THE WORK WITHOUT GAPS IN PROGRESS
- 11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPENSATING THE OWNER FOR ANY DESIGN CHANGES MADE AS RESULT OF DEVIATION BY THE CONTRACTOR FROM THESE PLANS AND SPECIFICATIONS OR DUE TO ERRORS. FAULTY MATERIAL, OR FAULTY WORKMANSHIP.
- 12. THE CONTRACTOR SHALL VERIFY AND ACCEPT ALL SITE CONDITIONS AND ROUGH GRADES PRIOR TO STARTING ANY WORK. ALL DRAINAGE FLOWS SHALL BE PROTECTED AND MAINTAINED THROUGHOUT CONSTRUCTION UNLESS PLANS SPECIFICALLY NOTE OTHERWISE.
- 13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DUST CONTROL DURING CONSTRUCTION AND SHALL ACQUIRE A DUST CONTROL PERMIT FROM THE COUNTY. ALL COSTS ASSOCIATED WITH DUST CONTROL AND PERMITS IS CONSIDERED INCIDENTAL TO THE PROJECT.
- 14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PAYMENT OF STATE, COUNTY, 10. THE PLANS INDICATE A DETAILED LAYOUT OF IRRIGATION MAINLINE PIPES, AND CITY SALES TAXES.
- 15. THE CONTRACTOR AGREES TO INDEMNIFY AND HOLD HARMLESS THE CITY, ITS OFFICERS, AGENTS AND EMPLOYEES, AND ANY JURISDICTION OR AGENCY ISSUING PERMITS FOR ANY WORK INCLUDED IN THE PROJECT FROM ALL SUITS, INCLUDING ATTORNEY'S FEES AND COST OF LITIGATION, ACTIONS, LOSS DAMAGE, EXPENSE, COST OR CLAIMS OF ANY CHARACTER OR NATURE ARISING OUT OF THE WORK DONE IN FULFILLMENT OF THE TERMS OF THESE PLANS OR SPECIFICATIONS, OR FROM ANY CLAIM OR ACT UNDER THE WORKMAN'S COMPENSATION LAW, OR ARISING OUT OF THE CONTRACTOR TO 11. CONTRACTOR MUST OBTAIN WRITTEN APPROVAL FROM THE OWNER OR CONFORM TO ANY SUITS, REGULATION, LAW OR COURT DECREE.
- CONTRACTOR SHALL VERIFY SITE INSTALLATION CONDITIONS PRIOR TO START OF CONSTRUCTION AND NOTIFY OWNER OR OWNER'S REPRESENTATIVE IMMEDIATELY IF ANY CONFLICTS OR DISCREPANCIES ARE FOUND BETWEEN PROPOSED PLANS AND SITE CONDITIONS THAT WILL OBSTRUCT OR DELAY CONSTRUCTION ACTIVITIES THAT ARE NOT ALREADY KNOWN

### **GENERAL IRRIGATION NOTES:**

- CONTRACTOR'S MAINTENANCE PERIOD OF IRRIGATION SYSTEM SHALL BE 90 DAYS DURATION BEGINNING ONCE SUBSTANTIAL COMPLETION ACCEPTANCE IS GRANTED BY OWNER. SUBSTANTIAL COMPLETION ACCEPTANCE IS TYPICALLY GRANTED AFTER THE INITIAL PUNCH WALK IS PERFORMED AND AFTER CONTRACTOR ADDRESSES ANY DEFICIENCIES IDENTIFIED BY THE SUBSTANTIAL PUNCH WALK REPORT. THIS ACCEPTANCE IS ONLY GRANTED BY THE OWNER AND SHOULD BE **OBTAINED BY CONTRACTOR IN WRITING / EMAIL**
- CONTRACTOR'S WARRANTY PERIOD OF IRRIGATION SYSTEM PRODUCTS AND INSTALLATION INCLUDING LABOR SHALL BE 1 YEAR (365 DAYS) DURATION BEGINNING ONCE FINAL COMPLETION ACCEPTANCE IS GRANTED BY OWNER. FINAL COMPLETION ACCEPTANCE IS TYPICALLY GRANTED AT THE END OF THE CONTRACTOR'S DEFINED MAINTENANCE PERIOD, HOWEVER A FINAL COMPLETION PUNCH WALK SHALL BE PERFORMED AND CONTRACTOR SHALL ADDRESS ANY DEFICIENCIES IDENTIFIED BY THE FINAL PUNCH WALK REPORT PRIOR TO FINAL ACCEPTANCE BEING GRANTED. THIS ACCEPTANCE IS ONLY GRANTED BY THE OWNER AND SHOULD BE OBTAINED BY CONTRACTOR IN WRITING / EMAIL. UPON FINAL ACCEPTANCE THE MAINTENANCE RESPONSIBILITY SHALL TRANSITION FROM CONTRACTOR TO OWNER
- 3. ALL MATERIALS UTILIZED ON THIS PROJECT ARE INTENDED TO BE NEW AND OF THE BEST GRADE AVAILABLE. NO USED, SALVAGED, RECLAIMED, OR SECONDS WILL BE ACCEPTED UNLESS PLANS SPECIFICALLY STATE OTHERWISE.
- ANY QUANTITIES PROVIDED WITHIN THESE PLANS ARE FOR INFORMATIONAL PURPOSES ONLY. THE CONTRACTOR SHALL VERIFY ALL QUANTITIES AND SITE CONDITIONS PRIOR TO BIDDING THE WORK.
- 5. ALL IRRIGATION EQUIPMENT TO BE INSTALLED PER IRRIGATION DETAILS, PROJECT SPECIFICATIONS, AND PER MANUFACTURER'S SPECIFICATIONS.
- 6. ALL ITEMS SHALL BE BID AS NOTED. AFTER BID IS AWARDED CONTRACTOR MAY PROPOSE PRODUCT SUBSTITUTIONS OF EQUAL OR BETTER PRODUCTS TO THAT SPECIFIED IN PLANS DURING THE PRODUCT SUBMITTAL PROCESS AS OUTLINED PER THE PROJECT SPECIFICATIONS. DURING THIS PROCESS ALL PROPOSED PRODUCTS TO BE INSTALLED SHALL BE SUBMITTED BY CONTRACTOR TO OWNER AND / OR OWNER'S REPRESENTATIVE FOR REVIEW AND THEY SHALL EITHER APPROVE OR DENY USE OF SUBMITTED PRODUCTS. ONCE THIS PROCESS IS COMPLETED NO FURTHER SUBSTITUTIONS WILL BE ALLOWED UNLESS PRIOR APPROVAL IS OBTAINED IN WRITING FROM OWNER OR OWNER'S REPRESENTATIVE.
- ONLY APPROVED PRODUCTS THROUGH THE PRODUCT SUBMITTAL PROCESS ARE PERMITTED TO BE INSTALLED. ANY UNAPPROVED PRODUCTS FOUND INSTALLED SHALL BE SUBJECT TO REVIEW BY OWNER AND POTENTIALLY TO BE REMOVED AND REPLACED WITH APPROVED ITEM AT NO ADDITIONAL EXPENSE TO OWNER BEYOND THE COST OF APPROVED ITEM AND INSTALLATION OF THAT ITEM ONLY.
- 8. ALL CONTROL WIRES SHALL BE SLEEVED SEPARATELY IN UL APPROVED SCH 40 PVC ELECTRICAL CONDUIT SIZED AS NOTED PER PLANS IN SAME TRENCH AS MAINLINE PIPE LOCATED HORIZONTAL TO AND BELOW TOP OF MAINLINE PIPE PER TRENCHING DETAIL. IF CONTROL WIRES MUST BE INSTALLED WITHOUT MAINLINE OR OTHER PIPES, THEN WIRES SHALL BE INSTALLED IN CONTINUOUS CONDUIT AT MINIMUM OF 18" DEPTH FOR LENGTH OF TRENCH UNTIL REACHING JOINT TRENCH LOCATION WITH PIPES AND AN APPROVED WARNING TAPE 2" MINIMUM WIDTH SHALL BE INSTALLED AT 6" ABOVE CONDUIT.
- 9. ALL MAINLINE PIPES SHALL BE INSTALLED AT DEPTHS AS NOTED PER TRENCHING DETAIL (18" MINIMUM DEPTH) AND SHALL HAVE AN APPROVED WARNING TAPE 3" MINIMUM WIDTH INSTALLED AT 6" ABOVE MAINLINE PIPE OR 6" ABOVE HIGHEST PIPE INSTALLED WITHIN SAME TRENCH AS MAINLINE PIPE.
- LATERAL PIPES, AND EQUIPMENT LOCATIONS; PIPES INTENDED TO BE IN JOINT TRENCH ARE TYPICALLY SHOWN PARALLEL AND EVENLY SPACED TOGETHER. DUE TO GRAPHICAL CLARITY, SOMETIMES LINES REPRESENTING PIPES OR SLEEVES AND SOMETIMES EQUIPMENT SYMBOLS MAY BE SHOWN DIAGRAMMATICALLY BEYOND THE LIMITS OF PLANTING AREAS. THE CONTRACTOR SHALL FOLLOW THE INTENT OF THE PLAN LAYOUT AND SHALL CONTACT DESIGNER FOR CLARIFICATION IF INTENT IS NOT CLEAR.
- OWNER'S REPRESENTATIVE FOR ANY CHANGES TO LAYOUT AS SHOWN PER PLANS AND SHALL CLEARLY DOCUMENT ANY SUCH CHANGES FOR USE WITH RECORD DRAWINGS (AS-BUILTS).

- 12. CONTRACTOR SHALL VERIFY PRESSURE AT IRRIGATION SYSTEM POINT OF CONNECTION PRIOR TO INITIATING ANY WORK. STATIC PRESSURE (TAKEN WHEN WATER IS AT REST) MUST BE 60 PSI MINIMUM FOR SYSTEM TO OPERATE PROPERLY AS DESIGNED. NOTIFY IRRIGATION DESIGNER PRIOR TO COMMENCING WITH CONSTRUCTION IF PRESSURE IS FOUND TO BE
- 13. ADJUST IRRIGATION OPERATING TIMES TO ACCOMMODATE FOR PLANT MATURITY, SOIL TYPE, PLANT EXPOSURE, SLOPE CONDITIONS, AND SEASONAL REQUIREMENTS.
- 14. ALL CONTROL VALVE & PIPE SIZES SHALL BE INSTALLED AS NOTED PER PLANS. ANY DEVIATIONS TO INSTALLED PIPE SIZES MUST BE APPROVED IN WRITING BY OWNER OR OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION OF SUCH PIPE OR EQUIPMENT. ALL PVC PIPES WERE DESIGNED TO FLOW AT A MAXIMUM VELOCITY OF 5.0 FPS AND ALL COPPER PIPES AT A MAXIMUM VELOCITY OF 7.5 FPS, HOWEVER MANY TIMES PIPES ARE PURPOSELY SIZED TO EXCEED THESE REQUIREMENTS IN EFFORTS TO REDUCE FRICTION LOSS AND PRESSURE LOSS THROUGH IRRIGATION SYSTEM.
- 15. ALL MASTER & CONTROL VALVES SHALL INCLUDE IDENTIFICATION TAGS INSTALLED ON WIRES PRIOR TO INSTALLATION OF WIRE CONNECTORS WITH CORRESPONDING INFORMATION AS IDENTIFIED PER PLANS CLEARLY PRINTED ON ONE SIDE ON TAG USING BLACK PERMANENT MARKER AT MINIMUM OF 1" SIZE TEXT. WIRE TAGS SHALL BE STANDARD SIZE, BLANK BOTH SIDES, & YELLOW COLOR WHEN USED WITH POTABLE WATER SYSTEMS OR SHALL BE MAXI SIZE, BLANK ONE SIDE WITH BILINGUAL 'WARNING- DO NOT DRINK' PRINTED ON OPPOSITE SIDE BY MANUFACTURER. & PURPLE COLOR WHEN USED WITH ANY NON-POTABLE WATER SYSTEM.
- 16. PVC MAINLINE PIPES SIZED 3" AND LARGER SHALL USE EITHER BELL END GASKET PIPE CONNECTIONS AND / OR DUCTILE IRON FITTINGS WITH RESTRAINTS AND / OR THRUST BLOCKS AS NOTED PER PLANS INSTALLED AT 24" MINIMUM DEPTH OR AS NOTED PER TRENCHING DETAIL. PVC MAINLINE PIPES SIZED 2 1/2" AND SMALLER SHALL BE SOLVENT WELD USING SCHEDULE 80 PVC FITTINGS INSTALLED AT 18" MINIMUM DEPTH OR AS NOTED PER TRENCHING DETAIL. ALL LATERAL PVC PIPES SHALL BE SOLVENT WELD USING SCHEDULE 40 PVC FITTINGS INSTALLED AT 12" MINIMUM DEPTH OR AS NOTED PER TRENCHING DETAIL. ALL THREADED PVC CONNECTIONS SHALL USE SCHEDULE 80 PVC FITTING WITH TEFLON SEALANT. ALL COPPER PIPE SHALL BE TYPE 'K' COPPER WITH LEAD-FREE SOLDERED WROUGHT FITTINGS. ALL PVC PIPE MATERIAL TYPES SHOULD BE AS IDENTIFIED PER PLANS.
- 17. PVC PIPE SLEEVES SHALL BE INSTALLED AT DEEPEST PIPE DEPTH OF PIPES INSTALLED WITHIN SLEEVE OR AT 36" MINIMUM COVER WHEN INSTALLED UNDER VEHICULAR DRIVING HARDSCAPE SURFACES.
- 18. ANY PVC ELECTRICAL CONDUITS CONTAINING LOW VOLTAGE CONTROL WIRES, 2-WIRE PATH CABLES, COMMUNICATION CABLES, OR GROUNDING WIRES SHALL BE INSTALLED WITHIN UL APPROVED PVC CONDUIT SIZED AS NOTED PER PLANS AND INSTALLED AT PIPE SLEEVE DEPTHS OR AT 20" MINIMUM COVER.
- 19. PVC SOLVENT CEMENT SHALL BE USED WITH PURPLE COLOR PRIMER PER MANUFACTURER'S SPECIFICATIONS. SPECIFIC SOLVENT AND PRIMER PRODUCTS TO BE USED MUST BE SUBMITTED WITH PRODUCT SUBMITTAL PROCESS AND CORRESPOND WITH PVC PIPE MATERIALS BEING USED.
- 20. HAND DIG ANY EXCAVATIONS WITHIN 2'-0" OF ALL ELECTRICAL OR IRRIGATION STRUCTURES.
- 21. SEE PROJECT SPECIFICATIONS FOR FURTHER PRODUCT DESCRIPTIONS
- 22. CONTRACTOR SHALL PROVIDE RECORD DRAWINGS (AS-BUILT PLANS) PER PROJECT SPECIFICATIONS INCLUDING, BUT NOT LIMITED TO, DOCUMENTING ANY DEVIATIONS FROM PLANS AND PROVIDING DIMENSIONS TO LOCATE TRENCHES, SLEEVE ENDS, AND EQUIPMENT FROM FIXED LOCATIONS AS IDENTIFIABLE IN BOTH FIELD AND ON PLANS.

### **VALVE BOX NOTES:**

- 1. ALL VALVE BOX BODIES & COVERS TO BE INTEGRAL TAN COLOR WITH T-STYLE BOLT DOWN COVERS AND STAINLESS STEEL WASHER & BOLT.
- 2. EMBOSS VALVE BOX COVERS WITH 2" TALL STENCIL LETTERS/ NUMBERS PER THE VALVE BOX INSTALLATION DETAIL IN THIS SET.

#### **VALVE BOX NOTES:**

3. ALL VALVE BOXES SHALL BE SIZED AS NOTED PER PLANS WITH BOLT DOWN T-STYLE COVERS (EXCEPT EMITTER BOXES). ALL BOLT DOWN HARDWARE SHALL BE STAINLESS STEEL. WHEN IRRIGATION SYSTEM UTILIZES POTABLE WATER ALL VALVE BOX BODIES & COVERS SHALL BE TAN COLOR WHEN LOCATED IN GRANITE OR GREEN COLOR WHEN LOCATED IN TURF. WHEN SYSTEM UTILIZES NON-POTABLE WATER ALL VALVE BOX BODIES & COVERS SHALL BE INTEGRAL PURPLE COLOR. ALL BOX COVERS (EXCEPT EMITTER BOXES) SHALL BE EMBOSSED WITH STENCIL LETTERS / NUMBERS TO DESIGNATE EQUIPMENT TYPE AS NOTED PER PLANS.

#### **EMITTER NOTES:**

- 1. INSTALL MULTI-PORT EMITTERS WITH FLOWS AND QUANTITIES OF EMITTER TUBES TO EACH PLANT PER 'EMITTER SCHEDULE' ON IR-102.
- 2. INSTALL ALL EMITTER TUBES UP SLOPE FROM PLANT MATERIAL
- 3. INSTALL EMITTERS PER PLAN DETAILS.
- 4. USE RIGID 3/4" SCH 40 PVC AS DRIP LATERAL PIPES UNLESS SPECIFICALLY NOTED OTHERWISE IN PLANS. USE SCHEDULE 40 PVC FITTINGS ONLY FOR ALL PVC LATERAL PIPE FITTINGS.
- 5. CONTRACTOR MAY INSTALL RIGID 1/2" SCHEDULE 40 PVC EMITTER LATERAL PIPES (NOT SHOWN IN PLANS) AS REQUIRED AT A MAXIMUM ACCUMULATIVE LENGTH OF 15'-0" FROM THE 3/4" DRIP LATERAL PIPES (SHOWN IN PLANS) TO DESIRED MULTI-PORT EMITTER LOCATIONS.
- 6. EMITTER TUBES (DISTRIBUTION TUBING) SHALL BE VINYL MATERIAL SIZED AS REQUIRED TO FIT THE APPROVED EMITTER TYPE AND EACH TUBE SHALL NOT EXCEED 10'-0" IN LENGTH. EMITTER TUBES SHALL BE BURIED A MINIMUM OF 2" BELOW FINISH GRADE OF SOIL (NOT FINISH GRADE OF DG) AND SHALL NOT BE INSTALLED WHERE TUBES ARE PINCHED OR KINKED RESULTING IN RESTRICTED FLOW. ALL TUBES SHALL BE INSTALLED WITH ENDS OF TUBES LOCATED PER INSTALLATION DETAILS WITH ALL ENDS OF TUBES EXPOSED AND CUT AT 1" - 2" ABOVE THE FINISH GRADE OF SURFACE MATERIAL (DG, RIP-RAP, OR TURF).
- 7. INSTALL FLUSHING END CAPS AT ENDS OF DRIP LATERAL PIPES AS SHOWN PER PLANS. INSTALL ALL FLUSHING END CAPS IN A MINIMUM 10" DIA. CIRCULAR PURPLE VALVE BOX WITH T-STYLE BOLT DOWN COVERS. A MAXIMUM OF TWO FLUSHING END CAPS MAY SHARE A SINGLE VALVE BOX IF THEY ARE LOCATED WITHIN CLOSE PROXIMITY IN PLANS.
- 8. INSTALL ALL EQUIPMENT PER MANUFACTURER'S INSTRUCTIONS AND SPECIFICATIONS AND PROVIDE 100% WATER COVERAGE TO ALL PLANTS

### **WIRE PATH NOTES:**

- 1. ALL CONVENTIONAL CONTROL WIRES SHALL BE TYPE UF & TWU IN ACCORDANCE TO NATIONAL ELECTRIC CODE FOR OPERATION AT A POTENTIAL OF 600 VOLTS OR LESS AND AT A TEMPERATURE OF 75°C OR LESS. LISTED BY UL, ETL, OR CSA. CONDUCTORS SHALL BE OF SOFT DRAWN BARE COPPER MEETING THE REQUIREMENTS OF ASTM SPECIFICATION B-3 OR B-8. TEMPERATURE RATING OF -10°C + 75°C. INSULATION SHALL BE POLYVINYL CHLORIDE RATED TO 75°C CONFORMING TO UL STANDARDS 493 AND 83. INSULATION SHALL BE MARKED WITH MANUFACTURER'S NAME. VOLTAGE RATING. SIZE AND TYPE, LISTING FILE NUMBERS, RoHS.
- 2. ALL COMMON AND SPARE WIRES SHALL BE #14 GAUGE SOLID WIRE. ALL CONTROL WIRES SHALL BE #14 GAUGE SOLID WIRE. ALL WIRES SHALL BE INSTALLED WITHIN APPROVED CONTINUOUS GRAY COLOR PVC ELECTRICAL CONDUIT WHEN BELOW GRADE AND EMT CONDUIT WHEN ABOVE GRADE.
- 3. ALL 24 VOLT CONTROL WIRE CONNECTIONS SHALL BE MADE WITH 3M #DBR/Y-6 GEL FILLED CONNECTOR SEALING PACKS OR APPROVED **EQUAL PER IRRIGATION CONTROLLER MANUFACTURER'S** SPECIFICATIONS.
- 4. DIRECT BURY OF WIRE SPLICES IS NOT ACCEPTABLE. WIRE SPLICES SHALL ONLY OCCUR INSIDE VALVE BOXES AT VALVES AS SHOWN PER DETAILS AND INSIDE DEDICATED WIRE SPLICE BOXES WHERE WIRES TEE IN DIFFERENT DIRECTIONS AND WHERE WIRE RUNS EXCEED 2,500 LF. ALL WIRE ENDS INSIDE WIRE SPLICE BOXES SHALL BE LABELED WITH ASSOCIATED STATION NUMBERS.
- 5. CONTROL WIRES MUST MAINTAIN A MINIMUM OF 9'-0" HORIZONTAL CLEARANCE FROM ANY GROUNDING RODS / PLATES.



CONSULTANT(S):

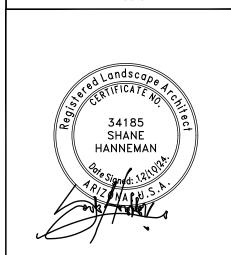


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			IRRIGATION LEGEND		
DETAIL	SYM.	DESCRIPTION	REMARKS	QUANTITIES PHASE 1	FULL BUILD
	M	POTABLE WATER METER	1.5" WATER METER FOR THE IRRIGATION SYSTEM	1 EA	1 EA
	(B)	BACKFLOW PREVENTOR	1.5" BACKFLOW PREVENTOR FOR THE IRRIGATION SYSTEM. FEBCO #825YA OR EQUAL.	1 EA	1 EA
1 IR.301	À	CONTROLLER	IRRITROL MODEL CONTROLLER #EGP8-S WITH 8 STATIONS AND STAINLESS STEEL WALL ENCLOSURE. GROUND CONTROLLER PER DETAILS 1 & 2 ON IR.301 & PER MANUFACTURER'S SPECIFICATIONS; SEE ELECTRICAL PLANS FOR 120 VAC POWER SUPPLY	1 EA	1 EA
	NO SYMBOL	WEATHER STATION	RAINMASTER MODEL RM-WETHR-ETRS, WIRED ET WEATHER SENSOR. COORDINATING INSTALLATION LOCATION WITH CITY STAFF & LANDSCAPE ARCHITECT. INSTALL PER MANUFACTURER'S SPECIFICATIONS.	1 EA	1 EA
2 IR.301		MASTER VALVE AND FLOW SENSOR ASSEMBLIES	MASTER VALVE: 1.5" HUNTER #ICV-151G-FS CONTROL VALVE WITH GLASS-FILLED NYLON GLOBE STYLE BODY RATED TO 220 PSI, FILTER SENTRY, EPDM DIAPHRAGM, & 1.5" FPT CONNECTIONS- NORMALLY CLOSED; INSTALL IN TAN COLOR CARSON #1220 JUMBO VALVE BOX WITH BOLT DOWN T-COVER EMBOSSED WITH 2" STENCIL LETTERS PER VALVE BOX INSTALLATION DETAIL IN THIS SET.  FLOW SENSOR: HUNTER 1.5" #FCT-158 SCHEDULE 80 PVC INSERTION TEE STYLE SENSOR WITH PULL PIN FLOW SENSOR INSTALLED PER MANUF. SPECIFICATIONS; INSTALL FLOW SENSOR IN TAN COLOR 10" ROUND CARSON #910 VALVE BOX WITH BOLT DOWN T-COVER EMBOSSED WITH 2" STENCIL LETTERS PER VALVE BOX INSTALLATION DETAIL IN THIS SET.	1 EA	1 EA
1 IR.302	M	ISOLATION BALL VALVE ASSEMBLY	ISOLATION BALL VALVE (USED WITH 2-1/2" PVC PIPES AND SMALLER): LEEMCO 304 STAINLESS STEEL BALL VALVES RATED TO 1,000 PSI (SIZE BALL VALVE PER PIPE SIZE VALVE IS INSTALLED ON); INSTALL IN CARSON #910 10" ROUND TAN VALVE BOX WITH BOLT DOWN T-COVER EMBOSSED WITH 2" STENCIL LETTERS PER VALVE BOX INSTALLATION DETAIL IN THIS SET.	4 EA	3 EA
2 IR.302	•	DRIP REMOTE CONTROL VALVE ASSEMBLY	HUNTER DRIP CONTROL ZONE KIT #ICZ-101-LF-25 WITH 1" ICV FILTER SENTRY GLOBE VALVE, 25 PSI FILTER REGULATOR #HFR-100-075 WITH 1" INLET & 3/4" OUTLET (FLOW 0.5 - 15.0 GPM); PROVIDE HUNTER 2-WIRE DECODER (DECODER MODEL # PER NUMBER OF SHARED ADJACENT STATIONS); 1" SPEARS TRUE UNION 2000 SERIES PVC BALL VALVE RATED TO 235 PSI; 1" PVC UNION RATED TO 235 PSI ON LATERAL SIDE OF VALVE ASSEMBLY; CHRISTY'S STANDARD YELLOW ID TAG WITH 'CONTROLLER LETTERS-STATION NO. (PER VALVE TAGS AS SHOWN IN PLANS) PRINTED AND INSTALLED ON CONTROL WIRE; IN CARSON #1324-12 SUPER JUMBO TAN COLOR VALVE BOX WITH BOLT DOWN T-STYLE COVER EMBOSSED WITH 2" STENCIL LETTERS / NUMBERS OF CONTROLLER LETTER & STATION # TO MATCH WIRE ID TAG PER VALVE BOX INSTALLATION DETAIL IN THIS SET.	2 EA	2 EA
3 IR.302	•	TURF REMOTE CONTROL VALVE ASSEMBLY	HUNTER ICV MODEL VALVE (SIZE AS NOTED PER VALVE KEYS IN PLANS) W/ GLASS-FILLED NYLON GLOBE STYLE BODY, FILTER SENTRY, EPDM DIAPHRAGM, & AS-ADJ ADJUSTABLE PRESSURE REGULATOR WITH ADAPTER; SPEARS TRUE UNION 2000 SERIES PVC BALL VALVE RATED TO 235 PSI (SIZE AS NOTED PER VALVE KEYS IN PLANS), PVC UNION RATED TO 235 PSI ON LATERAL SIDE OF VALVE ASSEMBLY (SIZE AS NOTED PER VALVE KEYS IN PLANS); CHRISTY'S STANDARD YELLOW ID TAG WITH 'CONTROLLER LETTERS-STATION NO. (PER VALVE TAGS AS SHOWN IN PLANS) PRINTED INSTALLED ON CONTROL WIRE; INSTALL IN CARSON #1220 TAN COLOR JUMBO VALVE BOX WITH BOLT DOWN T-COVER EMBOSSED WITH 2" STENCIL LETTERS / NUMBERS OF CONTROLLER LETTER & STATION # TO MATCH WIRE ID TAG PER VALVE BOX INSTALLATION DETAIL IN THIS SET.	3 EA	0 EA
3 IR.303		QUICK COUPLER VALVE ASSEMBLY	1" HUNTER #HQ-44RC TWO-PIECE BRASS BODY WITH YELLOW COLOR RUBBER COVER; HUNTER #HSJ-1-3-S-2-12 PVC SNAPLOK COMBO KIT SWING JOINT WITH 1" MPT INLET, 1" MALE BRASS NPT SNAPLOK, SINGLE-TOP OUTLET, & 12" LAY LENGTH; #4 GALVANIZE OR EPOXY COATED REBAR STAKE WITH TWO STAINLESS STEEL HOSE CLAMPS; INSTALL IN CARSON #910 10" ROUND TAN COLOR VALVE BOX WITH BOLT DOWN T-COVER EMBOSSED WITH 2" STENCIL LETTERS PER VALVE BOX INSTALLATION DETAIL IN THIS SET.	3 EA	2 EA
3 IR.304	•	DRIP LATERAL END CAP FLUSH VALVE ASSEMBLY	LATERAL FLUSH END CAP: 3/4" API PVC BALL VALVE WITH 3/4" SWIVEL FHT INPUT & 3/4" MHT OUTPUT; 3/4" PVC FLEX PIPE RISER WITH TWO 3/4" SCH 40 PVC MALE ADAPTERS; INSTALL IN CARSON #910 ROUND 10" TAN VALVE BOX WITH BOLT DOWN T-COVER EMBOSSED WITH 2" STENCIL LETTERS PER VALVE BOX INSTALLATION DETAIL IN THIS SET. (TWO END CAPS MAX. MAY BE INSTALLED WITHIN SAME VALVE BOX IF LOCATED IN SAME VICINITY)	8 EA	7 EA
1 IR.304	NOT SHOWN	MULTI-OUTLET EMITTER ASSEMBLY	HUNTER MPE MULTI-OUTLET EMITTERS #MPE-20 (RED) 2.0 GPH FOR ALL TREES, #MPE-10 (BLACK) 1.0 GPH FOR ALL SHRUBS & GROUND COVERS, & #MPE-05 (BLUE) 0.6 GPH FOR ALL CACTI - SEE 'EMITTER LEGEND' THIS SHEET FOR REQUIRED FLOWS TO EACH PLANT SPECIES; 1/2" PVC FLEX PIPE RISER WITH TWO 1/2" SCH 40 PVC MALE ADAPTERS; INSTALL IN NDS 6" ROUND TAN COLOR EMITTER BOX; EMITTER (DISTRIBUTION) TUBES SHALL BE VINYL MATERIAL SIZED TO FIT EMITTER	40 EA	37 EA
2 IR.304	⟨#⟩=MPR	TURF ROTORS: # = NOZZLE NO. MPR= MATCHED PRECIP. RATE	SMALL TURF ROTORS: HUNTER I-20 MPR NOZZLES #I-20-06-SS-PRB ROTOR BODY WITH 45 PSI PRESSURE REGULATOR, 3/4" INLET, 6" STAINLESS STEEL POP-UP RISER AND COLOR CODED NUMBERED MATCHED PRECIPITATION RATE NOZZLES (SEE NOZZLE LEGEND FOR DETAILED DESCRIPTION OF SPRAY NOZZLES); INSTALL ON HUNTER #HSJ-0 3/4" PVC SWING JOINT WITH 12" LAY ARM LENGTH.	17 EA	0 EA
	X"	MAINLINE PIPE:	SCHEDULE 40 PVC PIPE WITH SCH 80 PVC SOLVENT WELD FITTINGS ALL MAINLINES SHALL HAVE 18 AWG BLUE COLOR TRACER WIRE & BLUE COLOR 3" WARNING TAPE INSTALLED AT 6" ABOVE TOP OF PIPES; ALL MAINLINES 3" & LARGER SHALL INCLUDE PIPE RESTRAINTS OR CONCRETE THRUST BLOCKS (SIZE ALL PIPE AS NOTED PER PLANS)	2.0" = 220 LF 1.0" = 20 LF	2.0" = 60 LF 1.0" = 14 LF
1,4,5 IR.304	X"	TURF LATERAL PIPE:	TURF LATERAL PIPE: .75", 1", 1.25", 1.5", 2.0", & 2.5" CLASS 200 SDR 21 PVC PIPE WITH SCH 40 PVC SOLVENT WELD FITTINGS (SIZE AS NOTED PER PLANS)	0.75" =195 LF 1.0" = 120 LF 1.25" = 75 LF 1.5" =75 LF	0.75" = 0 LF 1.0" = 0 LF 1.25" = 0 LF 1.5" = 0 LF
		SHRUBS IN DG DRIP LATERAL PIPE:	3/4" CLASS 200 SDR PVC PIPE WITH SCH 40 PVC SOLVENT WELD FITTINGS	610 LF	520 LF
		TREES IN DG DRIP LATERAL PIPE:	3/4" CLASS 200 SDR PVC PIPE WITH SCH 40 PVC SOLVENT WELD FITTINGS	600 LF	600 LF
4	X"PS	PIPE SLEEVES (PS)	2", 3", 4", & 6" SCH 40 PVC PIPE (WHITE) SLEEVES UNDER HARDSCAPE- SIZE AS NOTED PER PLANS;	2" = 42 LF 4" =42 LF	2" = 0 LF 4" = 42 LF
IR.304	NO SYMBOL	WIRE SLEEVES (WS)	1.25" GRAY ELECTRICAL SCH 40 PVC SLEEVES FOR WIRE PATH NOT SHARING A TRENCH WITH THE MAINLINE (WHERE APPLICABLE AND AS NOTED PER PLANS)	160 LF	160 LF
	~~~~	CONVENTIONAL CONTROL WIRES (SYMBOL SHOWN WHEN NOT IN JOINT TRENCH WITH MAINLINE PIPE)	CONTROL WIRES SHALL BE PAIGE #P7001D OR APPROVED EQUAL #14 AWG SOLID CORE UNDERGROUND FEEDER TYPE UF & TWU WIRES; REMOTE CONTROL VALVE CONTROL WIRE (HOT) = RED COLOR, COMMON (NEUTRAL) = WHITE COLOR, SPARE = GREEN COLOR; PROVIDE ONE (1) CONTINUOUS SPARE WIRE FROM CONTROLLER IN EACH DIRECTION LOOPING IN AND OUT OF EACH REMOTE CONTROL VALVE BOX UNTIL TERMINATING AT FURTHEST REMOTE CONTROL VALVES (DO NOT CUT SPARE WIRES IN EACH BOX); ALL WIRES INSIDE VALVE BOXES SHALL HAVE 3' OF COILED WIRE LENGTH.  ALL WIRE CONNECTORS SHALL BE 3M #DBRY-6 WATERPROOF WIRE CONNECTORS RATED AT 600V OR APPROVED EQUAL; ALL WIRE	340 LF	280 LF
			SPLICES SHALL OCCUR IN EQUIPMENT VALVE BOXES OR IN A WIRE SPLICE BOX: CARSON #910 10" ROUND TAN COLOR WITH BOLT DOWN T-COVER EMBOSSED WITH 2" STENCIL LETTERS "WS" PER VALVE BOX INSTALLATION DETAIL IN THIS SET.		

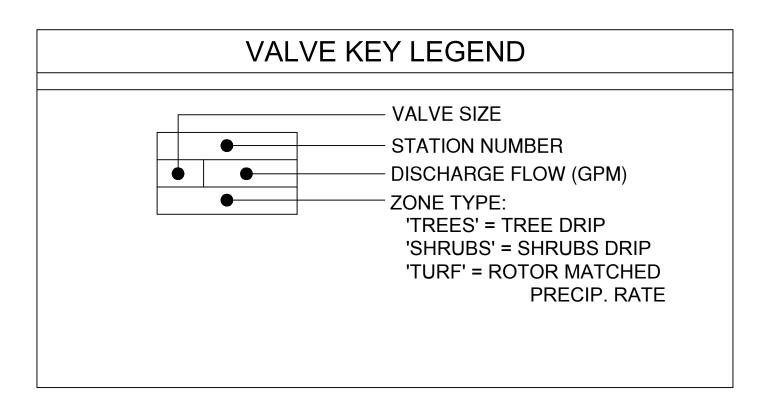
# SPRINKLER LEGEND

MATCH	IED PRECIPITA	ATION RATE	ROTORS:				
SYMBOL	MODEL	NOZZLE	ARC PATTERN	DESIGN PRESSURE	RADIUS	FLOW GPM	PRECIP RATE (IN / HR)
<b>250</b> >	I-20-06-SS-PRB	25 RED	QUARTER CIRCLE	45 PSI	25 FT	1.00	.62
<b>⟨</b> 25 <b>H</b> ⟩	I-20-06-SS-PRB	25 RED	HALF CIRCLE	45 PSI	25 FT	1.98	.62
<b>25F</b>	I-20-06-SS-PRB	25 RED	FULL CIRCLE	45 PSI	25 FT	3.82	.62
<b>30H</b> >	I-20-06-SS-PRB	30 GREEN	HALF CIRCLE	45 PSI	30 FT	2.96	.62
(30F)	I-20-06-SS-PRB	30 GREEN	FULL CIRCLE	45 PSI	30 FT	5.78	.62

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	EMITTER LEC	SEND				
SYMBOL:	BOTANICAL NAME / COMMON NAME:	QUANTITY / TYPE:	# PORTS / VOLUME:	VOLUME PER PLANT		
TREES:						
Son and the same of the same o	Fraxinus velutina ARIZONA ASH	2 / MULTI	8 / 2.0 GPH	16.0 GPH		
+ +	Quercus virginiana SOUTHERN LIVE OAK	2 / MULTI	8 / 2.0 GPH	16.0 GPH		
SHRUBS:						
$\bigcirc$	Calliandra eriophylla PINK FAIRY DUSTER	1 / MULTI *	1 / 1.0 GPH	1.0 GPH		
Jumas Sumar	Leucophyllum zygophyllum Cimarron CIMARRON SAGE	1 / MULTI *	1 / 1.0 GPH	1.0 GPH		
GROUND	GROUNDCOVERS & ACCENTS:					
	Rosmarinus officinalis 'Prostratus' TRAILING ROSEMARY	1 / MULTI *	1 / 1.0 GPH	1.0 GPH		
	Hesperaloe parviflora BRAKELIGHTS YUCCA	1 / MULTI *	1 / 0.5 GPH	0.5 GPH		

\* = MULTI PORT EMITTERS SHALL BE SHARED BETWEEN ADJACENT PLANT WITHIN 8'-0" MAX EMITTER TUBE REACH WITH SAME EMITTER TYPE.



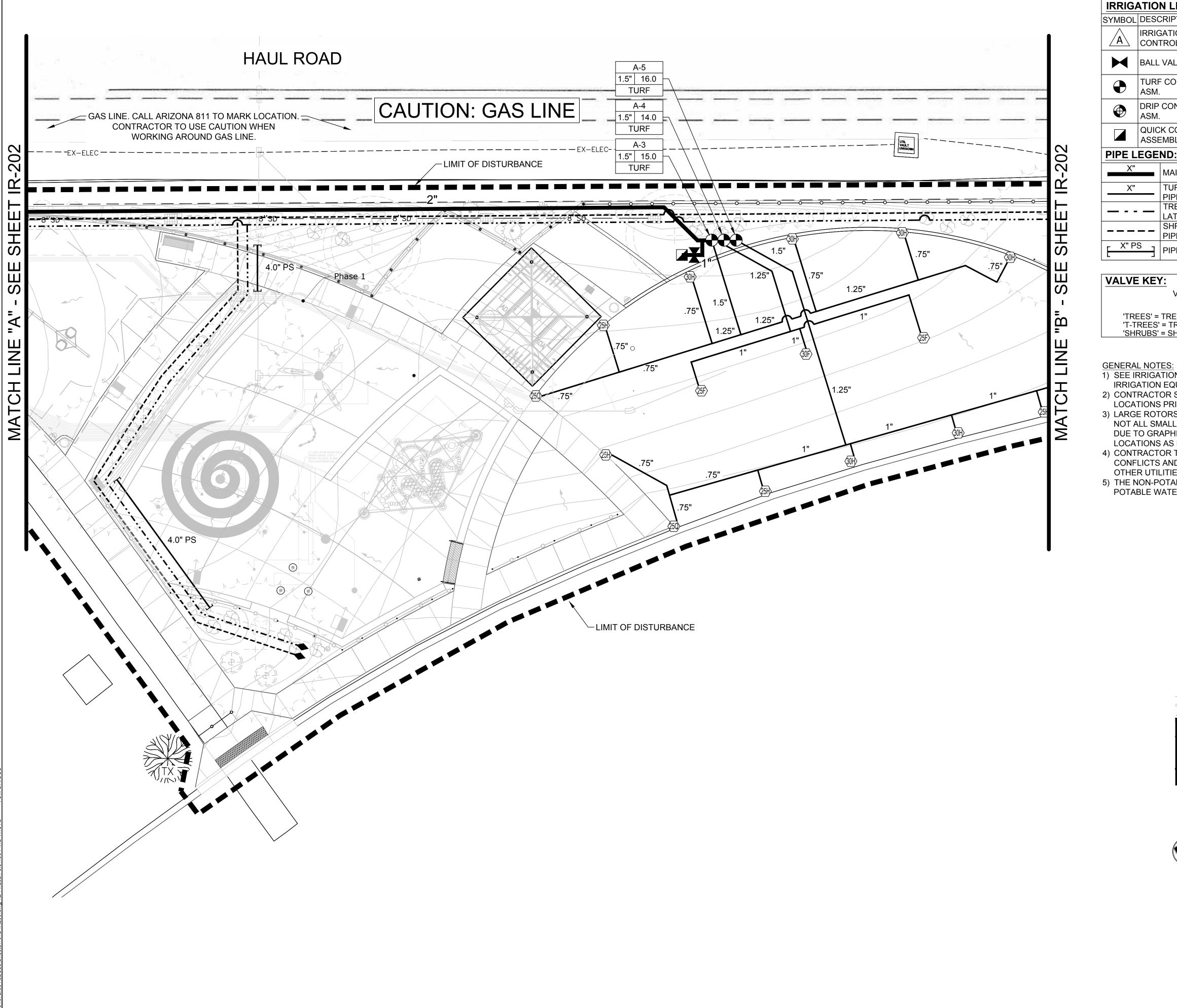
\*\* THE COST OF THE TWO-WIRE PATH, BI-CODERS AND GROUNDING IS CONSIDERED INCIDENTAL TO THE COST OF OTHER IRRIGATION EQUIPMENT.

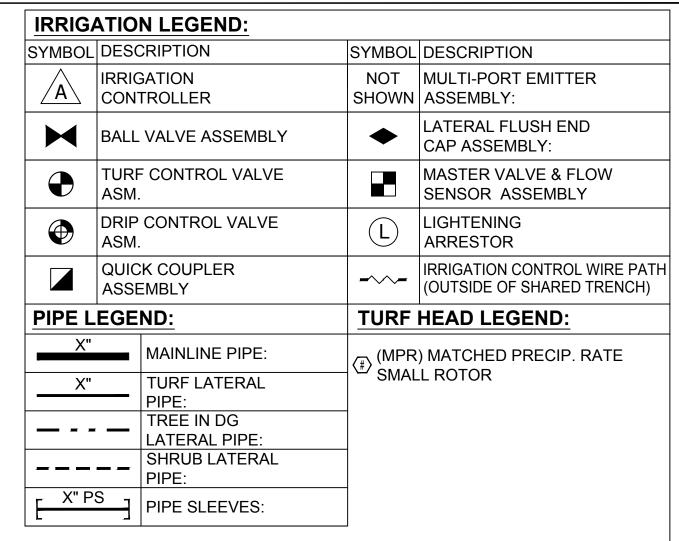


SPL SPL H **IRRIGATION** PAGE



IR-102 SHEET NO.: 64 OF 79





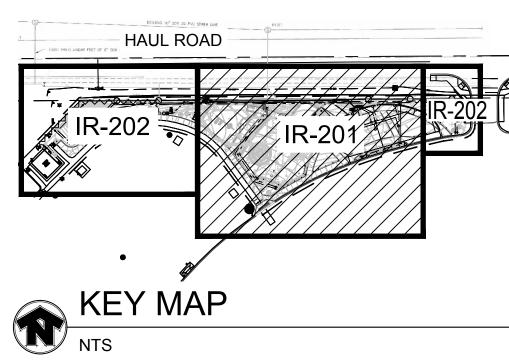
A-1 ● CONTROLLER LETTER - STATION # VALVE SIZE • 1" 2.3 • CONTROL ZONE FLOW (GPM) TREES • ZONE TYPES: 'TREES' = TREE IN DG DRIP 'TURF-FC' = FULL CIRCLE ROTORS 'T-TREES' = TREE IN TURF DRIP 'TURF-PC' = PART CIRCLE ROTORS 'TURF-MPR' = MATCH PRECIP. ROTORS 'SHRUBS' = SHRUBS DRIP

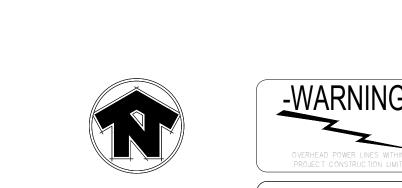
- 1) SEE IRRIGATION LEGEND ON SHEET IR-102 & IR-103 FOR COMPLETE IRRIGATION EQUIPMENT DESCRIPTIONS.
- 2) CONTRACTOR SHALL STAKE ALL MAINLINE ROUTING & CONTROL VALVES LOCATIONS PRIOR TO INSTALLATION FOR APPROVAL BY CITY.
- 3) LARGE ROTORS ARE SHOWN AT TRUE LOCATIONS (CENTER OF SYMBOLS). NOT ALL SMALL ROTORS AND SPRAYS ARE SHOWN AT TRUE LOCATIONS DUE TO GRAPHICAL CLARITY - ADJUST SMALL ROTOR & SPRAY LOCATIONS AS REQUIRED.
- 4) CONTRACTOR TO COORDINATE WITH OTHER DISCIPLINES TO AVOID CONFLICTS AND MAINTAIN MINIMUM SEPARATION DISTANCES FROM OTHER UTILITIES AND IMPROVEMENTS.
- 5) THE NON-POTABLE IRRIGATION MAINLINE PIPE IS TO DIP BELOW ANY POTABLE WATER PIPE AT ALL CROSSINGS.



DATE DESCRIPTION

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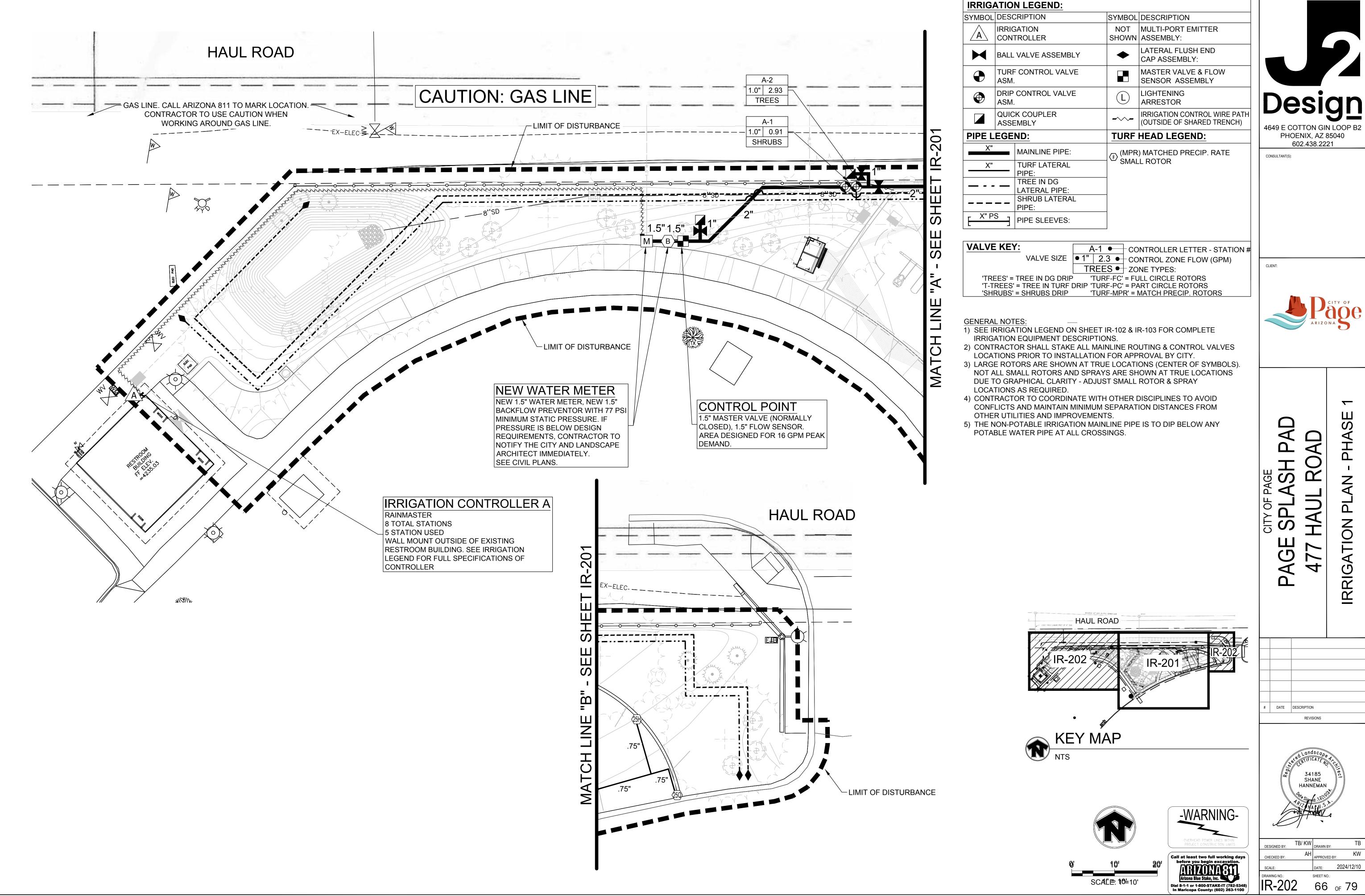
SC**AĽE: 10**±10′

Arizona Blue Stake, Inc.  Dial 8-1-1 or 1-800-STAKE-IT (782-5348) In Maricopa County: (602) 263-1100	IR-201
before you begin excavation.	SCALE:
Call at least two full working days	CHECKED BY:
OVERHEAD POWER LINES WITHIN PROJECT CONSTRUCTION LIMITS	DESIGNED BY:

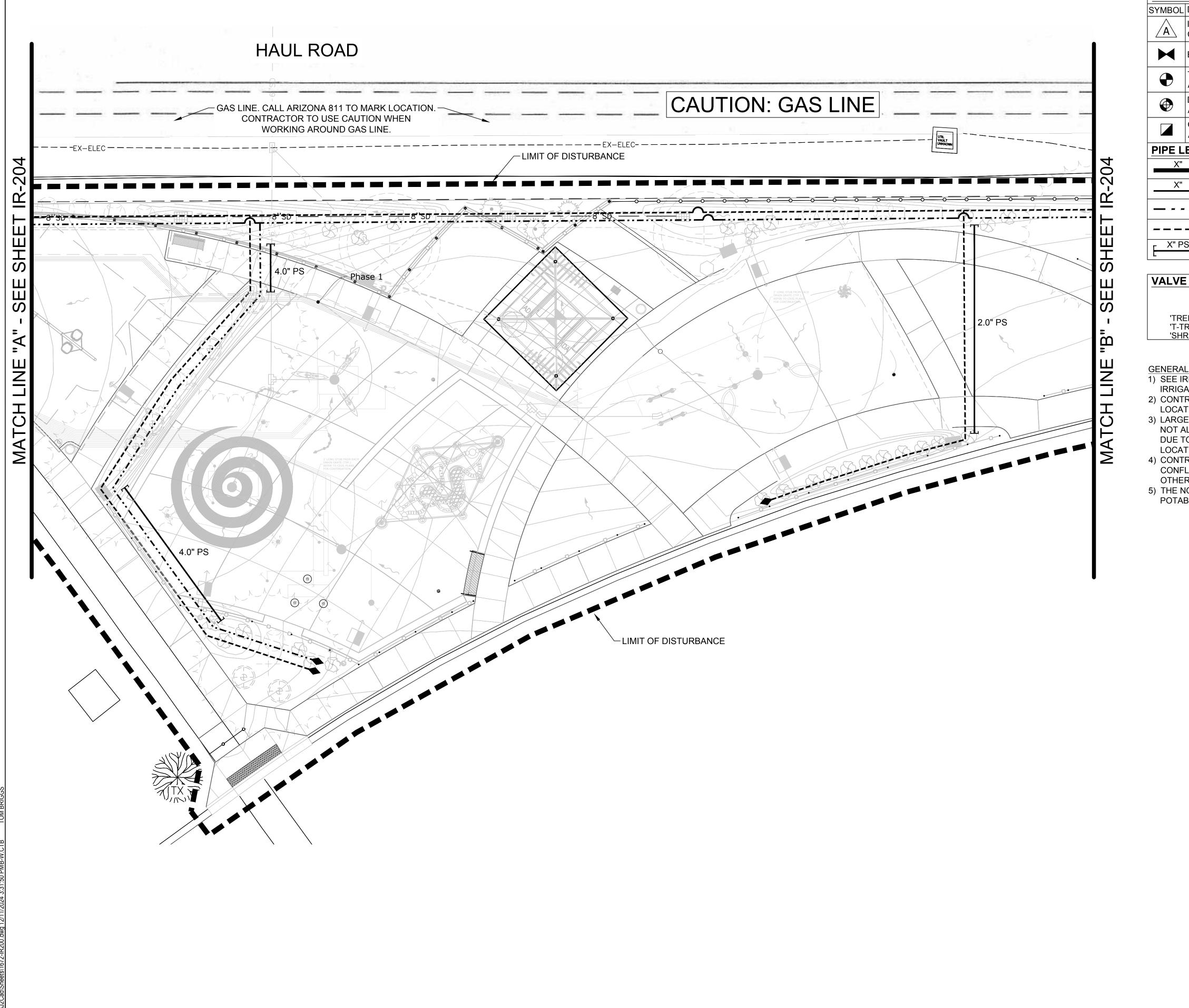
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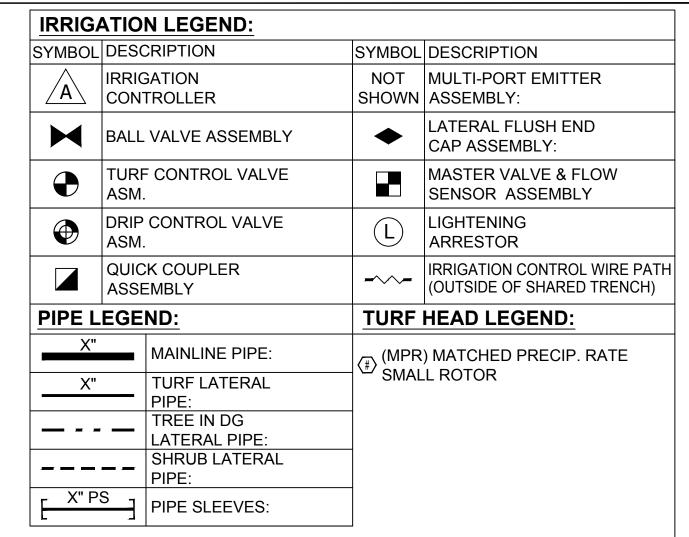
CONSULTANT(S):





Design

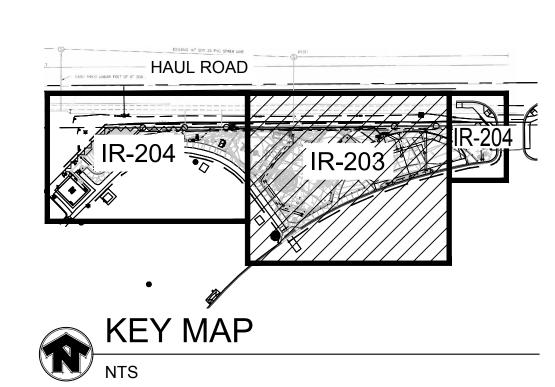




VALVE KEY: A-1 ◆ CONTROLLER LETTER - STATION #
VALVE SIZE ■ 1" 2.3 ■ CONTROL ZONE FLOW (GPM)
TREES ● ZONE TYPES:
'TREES' = TREE IN DG DRIP 'TURF-FC' = FULL CIRCLE ROTORS
'T-TREES' = TREE IN TURF DRIP 'TURF-PC' = PART CIRCLE ROTORS
'SHRUBS' = SHRUBS DRIP 'TURF-MPR' = MATCH PRECIP. ROTORS

**GENERAL NOTES:** 

- 1) SEE IRRIGATION LEGEND ON SHEET IR-102 & IR-103 FOR COMPLETE IRRIGATION EQUIPMENT DESCRIPTIONS.
- 2) CONTRACTOR SHALL STAKE ALL MAINLINE ROUTING & CONTROL VALVES LOCATIONS PRIOR TO INSTALLATION FOR APPROVAL BY CITY.
- 3) LARGE ROTORS ARE SHOWN AT TRUE LOCATIONS (CENTER OF SYMBOLS). NOT ALL SMALL ROTORS AND SPRAYS ARE SHOWN AT TRUE LOCATIONS DUE TO GRAPHICAL CLARITY - ADJUST SMALL ROTOR & SPRAY LOCATIONS AS REQUIRED.
- 4) CONTRACTOR TO COORDINATE WITH OTHER DISCIPLINES TO AVOID CONFLICTS AND MAINTAIN MINIMUM SEPARATION DISTANCES FROM OTHER UTILITIES AND IMPROVEMENTS.
- 5) THE NON-POTABLE IRRIGATION MAINLINE PIPE IS TO DIP BELOW ANY POTABLE WATER PIPE AT ALL CROSSINGS.





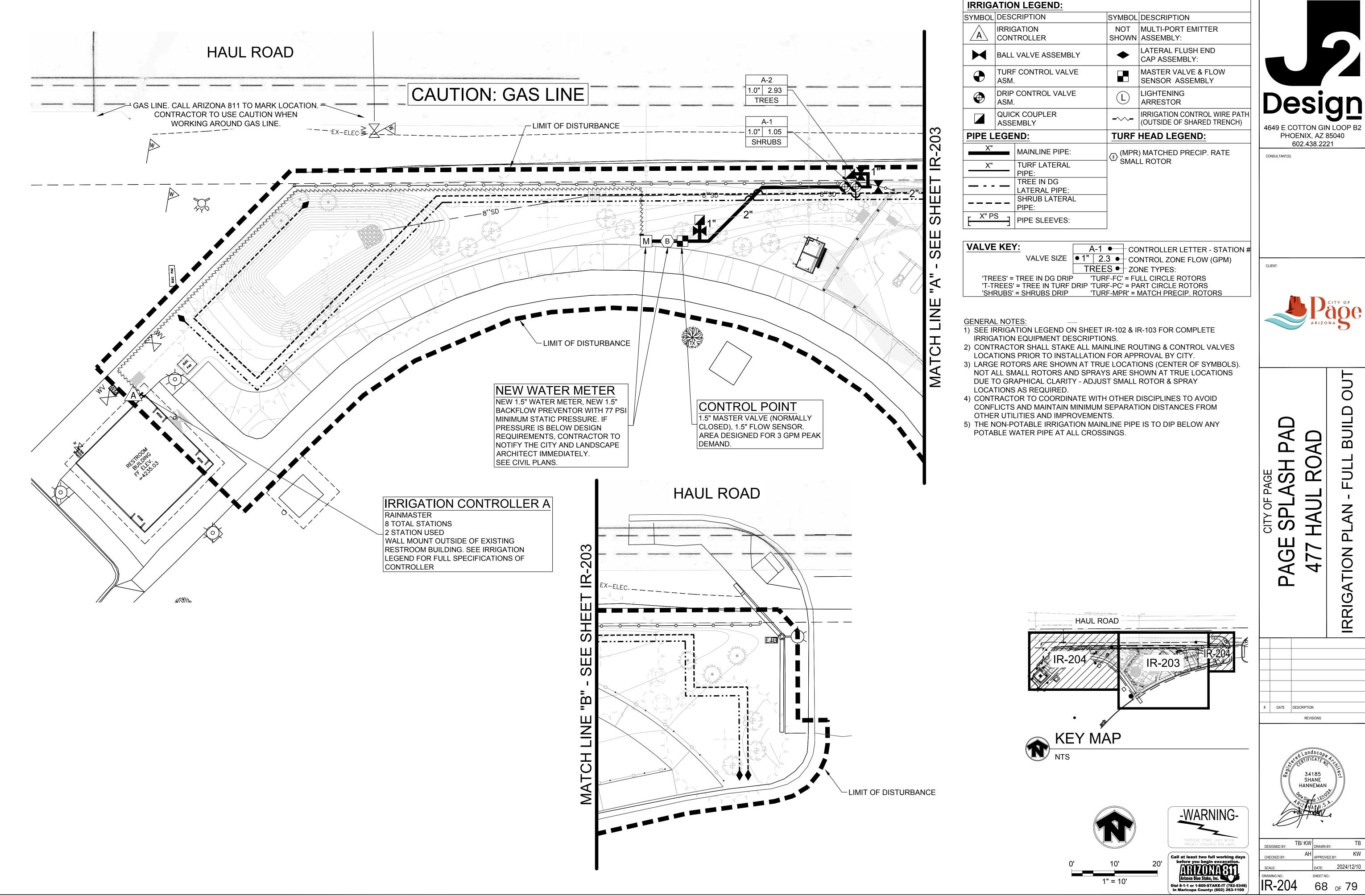


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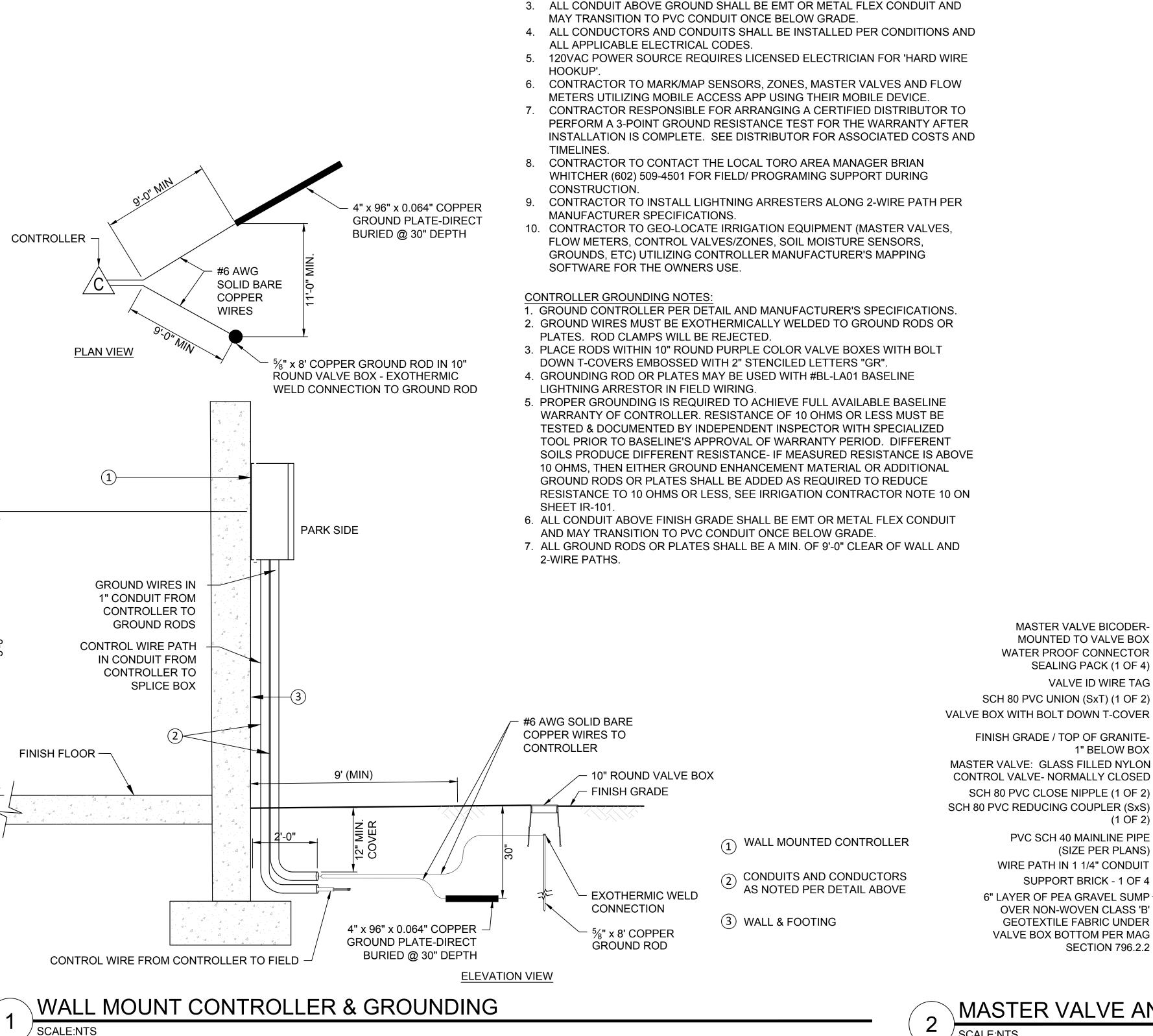
DATE DESCRIPTION



IR-203



Design



**CONTROLLER INSTALLATION NOTES:** 

1. STEEL WALL MOUNT ENCLOSURE- INSTALL PER MANUFACTURER'S

OHMS OR LESS- SEE 'TWO-WIRE PATH NOTES' ON DWG. NO. IR-101.

2. GROUND CONTROLLER PER DETAIL 2 AND MANUFACTURER'S INSTRUCTIONS.

PROPER GROUNDING IS REQUIRED TO ACHIEVE GROUND RESISTANCE OF 10

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PAD **SH** SP H IRRIG, 9 47

PA

1" PVC CONDUIT BETWEEN VALVE BOXES

SCH 40 PVC MAINLINE PIPE (SIZE PER PLANS)

VALVE BOX WITH BOLT DOWN

T-COVER

DOWNSTREAM=

5x DIA. OF FLOW

METER SIZE

ALL EQUIPMENT SHALL INCLUDE ANY AVAILABLE NON-POTABLE WATER (PURPLE) OPTIONS

FLOW SENSOR (SIZE PER PLANS)

TO VALVE BOX

WATER PROOF

PACK (1 OF 4)

VALVE ID WIRE TAG

CONNECTOR SEALING

SUPPORT BRICK- 1 OF 4

FLOW BICODER- MOUNTED

DATE DESCRIPTION



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MASTER VALVE AND FLOW SENSOR ASSEMBLY

2" MIN. —

MIN. DISTANCE UPSTREAM=

10x DIA. OF FLOW

METER SIZE

MASTER VALVE & FLOW SENSOR TO BE SIZED PER PLAN.

SEE VALVE BOX NOTES ON SHEET IR-101

SCALE:NTS

MASTER VALVE BICODER-

WATER PROOF CONNECTOR

SCH 80 PVC UNION (SxT) (1 OF 2)

FINISH GRADE / TOP OF GRANITE-

SCH 80 PVC CLOSE NIPPLE (1 OF 2)

PVC SCH 40 MAINLINE PIPE

SUPPORT BRICK - 1 OF 4

WIRE PATH IN 1 1/4" CONDUIT

6" LAYER OF PEA GRAVEL SUMP-

**OVER NON-WOVEN CLASS 'B'** 

GEOTEXTILE FABRIC UNDER

VALVE BOX BOTTOM PER MAG

MOUNTED TO VALVE BOX

SEALING PACK (1 OF 4)

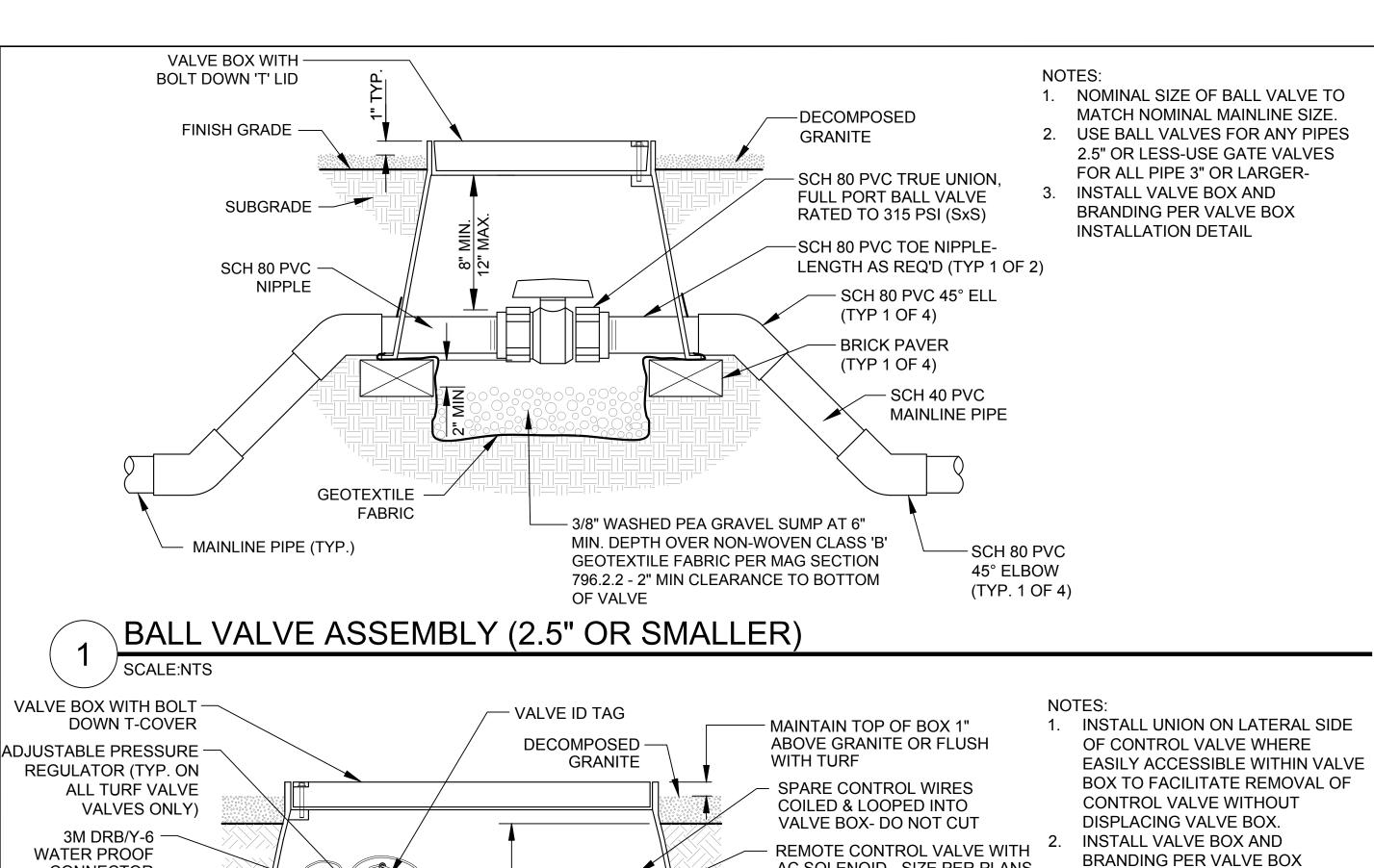
VALVE ID WIRE TAG

1" BELOW BOX

(SIZE PER PLANS)

**SECTION 796.2.2** 

(1 OF 2)



AC SOLENOID - SIZE PER PLANS

SCH 80 PVC TRUE UNION,

FULL PORT BALL VALVE

RATED TO 315 PSI (SxS)

INSTALLATION DETAIL.

SCH 80 PVC TOE NIPPLE (1 OF 2) 4. TWO SPARE CONTROL WIRES (SIZE

SCH 80 PVC

FITTINGS- TYP

MAINLINE PIPES

PROVIDE EXPANSION COILS AT

BOX, 3'-0" MIN LENGTH. (WRAP

TO MATCH COMMON WIRE AWG)

SHALL BE CONTINUOUS LOOP IN &

OUT OF EACH CONTROL VALVE

**BOX UNTIL TERMINATING AT** 

CONTROLLER. SPARE WIRES

FURTHEST VALVE FROM

SHALL BE GREEN COLOR.

SCH 80 PVC INLET PIPE- SIZE EQUAL TO

VALVE SIZE OR OUTLET LATERAL PIPE

SIZE- WHICHEVER IS GREATER

AROUND 1/2" PIPE 15 TIMES)

EACH WIRE CONNECTION IN VALVE

NOTED PER PLANS - 2" MIN CLEARANCE TO BOTTOM OF VALVE TURF REMOTE CONTROL VALVE ASSEBMLY

2" MIN CLEAR

VALVE CONTROL WIRES □

IN CONDUIT

PVC MAINLINE PIPE- SIZE AS -

SCALE:NTS

3/8" WASHED PEA GRAVEL SUMP AT 6" MIN. ——

GEOTEXTILE FABRIC PER MAG SECTION 796.2.2

DEPTH OVER NON-WOVEN CLASS 'B'

VALVE ID TAG

CONNECTOR

(1 OF 4)

SCH 80 UNION

VALVE SIZE

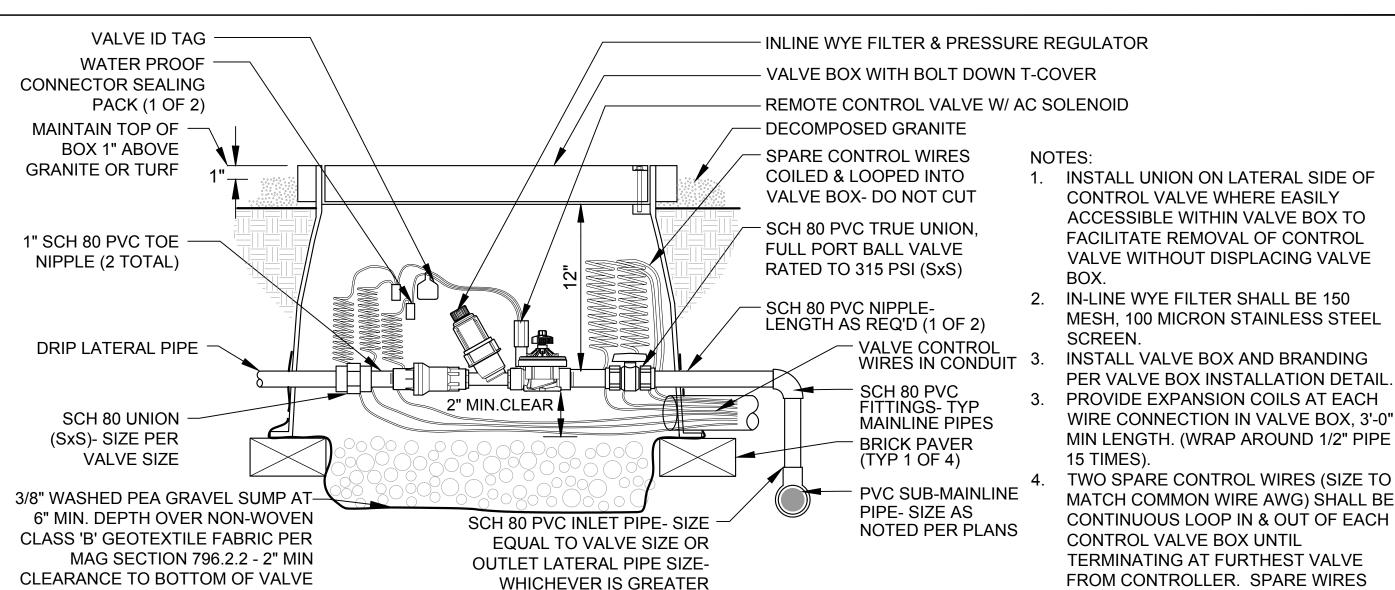
(SxS)- SIZE PER

SCH 80 PVC TOE NIPPLE-SIZE PER VALVE SIZE

SEALING PACK

TURF LATERAL -

SIZE PER PLANS



- 1. INSTALL UNION ON LATERAL SIDE OF CONTROL VALVE WHERE EASILY ACCESSIBLE WITHIN VALVE BOX TO **FACILITATE REMOVAL OF CONTROL** VALVE WITHOUT DISPLACING VALVE BOX.
- 2. IN-LINE WYE FILTER SHALL BE 150 MESH, 100 MICRON STAINLESS STEEL SCREEN.
- INSTALL VALVE BOX AND BRANDING PER VALVE BOX INSTALLATION DETAIL. PROVIDE EXPANSION COILS AT EACH WIRE CONNECTION IN VALVE BOX, 3'-0"
- TWO SPARE CONTROL WIRES (SIZE TO MATCH COMMON WIRE AWG) SHALL BE CONTINUOUS LOOP IN & OUT OF EACH CONTROL VALVE BOX UNTIL TERMINATING AT FURTHEST VALVE FROM CONTROLLER. SPARE WIRES SHALL BE GREEN COLOR.

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CONSULTANT(S):

CLIENT:



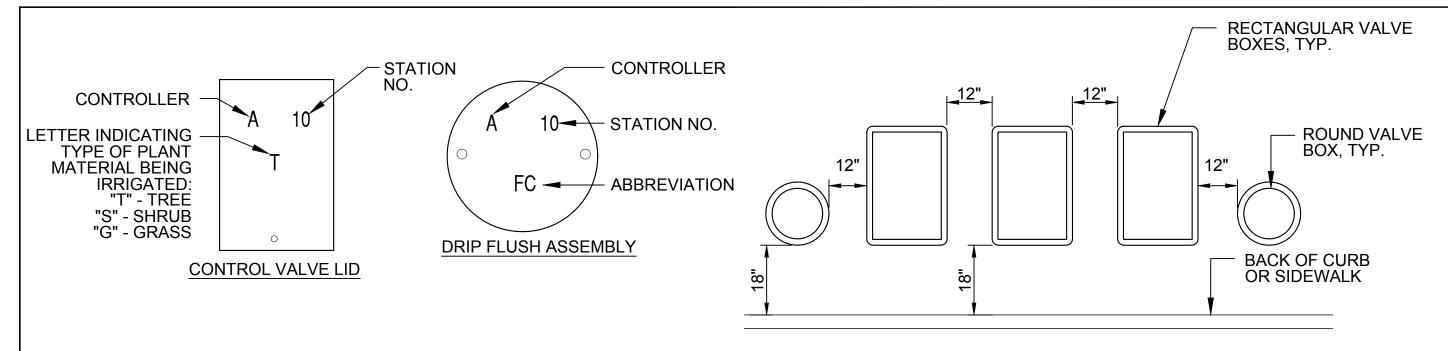
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DATE DESCRIPTION



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DRIP REMOTE CONTROL VALVE ASSEBMLY SCALE:NTS



#### **ABBREVIATIONS:**

"BV" - BALL VALVE

"GV" - GATE VALVE

DRIP VALVE ASSEMBLY - (SEE ABOVE) "QC" - QUICK COUPLER DRIP FLUSH ASSEMBLY - (SEE ABOVE) "AR" - AIR RELIEF

CONTROL VALVE - (SEE ABOVE) "HM" - HYDROMETER

"MV" - MASTER VALVE "FS" - FLOW SENSOR "PS" - PRESSURE SENSOR "WS" - WIRE SPLICE

"PR" - PRESSURE REGULATOR "GR" - GROUNDING ROD

"GR" - LIGHTNING ARRESTOR "DR" - MAINLINE DRAIN "SM" - SOIL MOISTURE

"VB" - VOLLEYBALL SAND WATERING

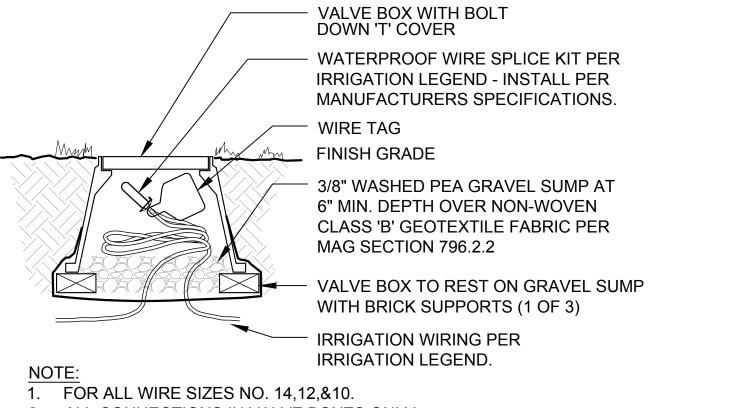
"TB" - TIMEBOX INFIELD WATERING

1. DETAIL IS SHOWN FOR INTENT ONLY. ALL BRANDING SHALL BE DONE IN A MANNER THAT IS CLEARLY LEGIBLE. LOCATION OF LETTERING MAY VERY DUE TO VALVE **BOX TEXTURE** 

2. VALVE BOX TO BE TAN COLOR IN DECOMPOSED GRANITE, GREEN IN TURF WHEN USED WITH POTABLE WATER, OR PURPLE COLOR WHEN USED WITH NON-POTABLE WATER.

3. VALVE BOX LID - BOLT DOWN T-STYLE COVER WITH STAINLESS STEEL WASHER AND BOLT.

4. LETTERING / NUMBERING TO BE 2" TALL STENCIL LETTERING

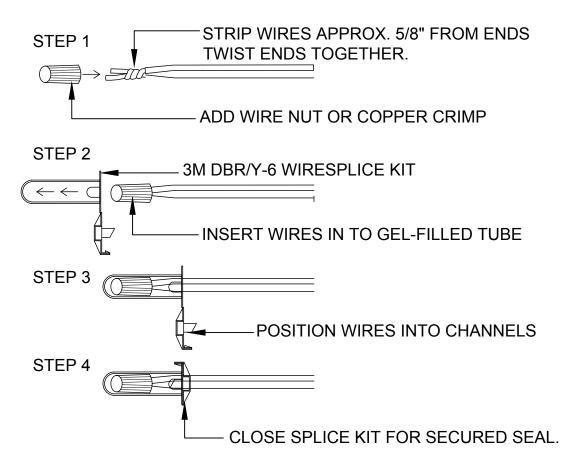


- 2. ALL CONNECTIONS IN VALVE BOXES ONLY.
- 3. FOR 1-10 CONTROL WIRES: CARSON #910 ROUND 10" VALVE BOX WITH BOLT DOWN T-COVER OR APPROVED EQUAL
- 4. FOR 11 OR MORE CONTROL WIRE: CARSON #1220 JUMBO VALVE BOX WITH BOLT DOWN T-COVER OR APPROVED EQUAL.
- 5. INSTALL VALVE BOX AND BRANDING PER VALVE BOX INSTALLATION DETAIL.

TYPICAL IRRIGATION WIRE CONNECTION

6. LABEL ALL WIRES ENDS IN SPLICE BOX.

SCALE:NTS





CONSULTANT(S):

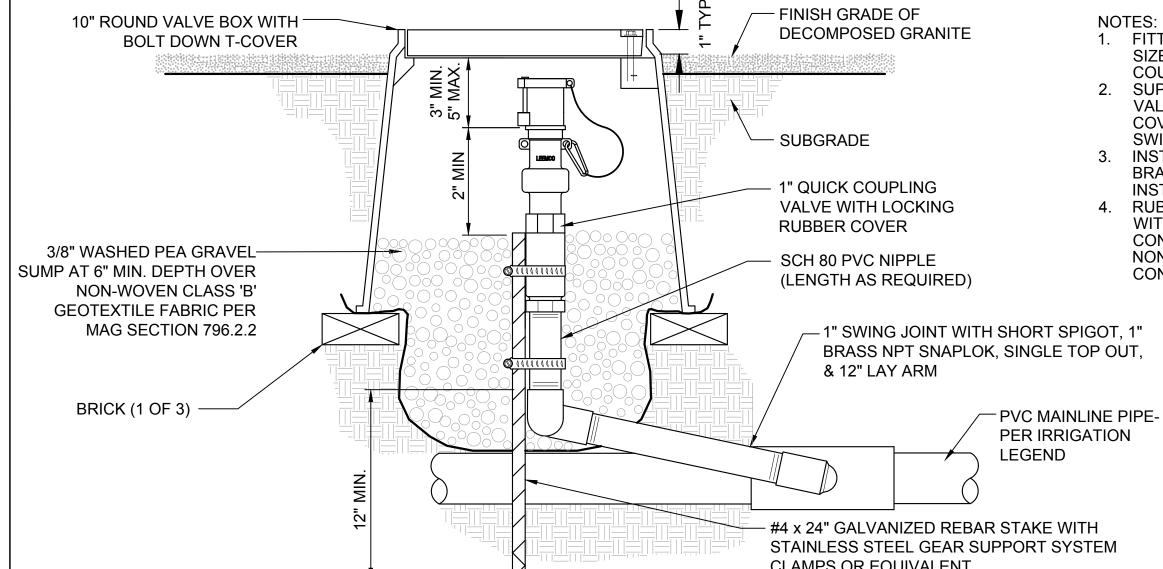


AD AL SH SP **IRRIGATIO** HPAGE



DESIGNED BY:	TB/ KW	DRAWN BY:		TB
CHECKED BY:	AH	APPROVED	BY:	KW
SCALE:		DATE:		
RAWING NO.:		SHEET NO.:		
R-303	}	71	OF	79

# **VALVE BOX INSTALLATION** SCALE:NTS



QUICK COUPLER ASSEMBLY

1. FITTINGS AND PIPING NOMINALLY SIZED TO MATCH NOMINAL QUICK COUPLING VALVE INLET SIZE.

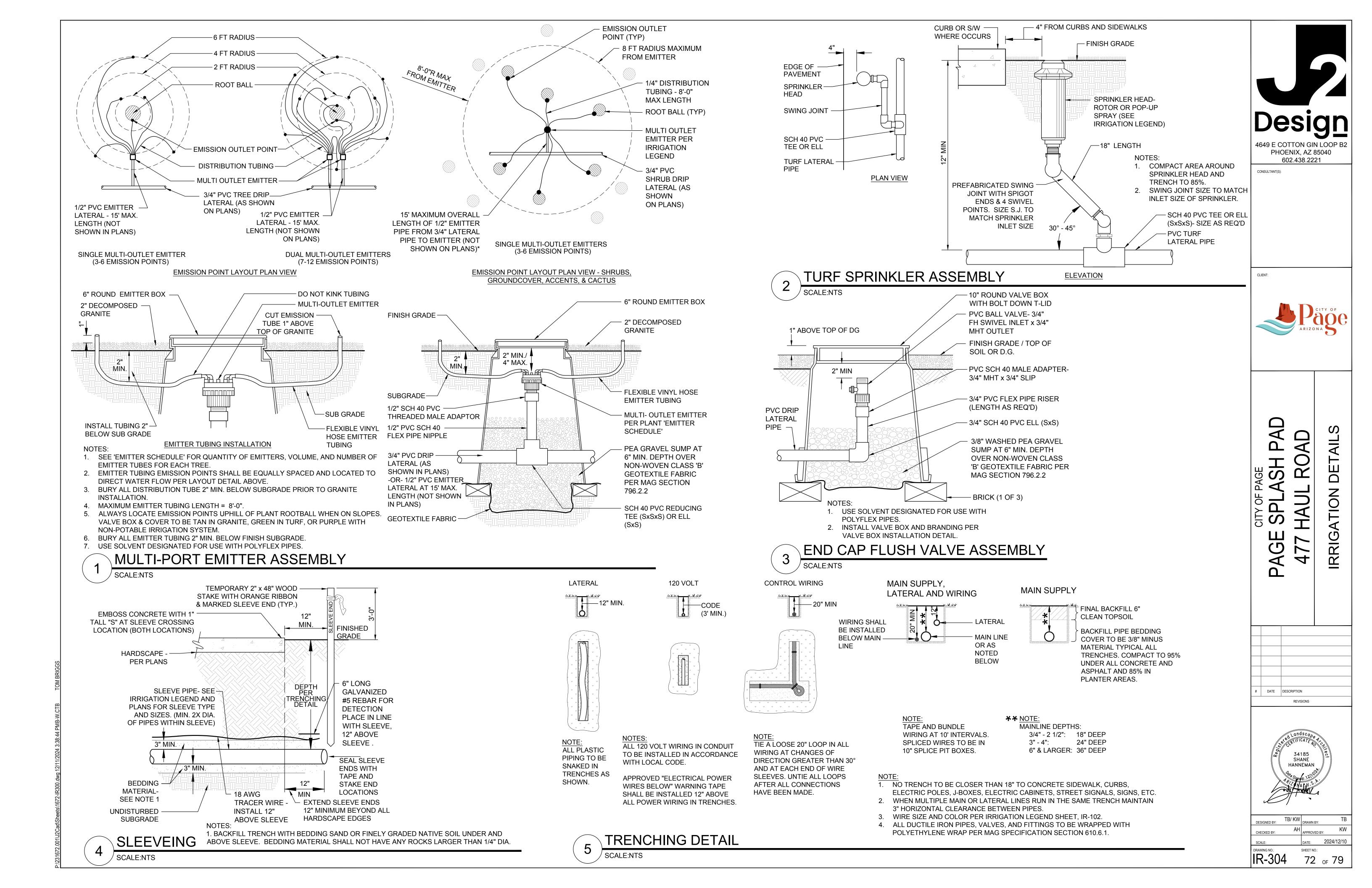
SUPPLY OWNER TWO SETS OF VALVE KEYS, LOCKING RUBBER COVER KEYS, AND HOSE SWIVELS.

3. INSTALL VALVE BOX AND BRANDING PER VALVE BOX INSTALLATION DETAIL.

4. RUBBER CAP TO BE YELLOW WITH POTABLE WATER CONNECTION, PURPLE WITH NON-POTABLE WATER CONNECTION.

CLAMPS OR EQUIVALENT

SCALE:NTS



# SITE ELECTRICAL PLAN

# PAGE, ARIZONA

#### **GENERAL ELECTRICAL NOTES**

- 1. ELECTRICAL WORK SHALL COMPLY WITH THE NATIONAL ELECTRIC CODE (LATEST EDITION), FEDERAL, STATE AND LOCAL JURISDICTION CODES.
- 2. ALL WORK SHALL BE DONE IN A NEAT, WORKMANLIKE, FINISHED AND SAFE MANNER, ACCORDING TO THE LATEST PUBLISHED NATIONAL ELECTRICAL CONTRACTORS ASSOCIATION STANDARDS OF INSTALLATION, UNDER COMPETENT SUPERVISION.
- 3. VISIT THE SITE PRIOR TO BIDDING TO BECOME FAMILIAR WITH EXISTING CONDITIONS AND ALL OTHER FACTORS WHICH MAY AFFECT THE EXECUTION OF THIS WORK. INCLUDE ALL RELATED COSTS IN THE INITIAL BID PROPOSAL
- 4. CONTRACTOR IS RESPONSIBLE FOR VERIFYING LOCATIONS OF ALL EXISTING UTILITIES AND AVOIDING DAMAGE TO SAME. CONTRACTOR TO CALL 811 FOR BLUE STAKE. FOR ALL MUNICIPAL OR PRIVATELY OWNED UTILITIES EXISTING WITHIN LIMITS OF WORK OF PROJECT, CONTRACTOR TO PRIVATELY LOCATE UTILITIES. IRRIGATION LINES LESS THAN 2" WILL NOT TYPICALLY BE MARKED AND CAUTION SHOULD BE USED TO AVOID DAMAGE. CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO ALL UTILITIES CAUSED AS A RESULT OF CONTRACT WORK, ALL DAMAGES TO BE REPAIRED IN KIND.
- 5. CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO EXISTING WALKS, WALLS, DRIVES, CURBS, ETC. DAMAGES SHALL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE OWNER AT NO ADDITIONAL COST TO THE
- 6. PROPER PROTECTION OF THE CONSTRUCTION AREA FOR SAFETY SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. COVER ALL TRENCHES AT THE END OF EACH WORK DAY. BARRICADES SHALL BE INSTALLED AS DIRECTED BY THE OWNER OR THE PROJECT INSPECTOR. THE SITE AND ALL WORK SHALL CONFORM TO OSHA REQUIREMENTS.
- 7. ALL EXISTING LANDSCAPE, HARDSCAPE AND SPRINKLER SYSTEMS DAMAGED OR DISTURBED DURING THE CONSTRUCTION OF THIS PROJECT BY THE CONTRACTOR SHALL BE REPLACED IN KIND.
- 8. CONTRACTOR SHALL PAY FOR PERMITS AND INSPECTIONS AS MAY BE REQUIRED AND PROVIDE A CERTIFICATE OF INSPECTION TO THE OWNER.
- 9. PROTECT ALL MATERIAL AND EQUIPMENT INSTALLED AGAINST DAMAGE BY OTHER TRADES, WEATHER CONDITIONS OR ANY OTHER CAUSES. EQUIPMENT FOUND DAMAGED OR IN OTHER THAN NEW CONDITION WILL BE REJECTED AS DEFECTIVE. ALL COMPONENTS SHALL BE FREE OF DUST, GRIT AND FOREIGN MATERIALS, AND LEFT AS NEW BEFORE FINAL ACCEPTANCE OF WORK.
- 10. LEAVE THE SITE CLEAN, REMOVE ALL DEBRIS, EMPTY CARTONS, TOOLS, CONDUIT, WIRE SCRAPS AND ALL MISCELLANEOUS SPARE EQUIPMENT AND MATERIALS USED IN THE WORK DURING CONSTRUCTION.
- 11. ALL UNDERGROUND CONDUIT SHALL BE SCHEDULE 40 PVC, BURIED 24" MINIMUM BELOW FINISHED GRADE, UNLESS SPECIFICALLY NOTED OTHERWISE ON PLANS OR IN DETAILS.
- 12. PROVIDE EMT INDOOR AND GRS OUTDOOR FOR ABOVE GROUND CONDUIT. WHERE METALLIC CONDUITS COME IN CONTACT WITH DIRT, THEY SHALL BE HALF LAP WRAPPED WITH SCOTCH 50 TAPE TO 12" AFG. FITTINGS SHALL BE STEEL, THREADED TYPE WITH INSULATED THROATS. SECURELY ATTACH ALL SURFACE MOUNTED CONDUIT EVERY 10 FEET AND WITHIN 3 FEET OF EACH JUNCTION BOX, PER NEC ARTICLE 344.30.
- 13. MINIMUM CONDUIT SIZE SHALL BE 3/4" UNLESS SPECIFICALLY NOTED OTHERWISE ON PLANS OR IN DETAILS.
- 14. ALL FEEDERS AND BRANCH CIRCUIT WIRE SHALL BE COPPER TYPE XHHW (75 DEGREE C) FOR BELOW GRADE INSTALLATIONS (AND CONDUIT RISERS) AND THHN/THWN (75 DEGREE C) FOR ABOVE GRADE INSTALLATIONS. MINIMUM SIZE SHALL BE #12 AWG, ÚNLESS SPEĆIFICALLY NOTED OTHERWISE ON PLANS OR IN DETAILS. ALL WIRING SHALL BE IN CONDUIT. FOR NEW WIRING IN COMMERCIAL APPLICATIONS, THE USE OF TYPES NM, NMC, NMS (ROMEX) CABLES IS NOT PERMITTED. ALL CONDUCTORS SHALL BE NEW UNLESS NOTED OTHERWISE IN PLANS.
- 15. A SEPARATE GREEN INSULATED EQUIPMENT GROUNDING CONDUCTOR (BOND) SHALL BE INSTALLED WITHIN EACH RACEWAY, INCLUDING WITHIN EMT CONDUIT. EQUIPMENT GROUNDING CONDUCTOR SHALL BE SIZED PER NEC TABLE
- 16. WHEN A PANEL IS SUPPLIED BY A FEEDER OR BRANCH CIRCUIT, ANY INSTALLED GROUNDED CONDUCTOR SHALL NOT BE CONNECTED TO THE EQUIPMENT GROUNDING CONDUCTOR (GEC) OR TO THE GROUNDING ELECTRODE(S) PER NEC ARTICLE 250.32(B)
- 17. BOND ALL ENCLOSURES PER NEC ARTICLE 250.96.
- 18. CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIAL, ETC. NECESSARY FOR A COMPLETE AND WORKABLE ELECTRICAL SYSTEM WHETHER OR NOT THESE ITEMS ARE SPECIFICALLY NOTED ON THESE DRAWINGS. INCIDENTAL ITEMS NOT INDICATED ON THE DRAWINGS. NOR MENTIONED IN SPECIFICATIONS THAT CAN BE LEGITIMATELY AND REASONABLY INFERRED TO BELONG TO THE WORK DESCRIBED OR BE NECESSARY IN GOOD PRACTICE TO PROVIDE A COMPLETE SYSTEM, SHALL BE FURNISHED AND INSTALLED AS THOUGH ITEMIZED HERE IN EVERY DETAIL.
- 19. ALL TRENCHING, CONDUITS, ETC. SHALL BE ROUTED AND INSTALLED IN SUCH A MANNER THAT WILL NOT DAMAGE EXISTING FACILITIES. SHOULD DAMAGE OCCUR, IT WILL BE THE CONTRACTORS RESPONSIBILITY TO REPAIR DAMAGE TO THE SATISFACTION OF THE OWNER OR INSPECTOR.
- 20. ALL CONDUIT RUNS SHOWN ON THIS PLAN ARE SCHEMATIC IN NATURE. THE CONTRACTOR SHALL MAKE SURE THAT ALL CONDUIT, ETC. FALLS WITHIN THE CONSTRUCTION AREA/RIGHT OF WAY. (THIS INCLUDES MAINTAINING ALL REQUIRED CLEARANCES.)
- 21. WHEN CROSSING PATHWAYS OR SIDEWALKS, CONTRACTOR SHALL BORE UNDER EXISTING CONCRETE WALKS AND SAWCUT ASPHALT WALKS. ASPHALT WALKS SHALL BE REPLACED IN KIND.
- 22. CONTRACTOR SHALL GUARANTEE WORK INSTALLED UNDER THE CONTRACT TO BE FREE FROM DEFECTIVE WORKMANSHIP AND MATERIALS, USUAL WEAR EXCEPTED, AND SHOULD ANY SUCH DEFECTS DEVELOP WITHIN A PERIOD OF ONE YEAR AFTER ACCEPTANCE OF THE PROJECT BY THE OWNER, THE CONTRACTOR SHALL REPAIR AND/OR REPLACE ANY DEFECTIVE ITEMS AND DAMAGE RESULTING FROM FAILURE OF THESE ITEMS, AT NO EXPENSE WHATSOEVER TO THE OWNER.
- 23. CONTRACTOR SHALL IDENTIFY SERVICE ENTRANCE SECTION MAIN SERVICE DISCONNECT(S) WITH 3/32-INCH THICK LAMINATED PHENOLIC TYPE NAMEPLATES WITH 1/4-INCH MINIMUM HEIGHT LETTERS. NAMEPLATE TO BE BLACK MATTE FINISH SURFACE WITH WHITE LETTER ENGRAVING. ATTACH NAMEPLATE TO THE OUTSIDE PANEL FACE WITH TWO STAINLESS STEEL SELF-TAPPING SCREWS. NAMEPLATE SHALL READ "SERVICE DISCONNECT" PER NEC ARTICLE 230.70(B).
- 24. ALL CIRCUITS SHALL BE LEGIBLY IDENTIFIED AT THE PANEL, JUNCTION BOXES AND AT ALL EQUIPMENT IN A PERMANENT MANNER (I.E. ETCHED PLATES, CONDUCTOR TAG, PERMANENT MARKER, ETC.). THE LABELING SHALL INCLUDE PANEL CIRCUIT NUMBER, "TO" AND "FROM" IDENTIFICATION, AND MARKED "SPARE" WHERE APPLICABLE.
- 25. CONTRACTOR SHALL TEST ELECTRICAL SYSTEM FOR SHORT CIRCUITS AND MEGGER TEST FEEDER CIRCUIT WIRING. PROVIDE CERTIFIED TEST RESULTS FOR MEGGER TEST TO OWNER UPON COMPLETION OF PROJECT.
- 26. ALL CONDUIT SHOWN SHALL BE CONCEALED WHEN POSSIBLE. WHEN NOT POSSIBLE, CONDUIT MAY BE SURFACE MOUNTED WITH PERMISSION OF THE OWNER OR OWNER'S REPRESENTATIVE.
- 27. CONTRACTOR SHALL COORDINATE ALL EQUIPMENT CONNECTIONS WITH EQUIPMENT SUPPLIER PRIOR TO ROUGH-IN. PROVIDE ADDITIONAL FUSED DISCONNECT SWITCHES AND CONTROLS IF OVERCURRENT PROTECTION OR CONTROLS IS NOT INTEGRAL WITH UNITS.
- 28. ALL EQUIPMENT SHALL BE FUSE SIZED PER MANUFACTURES RECOMMENDATIONS AND BEAR U.L. APPROVAL. COORDINATE WITH ENGINEER/OWNER.

- 29. ELECTRICAL DEVICES, DISCONNECT SWITCHES, ETC., SHALL BE SUPPORTED INDEPENDENT OF AND ISOLATED FROM **EQUIPMENT VIBRATIONS.**
- 30. FULL LOAD AMPS (FLA) SIZES, AS NOTED IN THESE DRAWINGS, ARE BASED ON SPECIFIED EQUIPMENT DATA. CONTRACTOR SHALL VÉRIFY NAMEPLATE FLA OF EQUIPMENT SUPPLIED AND COORDINATE ACCORDINGLY PER EQUIPMENT SUPPLIERS RECOMMENDATIONS.
- 31. ALL OUTDOOR ELECTRICAL EQUIPMENT SHALL BE NEMA-3R OR NEMA-4 ENCLOSURES.
- 32. CONDUITS OR RACEWAYS ROUTED FROM INDOORS TO OUTDOORS OR AS DESCRIBED IN NEC 300.7(A), SHALL BE SEALED WITH A PLIABLE SEALING COMPOUND AT A CONDUIT BODY OR AT A JUNCTION BOX BEFORE THE CONDUIT ENTERS THE COLDER ENVIRONMENT.
- 33. CONDUITS OR RACEWAYS INSTALLED IN AREAS WHERE ELEVATION CHANGES MAY CAUSE WATER OR MOISTURE TO ENTER THE ELECTRICAL EQUIPMENT THROUGH THE CONDUIT SHALL BE SEALED WITH A HERMETIC CONDUIT SEAL AT BOTH ENDS OF THE CONDUIT OR RACEWAY.
- 34. INSTALL FIRE SEALS IN ALL CONDUITS PENETRATING THE FIRE WALL TO MAINTAIN THE FIRE RESISTANCE RATING OF THE WALL, AS REQUIRED BY NEC 300.21.
- 35. ALL POLE LIGHTS SHALL BE PROVIDED WITH A TWO POLE FUSE HOLDER BUSSMANN #HEX OR A SINGLE POLE FUSE HOLDER BUSSMANN #HEB OR EQUAL FOR INLINE FUSING, PROVIDE 5 AMP FUSING IN FUSEHOLDER.
- 36. PRIOR TO POURING THE POLE BASES OR COVERING ANY ELECTRICAL CONDUITS, CONTACT THE INSPECTION DEPARTMENT 24 HOURS IN ADVANCE FOR APPROVAL.
- 37. MATERIALS SHALL BE NEW AND OF THE BEST QUALITY WITH MANUFACTURER'S NAME PRINTED THEREON. MATERIALS SHALL BE MANUFACTURED IN ACCORDANCE WITH NEMA, ANSI, UNDERWRITER'S LABORATORY OR OTHER APPLICABLE STANDARDS AND RATED FOR HEAVY DUTY SERVICE.
- 38. ALL WIRING DEVICES SHALL BE SPECIFICATION GRADE. ALL 15 AND 20 AMP, 125 AND 250 VOLT, NONLOCKING RECEPTACLES INSTALLED OUTDOORS SHALL BE LISTED WEATHER-RESISTANT TYPE. RECEPTACLE COVERS IN WET LOCATIONS SHALL BE EXTRA DUTY PER NEC 406.9(B). ALL WEATHERPROOF WHILE IN-USE RECEPTACLE COVERS SHALL BE METAL.
- 39. A MINIMUM OF (1) 20A 125V RECEPTACLE SHALL BE INSTALLED NOT LESS THAN 6 FEET AND NOT MORE THAN 20 FEET FROM THE INSIDE WALL OF EACH PERMANENTLY INSTALLED POOL, PER NEC 680.22(A)(1)
- 40. SELECTION OF MATERIALS SHALL BE IN STRICT ACCORDANCE WITH THE DRAWINGS AND/OR SPECIFICATIONS. THE USE OF MANUFACTURER'S NAME, MODEL, AND NUMBER IS INTENDED TO ESTABLISH STYLE, QUALITY, APPEARANCE, USEFULNESS AND BID PRICE. CONTRACTOR SHALL SUBMIT TO THE OWNER OR OWNER'S REPRESENTATIVE FOR REVIEW AND APPROVAL (PRIOR TO ORDERING MATERIALS) COPIES OF EQUIPMENT SHOP DRAWINGS AS FOLLOWS: LIGHT FIXTURES, POLES, POLE BASES, SERVICE ENTRANCE SECTION, ELECTRICAL EQUIPMENT, DISCONNECT SWITCHES, TIME CLOCKS AND OTHER CONTROLS, LIGHTING CONTACTORS AND PULL BOXES. AT THE TIME OF EACH SUBMITTAL, THE CONTRACTOR SHALL DEFINE AND DELINEATE IN WRITING ANY DEVIATIONS FROM THE CONTRACT DOCUMENTS. THE REVIEW WILL BE ONLY FOR CONFORMANCE WITH THE DESIGN CONCEPT OF THE WORK AND FOR COMPLIANCE WITH THE INFORMATION CONTAINED IN THE CONTRACT DOCUMENTS. THE REVIEW OF A SPECIFIED ITEM, AS SUCH, WILL NOT INDICATE REVIEW OF THE ASSEMBLY IN WHICH THE ITEM FUNCTIONS. REVIEW BY THE OWNER OR OWNER'S REPRESENTATIVE WILL NOT RELIEVE THE CONTRACTOR FROM RESPONSIBILITY FOR ANY ERRORS OR OMISSIONS IN THE SUBMITTALS NOR FROM HIS RESPONSIBILITY FOR COMPLYING WITH THE CONTRACT DOCUMENTS.
- 41. THE SUBMITTALS SHALL BE NEATLY GROUPED AND ORGANIZED. PERTINENT INFORMATION SHALL BE HIGHLIGHTED, AND THE SPECIFIC PRODUCT SHALL BE IDENTIFIED. ALL SUBMITTALS SHALL BE COMPLETE, AND PRESENTED IN ONE PACKAGE. THE SUBMITTAL SHALL INCLUDE A COMPLETE LIST OF THE EQUIPMENT AND MATERIALS, INCLUDING THE MANUFACTURER'S NAME, PRODUCT SPECIFICATION, DESCRIPTIVE DATA, TECHNICAL LITERATURE, PERFORMANCE CHARTS, CATALOG CUTS, INSTALLATION INSTRUCTIONS, AND SPARE PART RECOMMENDATIONS FOR EACH DIFFERENT ITEM OF THE EQUIPMENT SPECIFIED.

-PULL BOX

W/HOLD DOWN BOLTS

LID 'A' REINFORCED CONCRETE

PULL BOX LID

-WITH AN ULTRAVIOLET

CONCRETE.

WASHER

HOLD DOWN BOLT DETAIL

PLATE & MOUNT

INHIBITOR ANCHORED IN

-PLASTIC CAP OVER BOLT

-STAINLESS STEEL BOLT &

STAINLESS STEEL MOUNTING

CONDUIT-TO-LID

\_\_\_30 LB. FELT PAPER

-UNDISTURBED SOIL

CONCRETE

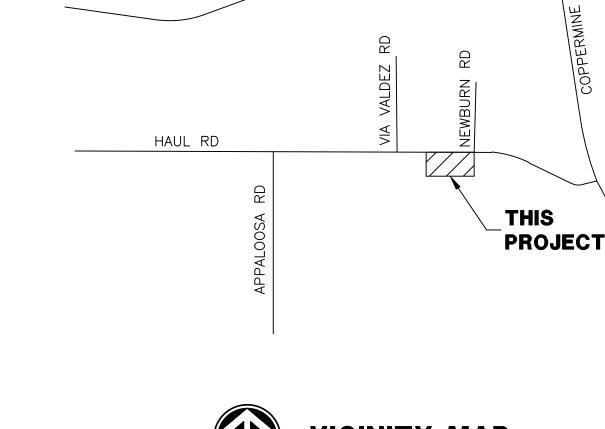
CLEARANCE

-3/4" AGGREGATE

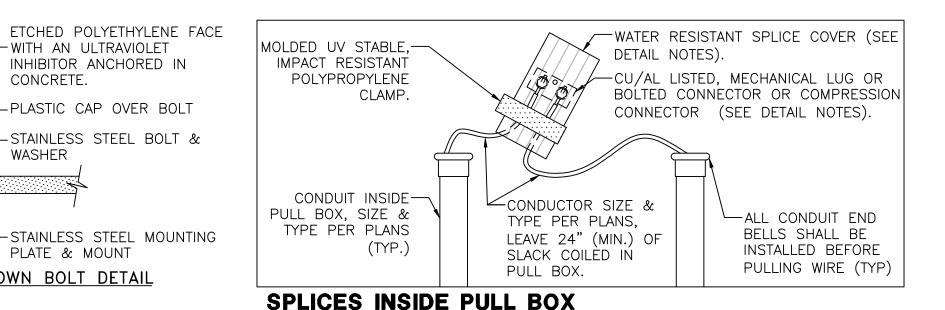
-ALL CONDUIT END BELLS

SHALL BE INSTALLED

BEFORE PULLING WIRE



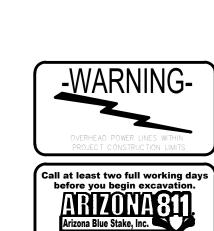




#### **DETAIL NOTES:**

- 1. THE PULL BOX SHALL BE MADE OF A HIGH DENSITY REINFORCED CONCRETE MATERIAL WITH END & SIDE KNOCKOUTS, & NON-SETTLING SHOULDERS TO MAINTAIN GRADE, MANUFACTURED WITH APPROXIMATE DIMENSIONS AS SHOWN.
- 2. STEEL REINFORCEMENT SHALL BE AS REGULARLY USED IN STANDARD PRODUCTS OF THE RESPECTIVE MANUFACTURER.
- 3. COVER LETTERING SHALL BE 1" LETTERS CAST IN STANDARD MARKINGS: "ELECTRIC" OR "HIGH VOLTAGE" OR "COMMUNICATIONS". AS REQUIRED.
- 4. THE PULL BOX SHALL HAVE AN ETCHED POLYETHYLENE FACE WITH AN ULTRAVIOLET INHIBITOR ANCHORED IN CONCRETE.
- 5. ALL CABLE & CONDUCTOR SPLICES MADE USING CU/AL LISTED, MECHANICAL LUG OR BOLTED CONNECTOR OR COMPRESSION CONNECTOR, (TYCO ELECTRONICS, NSI INDUSTRIES, ILSCO OR APPROVED EQUAL). CONNECTION TO BE INSULATED & MADE WATER RESISTANT WITH TYCO ELECTRONICS GELCAP-SL, NSI INDUSTRIES ESSLK-2/0 OR 3M SCOTCHCAST SPLICE KIT 85 SERIES.

PULLBOX TYPE         PULLBOX LENGTH         PULLBOX WIDTH         PULLBOX HEIGHT         LID LENGTH         LID WIDTH         LID HEIGHT           "A"         "B"         "C"         "D"         "E"         "F"           #3-1/2         19-3/4"         14-1/4"         12"         15-1/2"         10"         1-3/4"           #5         25-1/8"         15-5/8"         13"         20-3/4"         10-5/8"         2"	DATA TABLE									
#3-1/2 19-3/4" 14-1/4" 12" 15-1/2" 10" 1-3/4"										
		"A"	"B"	"C"	"D"	"E"	"F"			
#5 25_1/8" 15_5/8" 12" 20_3/4" 10_5/8" 2"	#3-1/2	19-3/4"	14-1/4"	12"	15-1/2"	10"	1-3/4"			
#5   25-1/6   15-5/6   12   20-5/4   10-5/8   2	#5	25-1/8"	15-5/8"	12"	20-3/4"	10-5/8"	2"			
#7 35" 22" 12" 30-1/2" 17-1/2" 2"	#7	35"	22"	12"	30-1/2"	17-1/2"	2"			
#9   40-1/2"   28-1/4"   18"   35-1/2"   24"   3"	#9	40-1/2"	28-1/4"	18"	35-1/2"	24"	3"			



Dial 8-1-1 or 1-800-STAKE-IT (782-534 In Maricopa County: (602) 263-1100

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PHOENIX, AZ 85040

**165 EAST CHILTON DRIVE** CHANDLER, ARIZONA 85225

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Wright Project # 24168

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480.497.5807

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DATE DESCRIPTION

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CONSULTANT(S)

602.438.2221

2024/12/10 DRAWING NO .: SHEET NO. 73 OF 79

**PULL BOX INSTALLATION** NO SCALE

SCHEDULE 40 PVC 90 DEGREE—

BEND CONDUIT WITH A RADIUS OF

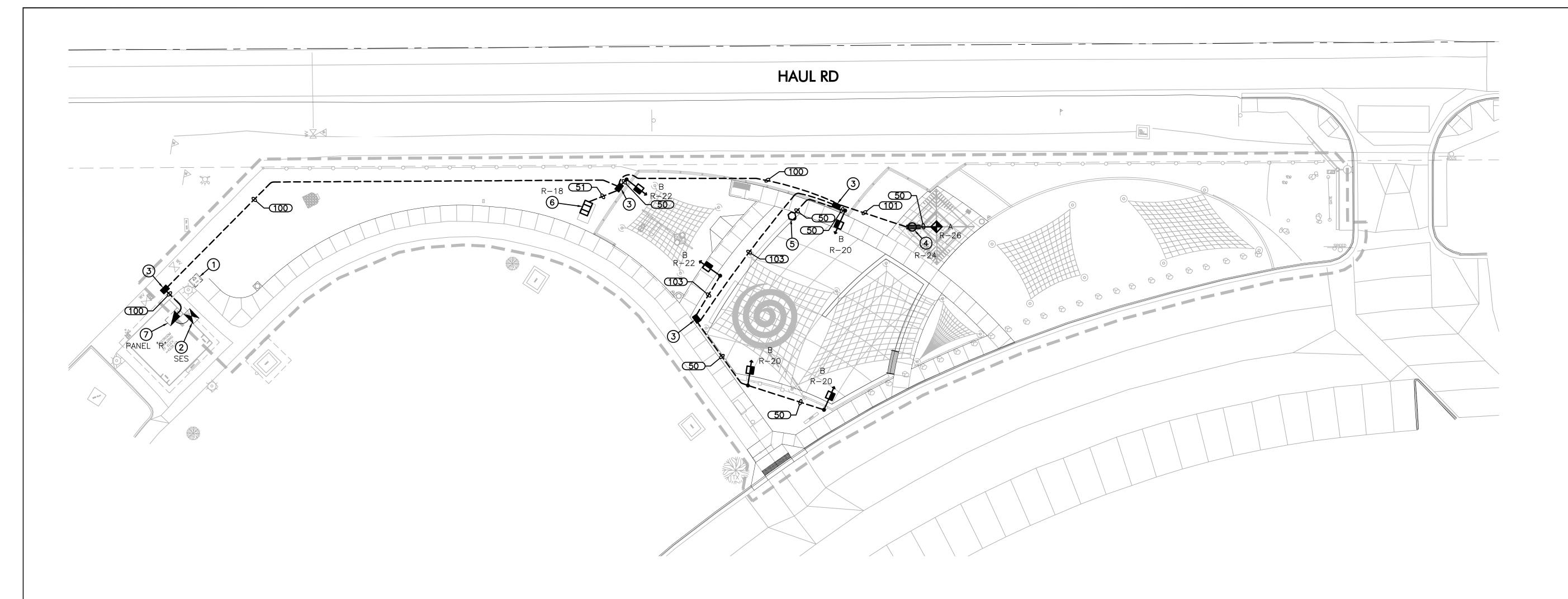
NOT LESS THAN 18" (FACTORY

BENDS ONLY SHALL BE USED)

BACKFILL & THOROUGHLY

TAMP EXCAVATED AREA -

FINISHED GRADE -



# **LEGEND**

[^] EXISTING 10 POWER CO. TRANSFORMER EXISTING 400A 120/240V 10 METERED ELECTRIC SERVICE

EXISTING 400A 120/240V 10 PANEL

SPLASH PAD POWER BOX, SEE SPLASH PAD ELECTRICAL PLANS

120V GFCI RECEPTACLE

EMERGENCY PUSH BUTTON POST

■ NEW PULL BOX

NEW UNDERGROUND CONDUIT NEW ABOVE GROUND CONDUIT

EXISTING CONDUIT

# **CONSTRUCTION NOTES**

- 1) EXISTING SINGLE PHASE TRANSFORMER LOCATION.
- 2 EXISTING 400A 120/240V, 1Ø, 3W, WALL MOUNTED METERED ELECTRIC SERVICE, SEE DETAIL 2 ON SHEET SE3.1.
- (3) #3-1/2 CONCRETE PULL BOX, SEE DETAIL 1 ON SHEET SE1.1.
- 4 RAMADA LIGHT AND RECEPTACLE, SEE DETAIL 3 ON SHEET SE3.2.
- (5) EMERGENCY SHUT-OFF PUSH BUTTON ON STEEL POST, SEE DETAIL 5 ON SHEET SE3.2.
- (6) 4A, 120V POWER BOX VAULT FOR SPLASH PAD PUMPS AND CONTROL PANELS, SEE SPLASH PAD PLANS FOR SPECIFICATIONS.
- 7 EXISTING 400A 120/240V, 10, 3W, WALL MOUNTED PANEL, SEE SINGLE LINE DIAGRAM DETAIL 2B ON SHEET SE3.1. INSTALL NEW LIGHTING CONTROL EQUIPMENT AND NEW EMERGENCY PUSH BUTTON CONTROL EQUIPMENT PER DETAIL 2 ON SHEET SE3.1.

	LIGHT FIXTURE SCHEDULE										
SYMBOL	LETTER ID	MANUFACTURER	CATALOG NUMBER	FINISH COLOR	VOLTS	LAMP	LUMENS (MIN)	CCT	MOUNTING HEIGHT	DETAIL	
	А	LUMINAIRE LIGHTING	SWP1212-NODIM-25W-30K-MVOLT-OP-BRZ	BRONZE	120	27W LED	2,234	3000K	10'-0" RAMADA CEILING	RAMADA LIGHT SEE DETAIL 3 SHEET SE3.2	
•	В	COOPER LIGHTING	GALN-SA3B-730-U-T4W-BZ	BRONZE	120	121W LED	15,481	3000K	15'-0"	SPLASH PAD LIGHT SEE DETAIL 4 SHEET SE3.2	

# WIRE & CONDUIT TABLE

CC	NDUIT		WIRE	REMARKS		
NO.	SIZE	POWER	GROUND	TYPE*	(CKT #)	
50	1"	2-#12	1-#12	CU	TYPICAL	
51	1"	2-#10	1-#10	CU	TYPICAL	
100	1"	2-#12	1-#10	CU	R-22	
		2-#12		CU	R-20	
		2-#10		CU	R-28	
	1"	4-#12	1-#12	CU	(2)TYP. PUSHBUTTON	
	1"	2-#12	1-#10	CU	R-26	
		2-#10		CU	R-24	
		2-#10		CU	R-18	
	1.5"	PULL	ROPE		SPARE	
101	1"	2-#12	1-#10	CU	R-26	
		2-#10		CU	R-24	
102	1"	2-#12	1-#12	CU	R-28	
		2-#12		CU	TYP. PUSHBUTTON	
	1.5"	PULL	ROPE		SPARE	
103	1"	2-#12	1-#12	CU	R-22	
		2-#12		CU	R-20	

\* THIS COLUMN IDENTIFIES THE CONDUCTOR MATERIAL TYPE.

CU = COPPER, AL = ALUMINUM.



Wright Project # 24168



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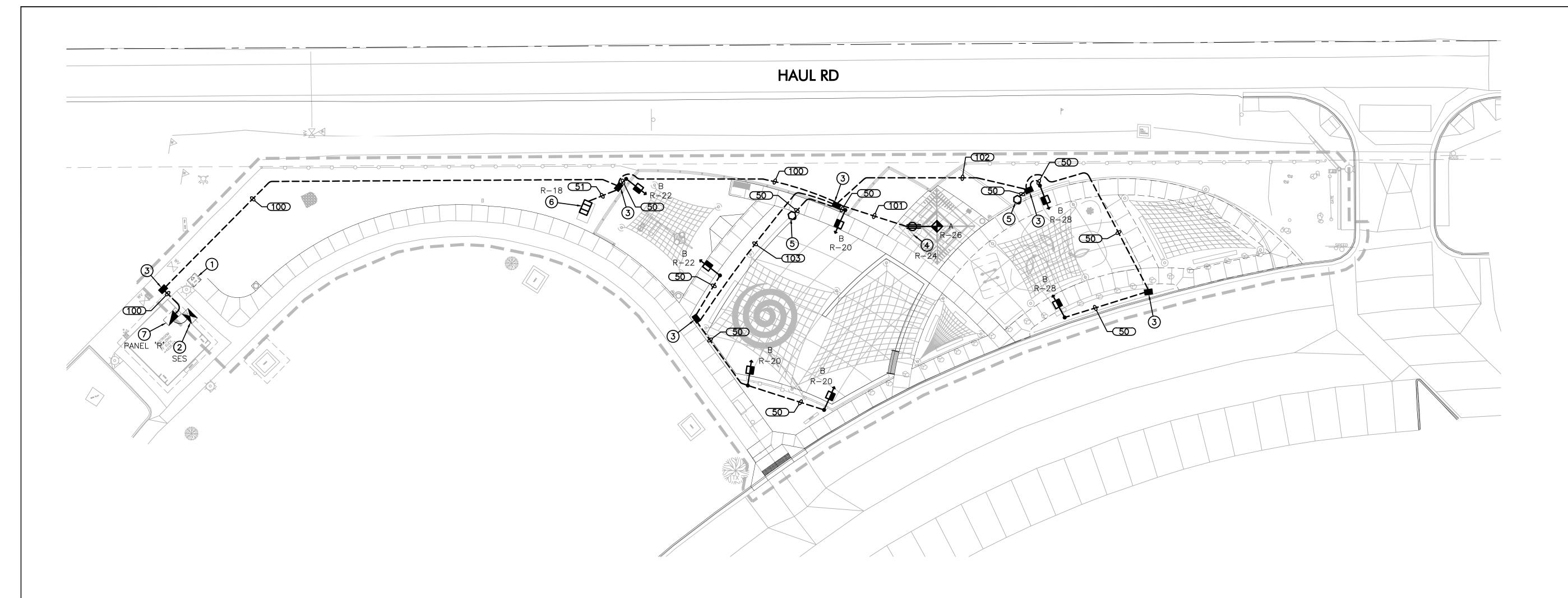
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OVERHEAD POWER LINES WITHIN PROJECT CONSTRUCTION LIMITS	DESIGNED BY:	KPD	DRAWN BY:	KPD
at least two full working days	CHECKED BY:	CMT	APPROVED B	Y: CMT
ORIZONARII	SCALE:		DATE:	2024/12/10
rizona Blue Stake, Inc.	DRAWING NO.:		SHEET NO.:	
-1-1 or 1-800-STAKE-IT (782-5348) aricopa County: (602) 263-1100	SE2.1		74	of <b>79</b>

-WARNING-



# **LEGEND**

[^] EXISTING 10 POWER CO. TRANSFORMER EXISTING 400A 120/240V 10 METERED ELECTRIC SERVICE

EXISTING 400A 120/240V 10 PANEL

SPLASH PAD POWER BOX, SEE SPLASH PAD ELECTRICAL PLANS

120V GFCI RECEPTACLE

 EMERGENCY PUSH BUTTON POST ■ NEW PULL BOX

✓ NEW UNDERGROUND CONDUIT NEW ABOVE GROUND CONDUIT EXISTING CONDUIT

# **CONSTRUCTION NOTES**

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- 6 4A, 120V POWER BOX VAULT FOR SPLASH PAD PUMPS AND CONTROL PANELS, SEE SPLASH PAD PLANS FOR SPECIFICATIONS.
- 7 EXISTING 400A 120/240V, 10, 3W, WALL MOUNTED PANEL, SEE SINGLE LINE DIAGRAM DETAIL 2B ON SHEET SE3.1. INSTALL NEW LIGHTING CONTROL EQUIPMENT AND NEW EMERGENCY PUSH BUTTON CONTROL EQUIPMENT PER DETAIL 2 ON SHEET SE3.1.

	LIGHT FIXTURE SCHEDULE									
SYMBOL	LETTER ID	MANUFACTURER	CATALOG NUMBER	FINISH COLOR	VOLTS	LAMP	LUMENS (MIN)	CCT	MOUNTING HEIGHT	DETAIL
	А	LUMINAIRE LIGHTING	SWP1212-NODIM-25W-30K-MVOLT-OP-BRZ	BRONZE	120	27W LED	2,234	3000K	10'-0" RAMADA CEILING	RAMADA LIGHT SEE DETAIL 3 SHEET SE3.2
•	В	COOPER LIGHTING	GALN-SA3B-730-U-T4W-BZ	BRONZE	120	121W LED	15,481	3000K	15'-0"	SPLASH PAD LIGHT SEE DETAIL 4 SHEET SE3.2

# WIRE & CONDUIT TABLE

CONDUIT			WIRE		REMARKS
NO.	SIZE	POWER	GROUND	TYPE*	(CKT #)
50	1"	2-#12	1-#12	CU	TYPICAL
51	1"	2-#10	1-#10	CU	TYPICAL
100	1"	2-#12	1-#10	CU	R-22
		2-#12		CU	R-20
		2-#10		CU	R-28
	1"	4-#12	1-#12	CU	(2)TYP. PUSHBUTTON
	1"	2-#12	1-#10	CU	R-26
		2-#10		CU	R-24
		2-#10		CU	R-18
	1.5"	PULL	ROPE		SPARE
101	1"	2-#12	1-#10	CU	R-26
		2-#10		CU	R-24
102	1"	2-#12	1-#12	CU	R-28
		2-#12		CU	TYP. PUSHBUTTON
	1.5"	PULL	ROPE		SPARE
103	1"	2-#12	1-#12	CU	R-22
		2-#12		CU	R-20

\* THIS COLUMN IDENTIFIES THE CONDUCTOR MATERIAL TYPE.

CU = COPPER, AL = ALUMINUM.



CHANDLER, ARIZONA 85225 PHONE: 480.497.5829 FAX: 480.497.5807

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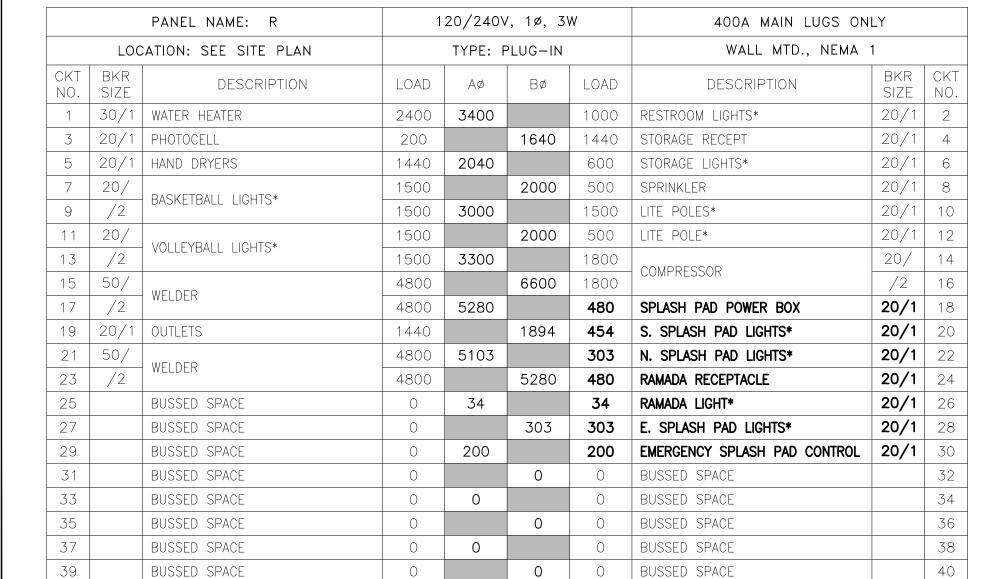
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DATE DESCRIPTION



Call at least two full working days 2024/12/10 DRAWING NO.: SE2.2 75 of 79

GRAY OR DASHED INDICATES EXISTING, BOLD INDICATES PROPOSED



22357 | 19717

186.3 | 164.3

BUSSED SPACE

\*INDICATES LOAD @ 125%

35,000 AIC BREAKERS

**EMERGENCY PUSH BUTTON CONTROL EQUIPMENT** 

GRAY OR DASHED INDICATES EXISTING, BOLD INDICATES PROPOSED. NEW BREAKERS TO MATCH TYPE AND AIC RATING OF EXISTING.

BUSSED SPACE

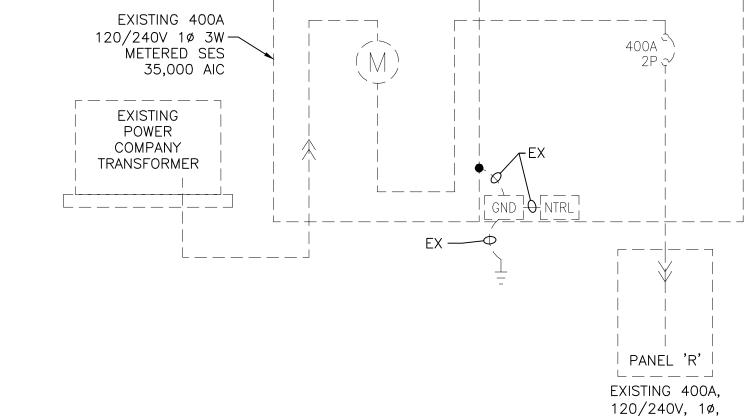
CODE TOTAL VA/Ø

CODE TOTAL AMPS/Ø

**1A** 

41

# 1. ALL WIRING SHALL BE INSTALLED IN AN ORGANIZED AND NEAT MANNER. 2. ALL EQUIPMENT SHALL HAVE LAMICOID NAMEPLATES WITH 1/4" LETTERING.



**EXISTING SINGLE LINE DIAGRAM** 

R-30 台 IN-LINE FUSE HOLDER -(CR301)-EMERGENCY STOP PUSH BUTTON CONTROL RELAY WITH 4 NORMALLY OPEN CONTACTS. REMOTE PUSH BUTTON ON INSTALL RESET PUSH POST NEXT TO SPLASH PAD IDEC POWER RH RELAY OR EQUAL BUTTON ON EXTERIOR DOOR OF ENCLOSURE EMERGENCY STOP PUSH BUTTON CONTROL 302 RELAY WITH 4 NORMALLY CLOSED CONTACTS, CR301 IDEC POWER RH RELAY OR EQUAL INSTALL EMERGENCY STOP LIGHT, MOUNTED 303 ON EXTERIOR DOOR OF ENCLOSURE (PUSH-TO-TEST STYLE LIGHT, RED COLOR) 304 AUTO DIALER, SEE SCHEMATIC NOTES FOR SPECIFICATIONS 305 306 PUSH BUTTON ACTIVATION 307 CR301 INSTALL 2 POLE, 30 AMP CONTACTOR IN

24V ACTIVATION SIGNAL FROM VORTEX CONTROLLER -(CR311)

CR302

#### **SCHEMATIC NOTES**

- ALL NEW EQUIPMENT INSTALLED.
- BE MANUFACTURED BY MISSION COMMUNICATIONS, #M150 (OR APPROVED EQUAL). CELLULAR SERVICE TO BE INCLUDED WITH PURCHASE OF AUTO DIALER AND COMMISSIONED WITH THE CITY OF PHOENIX AS THE OWNER.
- WITH AUTOMATIC POWER LOSS ALARM INDICATION.

BE INSTALLED IN NEW PUMP CONTROL EQUIPMENT ENCLOSURE.

# CONTROL SCHEMATIC LEGEND

# HAND-OFF-AUTO SWITCH

3W PANEL IN

UTILITY ROOM

120/240V 1ø 3W

<u>\_\_o\_ \_o^</u> PHOTOCELL RELAY

CONTROL RELAY

TIME CLOCK

LIGHTING CONTACTOR NORMALLY OPEN CONTACT

CR TC-A

60 CIRCUIT BREAKER

白 IN-LINE FUSE HOLDER

R-3

ACTIVATION CONTROL RELAY WITH

3 NORMALLY OPEN CONTACTS

NEW NEMA 3R ENCLOSURE TO INTERRUPT

POWER TO BOOSTER PUMP.

1. PROVIDE PERMANENT ETCHED LAMICOID LABELS ON

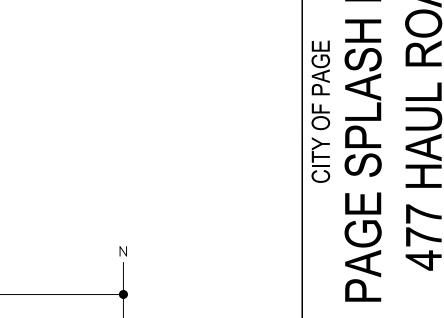
AND 24V COIL

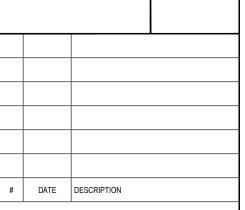
ALL EQUIPMENT SHOWN IS NEW AND TO

- 2. INSTALL LIGHTING CONTROL EQUIPMENT IN WALL-MOUNTED ENCLOSURE,

# CONTROLLER NOTES

- 1. THIS CIRCUIT TO BE ACTIVATED FROM DUSK TO DAWN.
- ADJACENT TO PANEL.





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PHOENIX, AZ 85040

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ELECTRICAL ENGINEERING AND DESIGI

CHANDLER, ARIZONA 85225

PHONE: 480.497.5829

www.wrightengineering.us

Wright Project # 24168

480.497.5807

**165 EAST CHILTON DRIVE** 

CONSULTANT(S):



KPD DRAWN BY: ESIGNED BY: CMT APPROVED BY: 2024/12/10 DRAWING NO .: SHEET NO .: 76 of 79

SPLASH PAD E-STOP SCHEMATIC

NORMALLY CLOSED RESET PUSH BUTTON

NO SCALE

**CONTROL SCHEMATIC LEGEND** CONTROL RELAY LIGHTING CONTACTOR

CR311

NORMALLY OPEN CONTACT NORMALLY CLOSED CONTACT CIRCUIT BREAKER

REMOTE CONNECTION POINT DEVICE CONNECTION POINT

42

 ${}_{\mathsf{L}}\longleftarrow$ 

NORMALLY OPEN PUSH BUTTON 0 0

PUSH-TO-TEST STYLE LIGHT

- 2. CELLULAR AUTO DIALER MONITORING SYSTEM SHALL
- 3. CELLULAR MONITORING SYSTEM SHALL BE EQUIPPED

LIGHTING CONTROL SCHEMATIC (PANEL 'R') 120V

20 YEAR TWISTLOCK PHOTOCELL

CONTROL RELAY

W/N.O. AND N.C. CONTACTS

R-20 6 6-

R-22 6 6—

R-28 6 6-

INTERMATIC ET27 SERIES TIME CLOCK WITH

6 POLE CONTACTOR

10,000 AIC MINIMUM

 $\$ 2 CHANNELS, A & B, (NO SUBSTITUTIONS)

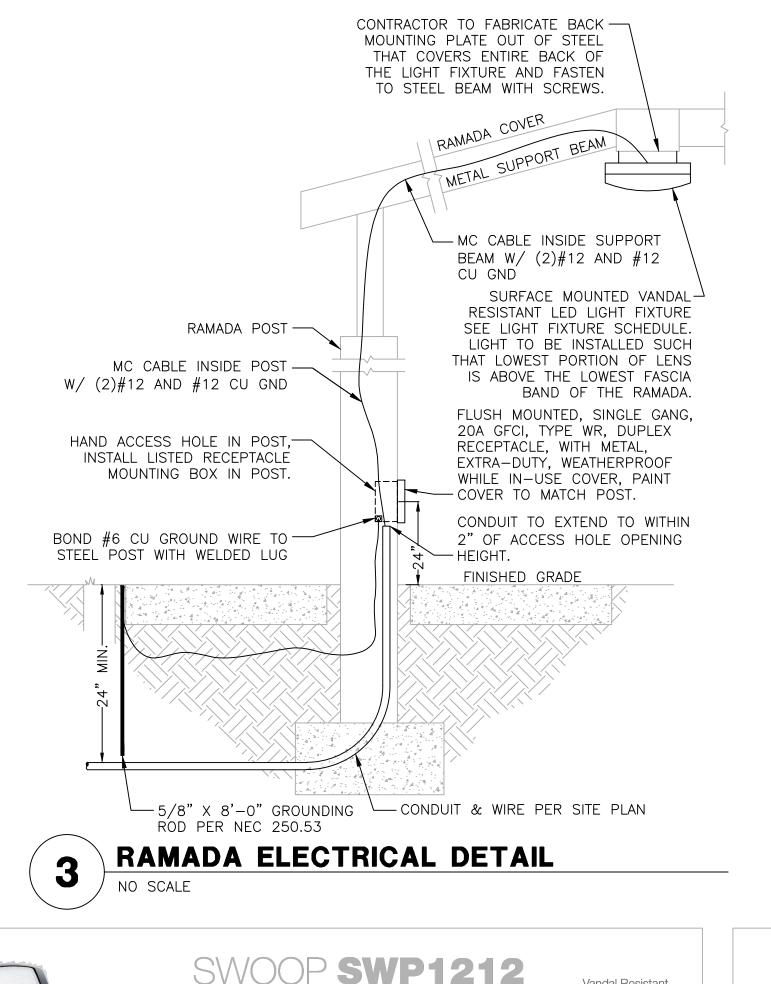
-WARNING-

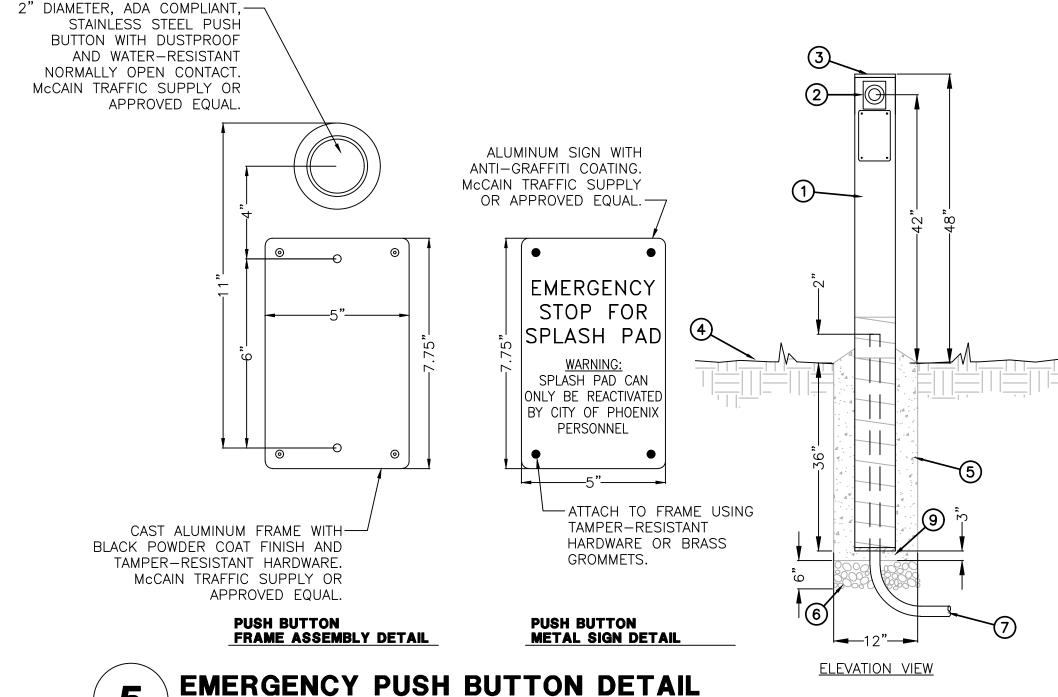
→ S. SPLASH PAD LIGHTS

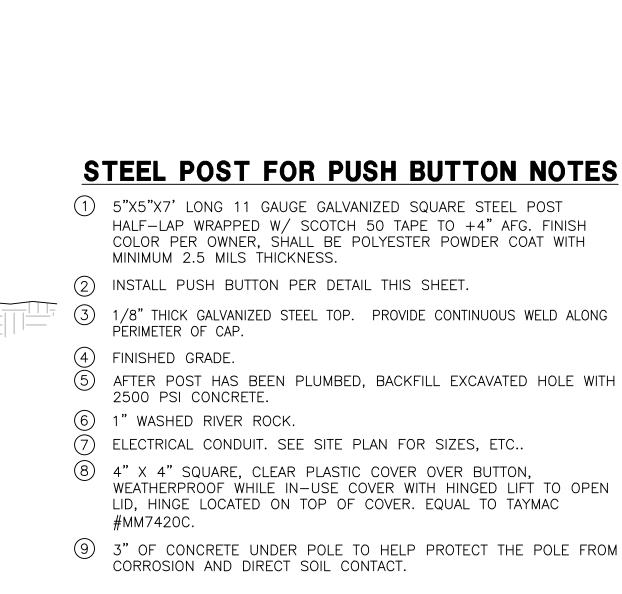
-⟨´`}——♦ RAMADA LIGHT

Call at least two full working day ARIZONA 811
Arizona Blue Stake, Inc. Dial 8-1-1 or 1-800-STAKE-IT (782-534 In Maricopa County: (602) 263-1100

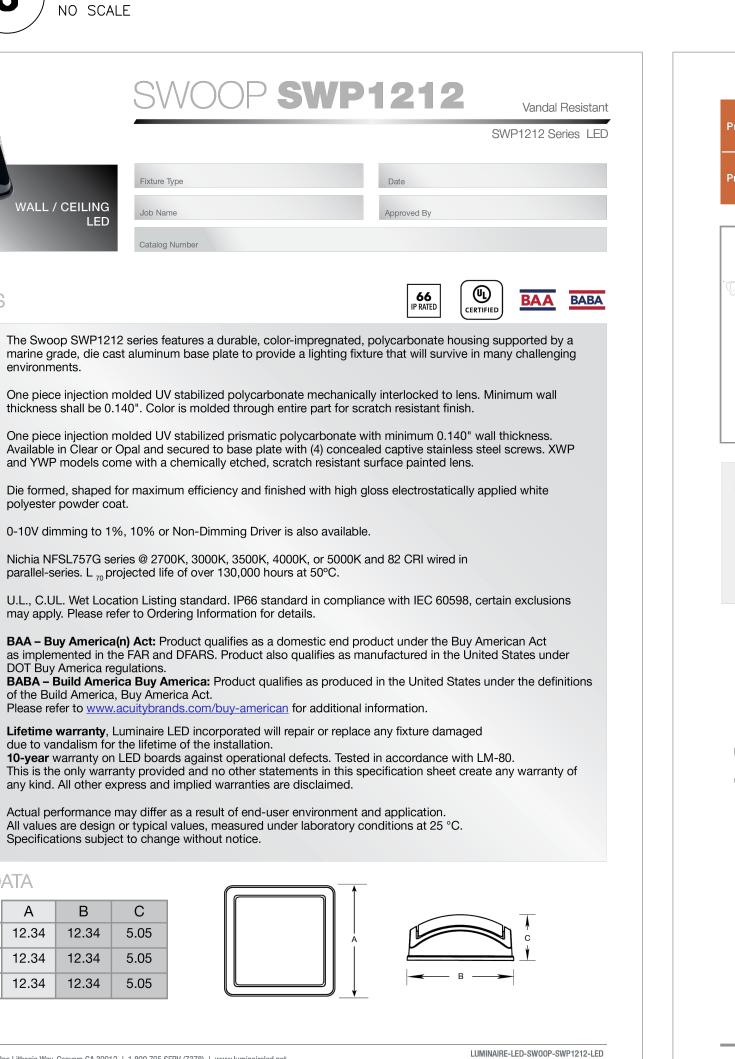
→ N. SPLASH PAD LIGHTS E. SPLASH PAD LIGHTS





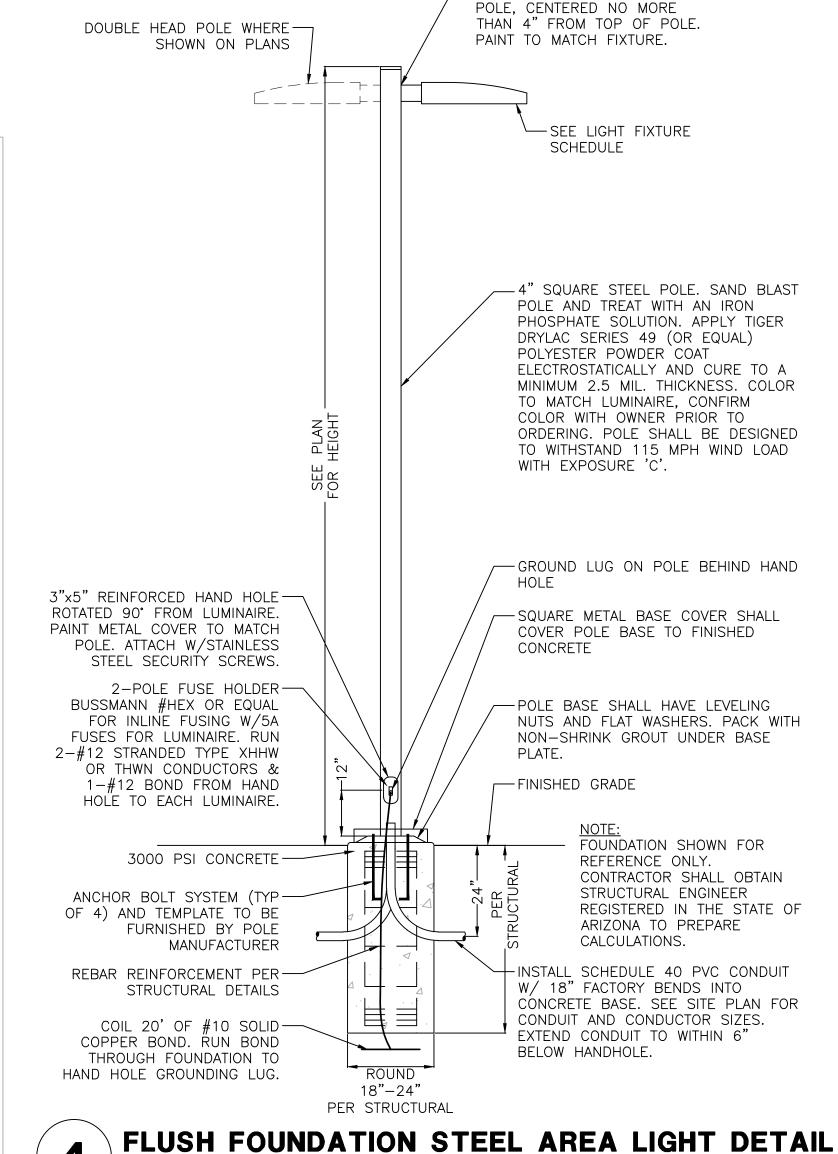


SECURELY ATTACH ARM TO





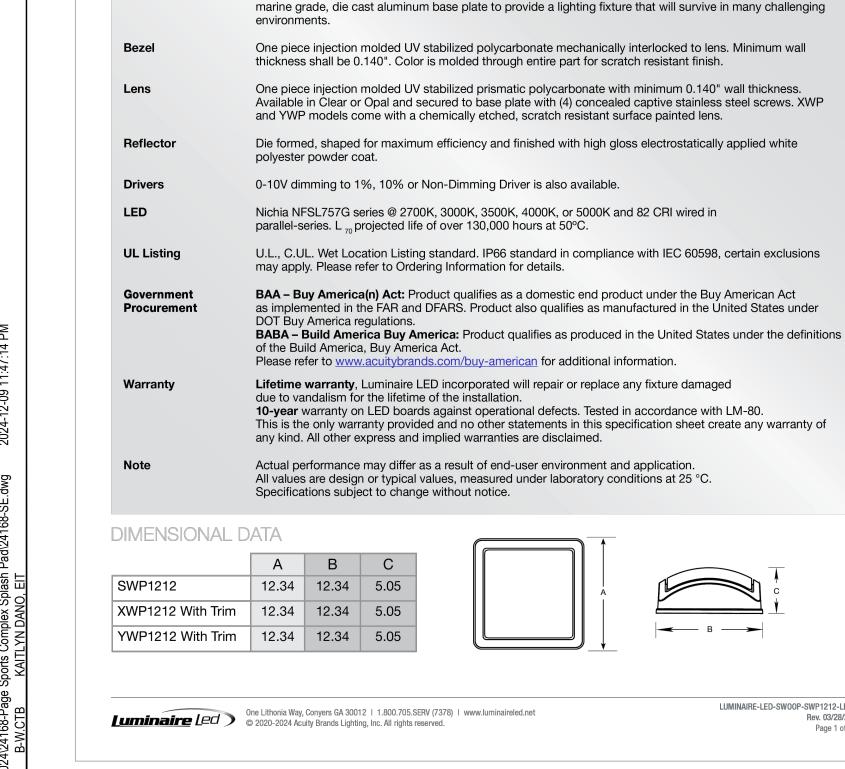
NO SCALE





Call at least two full working da ARIZONA 811
Arizona Blue Stake, Inc. DRAWING NO .: Dial 8-1-1 or 1-800-STAKE-IT (782-534 In Maricopa County: (602) 263-110

KPD | DRAWN BY CMT APPROVED BY: 2024/12/10 SHEET NO .:



**SPECIFICATIONS** 

Description

4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221 CONSULTANT(S):

ELECTRICAL ENGINEERING AND DESIGI **165 EAST CHILTON DRIVE** CHANDLER, ARIZONA 85225

480.497.5829 PHONE: 480.497.5807 www.wrightengineering.us

Wright Project # 24168

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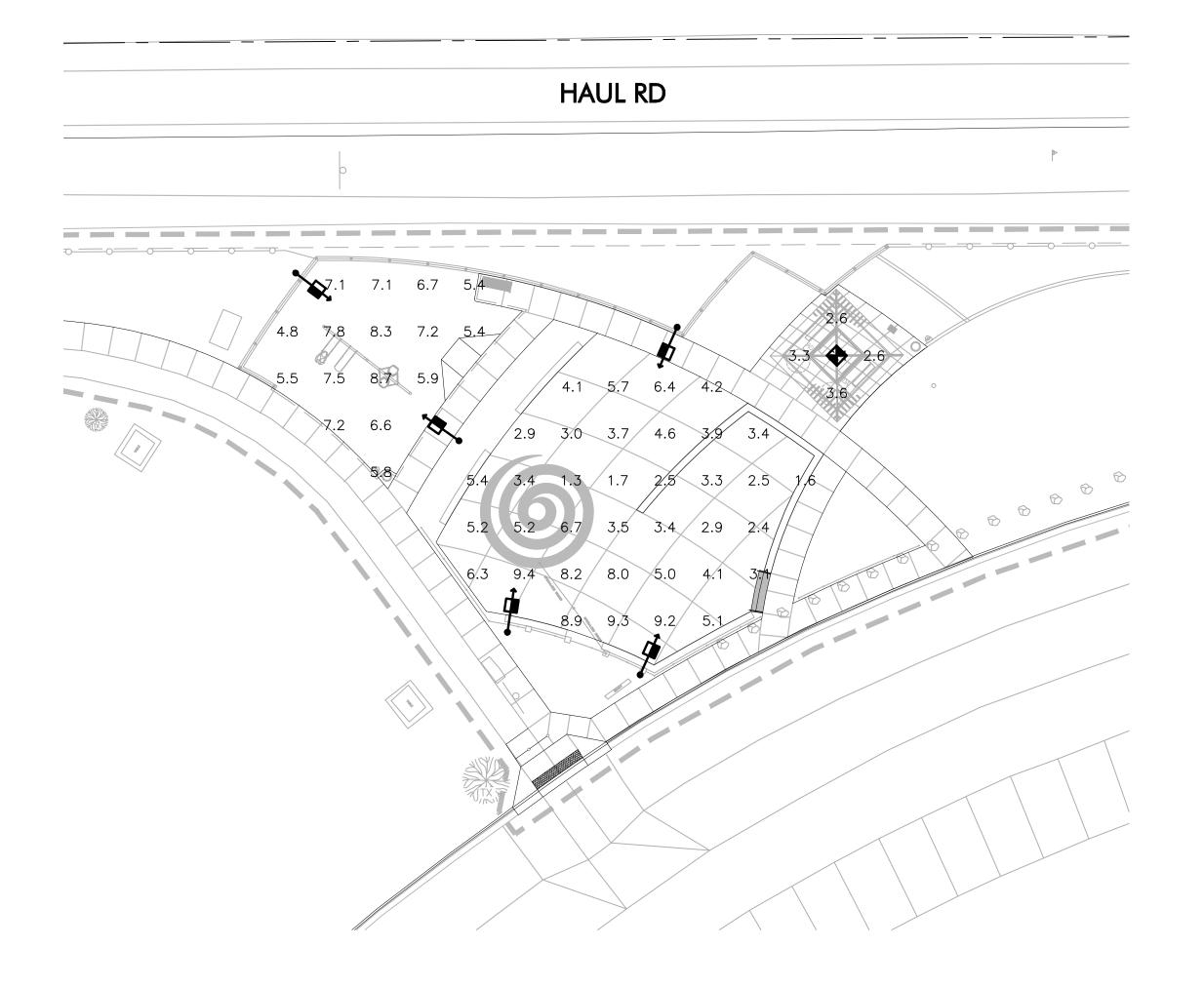
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DATE DESCRIPTION





### PHOTOMETRIC LEGEND

RAMADA LIGHT candela file 'SWP1212 25W 35K CLP.ies'
1 lamp(s) per luminaire, photometry is absolute Light Loss Factor = 0.700, watts per luminaire = 29 mounting height= 10 ft
number locations= 2, number luminaires= 2
kw all locations= 0.1

SPLASH PAD LIGHT candela file 'GALN-SA3B-730-U-T4W\_15481 lumens.ies' 48 lamp(s) per luminaire, photometry is absolute Light Loss Factor = 0.910, watts per luminaire = 121 mounting height= 15 ft number locations= 12, number luminaires= 12 kw all locations= 1.5

## **PHOTOMETRIC RESULTS**

PLAYGROUND 32 points at z=0, sp 10ft by 10ft HORIZONTAL FOOTCANDLES
Average 6.7 Maximum 4.8 Minimum 1.39 1.81 0.16 1.63 Avg:Min Max:Min Coef Var UnifGrad

RAMADA 10 points
HORIZONTAL FOOTCANDLES
Average 4.2 4.2 7.0 2.6 1.60 2.69 0.34 Maximum Minimum Avg:Min Max:Min Coef Var

UnifGrad

SPLASH PAD — PHASE 1 72 points at z=0, sp 10ft by 10ft HORIZONTAL FOOTCANDLES 4.8 Average Maximum 1.3 3.66 7.23 0.47 Minimum Avg:Min Max:Min Coef Var

5.15 UnifGrad SPLASH PAD — PHASE 2 18 points at z=0, sp 10ft by 10ft HORIZONTAL FOOTCANDLES Average 8.4 3.2 1.85 2.62 0.28 1.97 Maximum Minimum Avg:Min Max:Min Coef Var



602.438.2221

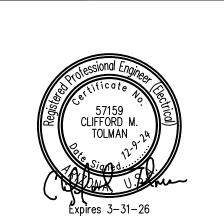
165 EAST CHILTON DRIVE CHANDLER, ARIZONA 85225 PHONE: 480.497.5829 FAX: 480.497.5807

www.wrightengineering.us Wright Project # 24168

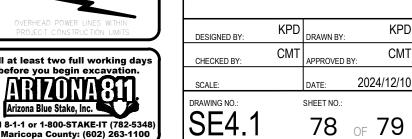


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DATE DESCRIPTION



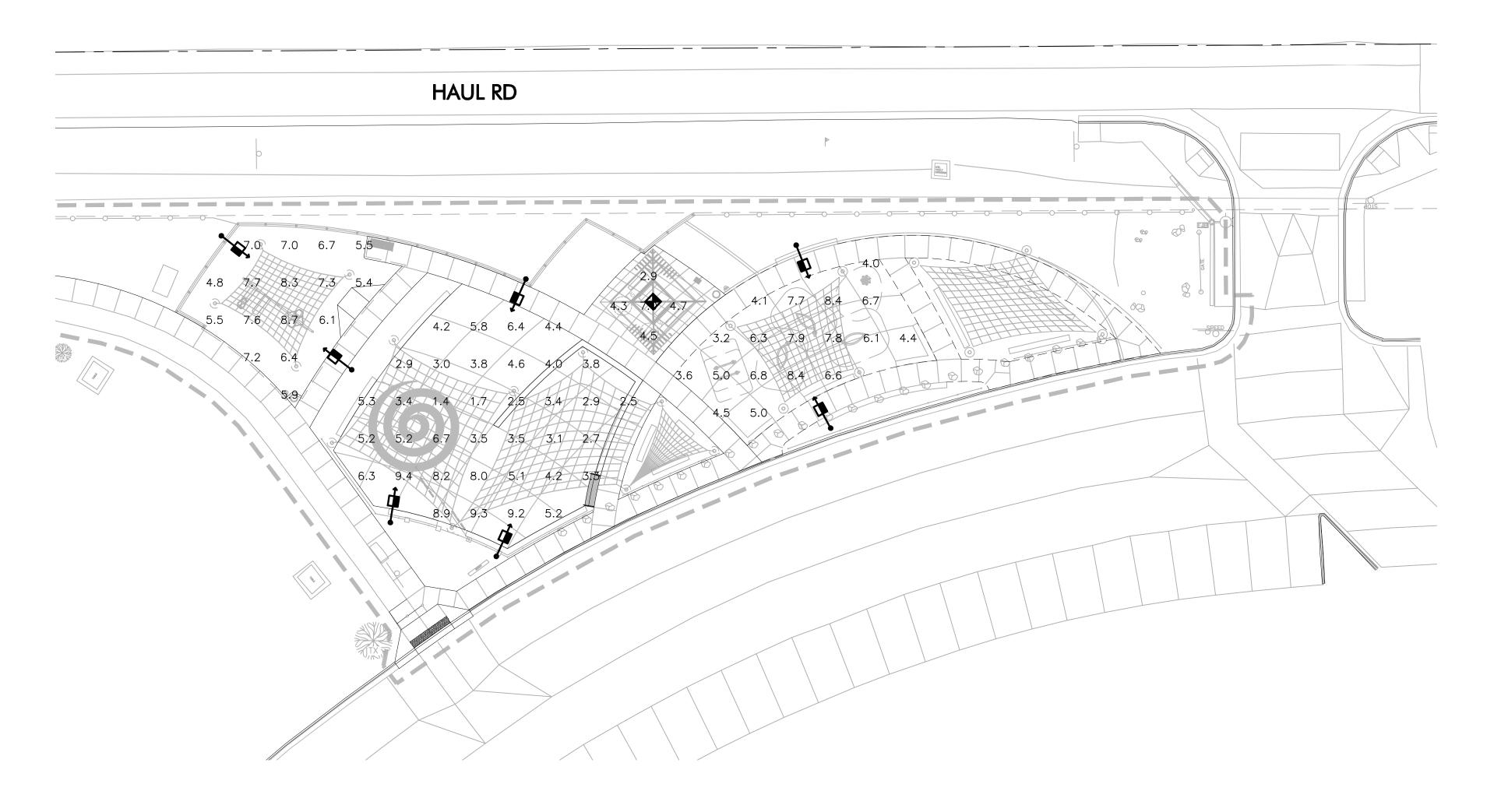
2024/12/10



Call at least two full working days Defore 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



# PHOTOMETRIC LEGEND

- RAMADA LIGHT candela file 'SWP1212 25W 35K CLP.ies' 1 lamp(s) per luminaire, photometry is absolute Light Loss Factor = 0.700, watts per luminaire = 29 mounting height= 10 ft number locations= 2, number luminaires= 2 kw all locations= 0.1
- SPLASH PAD LIGHT candela file 'GALN-SA3B-730-U-T4W\_15481 lumens.ies' 48 lamp(s) per luminaire, photometry is absolute
  Light Loss Factor = 0.910, watts per luminaire = 121
  mounting height= 15 ft
  number locations= 12, number luminaires= 12
  kw all locations= 1.5

# **PHOTOMETRIC RESULTS**

PLAYGROUND 32 points at z=0, sp 10ft by 10ft HORIZONTAL FOOTCANDLES 6.7 8.7 4.8 1.39 1.81 0.16 Average Maximum Minimum Avg:Min Max:Min Coef Var UnifGrad

10 points HORIZONTAL FOOTCANDLES 4.2 7.0 2.6 1.60 2.69 0.34 Average Maximum Minimum Avg:Min Max:Min

RAMADA

Coef Var

UnifGrad

SPLASH PAD — PHASE 1 72 points at z=0, sp 10ft by 10ft HORIZONTAL FOOTCANDLES Average 9.4 1.3 Maximum Minimum 3.66 7.23 0.47 5.15 Avg:Min Max:Min Coef Var

SPLASH PAD - PHASE 2 18 points at z=0, sp 10ft by 10ft HORIZONTAL FOOTCANDLES Average Maximum

5.9 8.4 3.2 1.85 2.62 0.28 1.97 Minimum Avg:Min Max:Min Coef Var UnifGrad



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SPL 7 HAU FULL TOMETI AGE 47

DATE DESCRIPTION

PHOT

