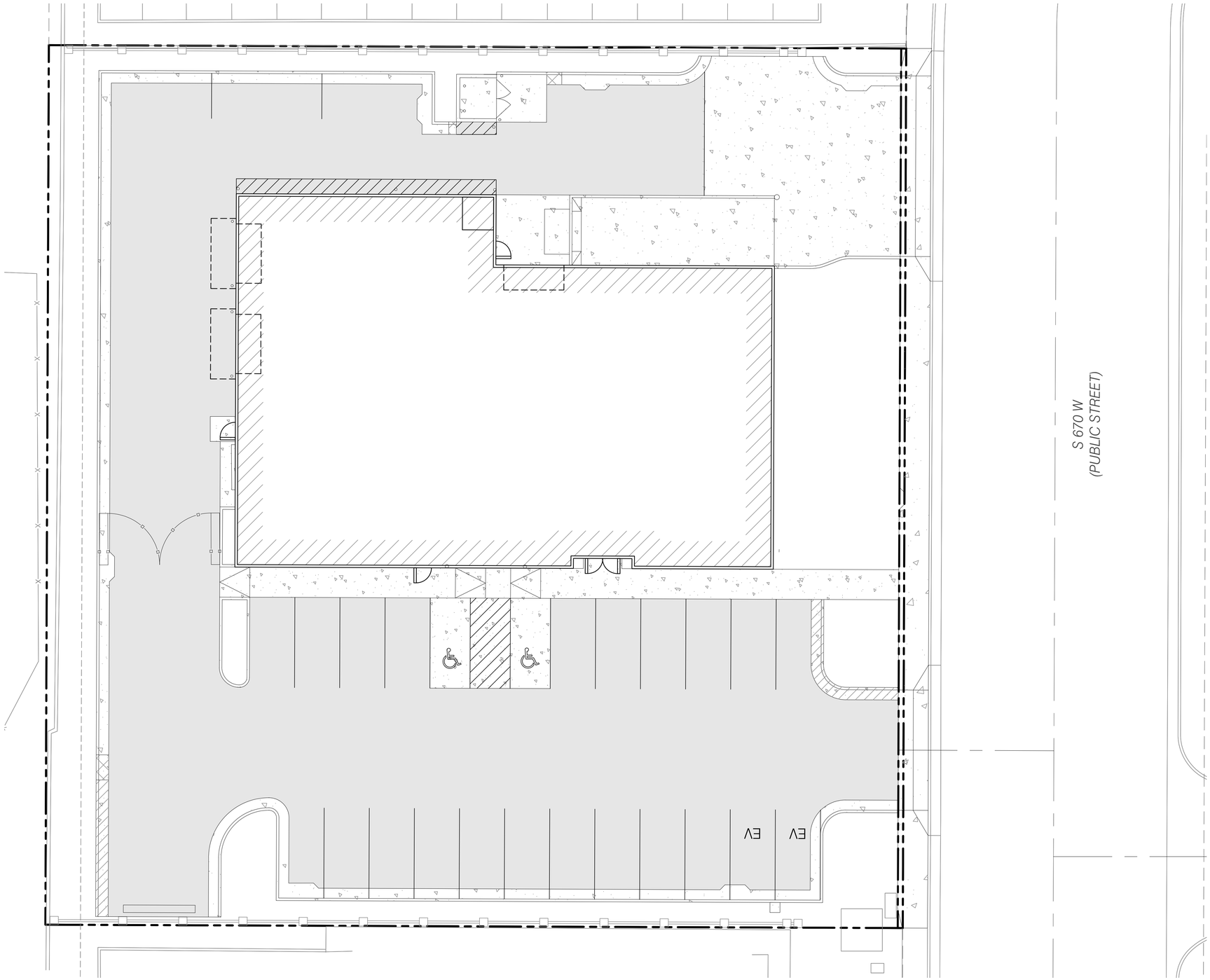
AC HQ

LOCATED IN THE SOUTHWEST QUARTER OF SECTION 1, TOWNSHIP
3 SOUTH, RANGE 1 WEST, SALT LAKE BASE AND MERIDIAN
SANDY CITY, SALT LAKE COUNTY,
9352 SOUTH 670 WEST, SANDY, UTAH

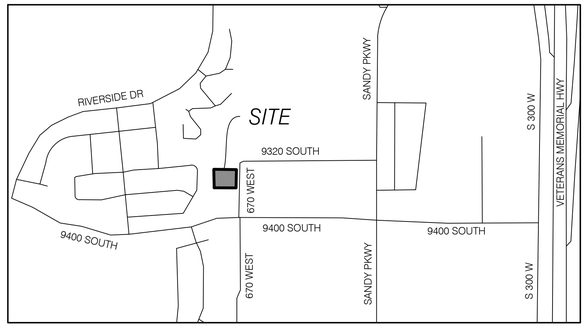


NORTH

GRAPHIC SCALE

10 0 5 10 20

(IN FEET)
1 inch = 10ft.



VICINITY MAP
N.T.S

OWNER/DEVELOPER:
ARCHITECTURAL COMPONENTS INC.
JOSH NAYLOR
2774 WEST 15250 SOUTH BLUFFDALE, UT 84065
801-561-0846
jnaylorac@gmail.com

DRAWING INDEX

COVER	COVER SHEET
CGN.01	GENERAL NOTES, LEGEND & ABBREVIATION
CGN.02	SANDY GENERAL NOTES
CDP.01	DEMO PLAN
CSP.01	SITE PLAN
CUP.01	UTILITY PLAN
CGD.01	GRADING & DRAINAGE PLAN
CEP.01	EROSION CONTROL PLAN
CEP.02	EROSION CONTROL DETAILS
CDT.01	DETAILS SHEET
CDT.02	DETAILS SHEET
CDT.03	DETAILS SHEET
CDT.04	DETAILS SHEET

BENCHMARK CIVIL

PROFESSIONAL ENGINEER
11/26/24
No. 12655175
J. HYRUM OSGUTHORPE
STATE OF UTAH

BENCHMARK ENGINEERING & LAND SURVEYING
9138 SOUTH STATE STREET SUITE # 100
SANDY, UTAH 84070 (801) 542-7192
www.benchmarkcivil.com

AC HQ
9352 SOUTH 670 WEST
SANDY, UTAH

DRAFT: FAC	DESIGN: TBM	CHECK: AGA
DATE: 08/08/2023	DATE: 04/17/2024	DATE: 04/17/2024

PROJECT NO. 2212304

No.	DATE	DESCRIPTION
9	04/23/2025	REVISED PER CITY COMMENTS
10	05/02/2025	REVISED PER ARCHITECT COMMENTS
11	06/25/2025	REVISED PER CITY COMMENTS
12	07/29/2025	REVISED PER CITY COMMENTS
13	09/26/2025	REVISED PER CITY COMMENTS
14	11/26/2025	REVISED PER CITY COMMENTS

COVER

BENCHMARK ENGINEERING CONTACT: ALLISON G. ALBERT, PE

LINETYPES:

NEW	EXISTING	
		SECTION LINE
		PROPERTY LINE
		ADJACENT PL or LOT LINES
		RIGHT-OF-WAY LINE
		CENTERLINE of ROAD
		EASEMENT LINE
		CURB & GUTTER
		EDGE OF ASPHALT
		FENCE / WALL, STONE
		FENCE, BLOCK
		FENCE, BRICK
		FENCE, CHAIN
		FENCE, IRON
		FENCE, VINYL
		FENCE, WIRE
		FENCE, WOOD
4475	4475	INDEX CONTOUR LINE
		INTERMEDIATE CONTOUR LINE
XX.XX TOC		SPOT ELEVATION
SS	SS	SANITARY SEWER LINE
SD	SD	STORM DRAIN LINE
W	W	WATER LINE
IRR	IRR	IRRIGATION LINE
OHP	OHP	OVERHEAD POWER LINE
UG	UG	UNDERGROUND POWER LINE
GAS	GAS	GAS LINE
T	T	TELEPHONE LINE
CATV	CATV	CABLE TELEVISION LINE
		DRAINAGE / DITCH CENTERLINE
		TREE LINE EDGE
FO	FO	FIBER OPTIC LINE
		PROPOSED ASPHALT
		PROPOSED CONCRETE

SYMBOLS:

NEW	EXISTING	
		SECTION CORNER (FOUND)
		SECTION CORNER (NOT FOUND)
		STREET MONUMENT (FOUND)
		STREET MONUMENT (NOT FOUND)
		BRASS CAP MONUMENT
		POWER POLE & OVERHEAD POWER
		LIGHT POLE
		GUY WIRE
		TELEPHONE MANHOLE
		SANITARY SEWER MANHOLE
		STORM DRAIN MANHOLE
		CATCH BASIN
		DIRECTION OF DRAINAGE
		WATER MANHOLE
		WATER VALVE
		WATER METER
		FIRE HYDRANT
		IRRIGATION VALVE
		GAS MANHOLE
		TREE

ABBREVIATIONS

BC	BAR & CAP	PUE	PUBLIC UTILITY EASEMENT
BOW	BOTTOM OF VISIBLE WALL	R	RADIUS OF CURVE
COR.	SECTION CORNER	RR	RAILROAD
CB	CATCH BASIN	ROW	RIGHT-OF-WAY
CF	CUBIC FEET	R/W	RIGHT-OF-WAY
D	DELTA ANGLE	SSMH	SEWER MANHOLE
EG	EXISTING GROUND	SD	STORM DRAIN
EOA	EDGE OF ASPHALT	SF	SQUARE FEET
EOC	EDGE OF CONCRETE	TBC	TOP BACK OF CURB
EX	EXISTING	TMH	TELEPHONE MANHOLE
FFE	FINISH FLOOR ELEVATION	TOA	TOP OF ASPHALT
FG	FINISHED GRADE	TOC	TOP OF CONCRETE
FH	FIRE HYDRANT	TOF	TOP OF FOOTING
FL	FLOW LINE	TOE	TOE OF SLOPE
GB	GRADE BREAK	TOG	TOP OF GRATE
GW	GUY WIRE	TOP	TOP OF SLOPE
HW	HEAD WALL	TOW	TOP OF WALL
I.E.	INVERT ELEVATION	TR	TELEPHONE RISER
LIP	LENGTH OF CURVE	UGP	UNDERGROUND POWER
L	LIP OF CURB	VPC	VERTICAL POINT OF CURVATURE
LF	LINEAR FEET	VPI	VERTICAL POINT OF INTERSECTION
LP	LOW POINT	VPT	VERTICAL POINT OF TANGENCY
M-M	MONUMENT TO MONUMENT	WM	WATER METER
MH	MANHOLE	WV	WATER VALVE
MON.	SURVEY MONUMENT		
OHP	OVERHEAD POWER		
PVC	POINT OF CURVATURE		
PVI	POINT OF INTERSECTION		
PP	POWER POLE		
PVT	POINT OF TANGENCY		

CONSTRUCTION NOTES

RESPONSIBLE DISTRICTS OR AGENCIES AND APPLICABLE STANDARDS
CITY OR COUNTY- SALT LAKE COUNTY
WATER UTILITY COMPANY- SANDY CITY PUBLIC UTILITIES (SCPU)
SEWER- SANDY SUBURBAN IMPROVEMENT DISTRICT (SSID)
STORM DRAIN/GROUNDWATER- SANDY CITY
ELECTRICAL- ROCKY MOUNTAIN POWER
TELEPHONE- CENTURY LINK
NATURAL GAS- QUESTAR GAS COMPANY

APPLICABLE STANDARDS: APWA 2017 STANDARDS

Blue Stakes of UTAH811 Bluestakes.org

NOTE:

IN THE EVENT THAT THE CONSTRUCTION NOTES CONFLICT WITH RESPONSIBLE DISTRICT OR AGENCY STANDARDS NOTES AND SPECIFICATIONS, THE DISTRICT OR AGENCY STANDARD NOTES AND SPECIFICATIONS GOVERN.

CAUTION NOTICE TO CONTRACTORS

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS ARE BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

THE CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO THE NORMAL WORKING HOURS; AND THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AN HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.

PUBLIC WORKS GENERAL CONSTRUCTION NOTES:

-THE CONTRACTOR SHALL OBTAIN A PERMIT TO WORK IN THE PUBLIC WAY (ROAD CUT PERMIT), FOR IMPROVEMENTS IN THE SANDY CITY RIGHT-OF-WAY (10200 SOUTH STREET), FROM THE PUBLIC WORKS DEPARTMENT. CONTACT MONICA PETERSEN (801-568-2960, MPETERSEN@SANDY.UTAH.GOV) FOR REQUIREMENTS. TRAFFIC PLAN, BONDING, AND INSURANCE WILL BE REQUIRED. [Sec. 10-1]

-NOTIFY SANDY CITY PUBLIC WORKS INSPECTION DEPARTMENT, 801-568-2999, 48 HOURS PRIOR TO BEGINNING CONSTRUCTION OF ANY ROADWAYS OR PUBLIC IMPROVEMENTS, INCLUDING SEWER FACILITIES. ALL INSPECTIONS MUST BE DONE PRIOR TO OR CONCURRENT WITH CONSTRUCTION. FAILURE TO MAKE THIS NOTIFICATION MAY RESULT IN THE UNCOVERING AND/OR REMOVAL OF ALL ITEMS INSTALLED WITHOUT NOTIFICATION, AT THE DISCRETION OF THE CITY ENGINEER. [Sec. 21-21-2].

-ALL PUBLIC IMPROVEMENTS, WHICH ARE TO BE OWNED AND MAINTAINED BY SANDY CITY, AND ALL PUBLICLY- AND PRIVATELY-OWNED AND MAINTAINED ROADS SHALL BE CONSTRUCTED ACCORDING TO THE SANDY CITY STANDARD SPECIFICATIONS AND DETAILS FOR MUNICIPAL CONSTRUCTION (LATEST EDITION). THE SPECIFICATIONS CAN BE FOUND IN .PDF FORMAT ON LINE AT WWW.SANDY.UTAH.GOV (SEARCH FOR "STANDARD SPECIFICATIONS"). [Sec. 21-2-25(d)]

-PROVIDE A PROCTOR TEST, FOR ROADBASE MATERIAL THAT IS TO BE PLACED IN THE PUBLIC RIGHT-OF WAY, TO THE SANDY CITY PUBLIC WORKS INSPECTOR, WHEN DELIVERED OR PLACED ON SITE.

-FOLLOW ALL RECOMMENDATIONS OF THE APPROVED GEOTECHNICAL REPORT. FOR IMPROVEMENTS THAT WILL BE OWNED AND MAINTAINED BY SANDY CITY, HOWEVER, SANDY CITY STANDARD SPECIFICATIONS AND DETAILS SHALL GOVERN UNLESS GEOTECHNICAL REPORT RECOMMENDATIONS ARE MORE STRINGENT.

-DUST, MUD, AND EROSION SHALL BE ADEQUATELY CONTROLLED, BY WHATEVER MEANS NECESSARY, AND THE ROADWAY SHALL BE KEPT FREE OF MUD AND DEBRIS, AT ALL TIMES. HOWEVER, THE USE OF MOTOR OILS AND OTHER PETROLEUM-BASED OR TOXIC LIQUIDS, FOR DUST SUPPRESSION, IS ABSOLUTELY PROHIBITED.

-ANY PROPOSED CHANGES TO THE APPROVED DESIGN SHALL BE REVIEWED AND APPROVED BY THE ENGINEER OR ARCHITECT OF RECORD AND THE CITY ENGINEER.

-BUILDER/OWNER SHALL REPLACE ANY EXISTING SIDEWALK OR CURB & GUTTER, ALONG THE FRONTAGE OF THIS PROJECT, THAT IS FOUND TO BE LIFTED, CHIPPED, CRACKED, SPALLED, OR NOT PROPERLY DRAINING, AS DIRECTED BY THE SANDY CITY INSPECTOR.

-PRIOR TO RELEASE OF THE IMPROVEMENT COMPLETION ASSURANCE (BOND), THE DEVELOPER SHALL SUBMIT A .PDF COPY OF THE CONTRACTOR'S SITE (NOT BUILDING) CONSTRUCTION DRAWING SET TO SANDY CITY PUBLIC WORKS DEPARTMENT. AN AS-BUILT FIELD SURVEY IS NOT REQUIRED. THE AS-BUILT DRAWING MAY BE SUBMITTED BY E-MAIL, AT DPOULSEN@SANDY.UTAH.GOV, OR ON A USB FLASH DRIVE.

GENERAL

1. ALL MATERIALS AND CONSTRUCTION IN THE PUBLIC RIGHT OF WAY SHALL BE IN ACCORDANCE WITH RESPONSIBLE DISTRICT OR AGENCY.

2. CONTRACTOR AND APPLICABLE SUBCONTRACTORS SHALL ATTEND ALL PRE-CONSTRUCTION CONFERENCES AND PERIODIC PROGRESS MEETINGS. PRIOR TO ANY WORK BEING PERFORMED, THE CONTRACTOR SHALL CONTACT RESPONSIBLE DISTRICT OR AGENCY FOR A PRE-CONSTRUCTION CONFERENCE. CONTRACTOR SHALL ALSO NOTIFY THE APPROPRIATE PROJECT CONTACTS (48) HOURS IN ADVANCE OF SAID MEETING.

3. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PUBLIC SAFETY AND OSHA STANDARDS.

4. THE CONTRACTOR SHALL FAMILIARIZE HIM/HER SELF WITH THE PLANS, THE GEOLOGY REPORTS AND THE SITE CONDITIONS PRIOR TO COMMENCING WORK. CONTRACTOR SHALL INSPECT THE SITE OF WORK PRIOR TO BIDDING TO SATISFY THEMSELVES BY PERSONAL EXAMINATION OR BY SUCH OTHER MEANS AS THEY MAY PREFER, OF THE LOCATION OF THE PROPOSED WORK, AND OF THE ACTUAL CONDITIONS OF AND AT THE SITE OF WORK.

CONDITIONS WHICH APPEAR TO THEM TO BE IN CONFLICT WITH THE LETTER OR SPIRIT OF THE PROJECT PLANS AND SPECIFICATIONS, THEY SHALL CONTACT THE ENGINEER FOR ADDITIONAL INFORMATION AND EXPLANATION BEFORE SUBMITTING THEIR BID.

SUBMISSION OF A BID BY THE CONTRACTOR SHALL CONSTITUTE ACKNOWLEDGMENT THAT, IF AWARDED THE CONTRACT, THEY HAVE RELIED AND ARE RELYING ON THEIR OWN EXAMINATION OF (1) THE SITE OF THE WORK, (2) ACCESS TO THE SITE, AND (3) ALL OTHER DATA AND MATTERS REQUISITE TO THE FULFILLMENT OF THE WORK AND ON THEIR OWN KNOWLEDGE OF EXISTING FACILITIES ON AND IN THE VICINITY OF THE SITE OF THE WORK TO BE CONSTRUCTED UNDER THIS CONTRACT.

THE INFORMATION PROVIDED BY THE OWNER OR THE ENGINEER IS NOT INTENDED TO BE A SUBSTITUTE FOR, OR A SUPPLEMENT TO, THE INDEPENDENT VERIFICATION BY THE CONTRACTOR TO THE EXTENT SUCH INDEPENDENT INVESTIGATION OF SITE CONDITIONS IS DEEMED NECESSARY OR DESIRABLE BY THE CONTRACTOR. CONTRACTOR SHALL ACKNOWLEDGE THAT THEY HAVE NOT RELIED SOLELY UPON OWNER OR ENGINEER FURNISHED INFORMATION REGARDING SITE CONDITIONS IN PREPARING AND SUBMITTING THEIR BID.

5. ALL WORK SHALL COMPLY WITH THE AMERICAN PUBLIC WORKS ASSOCIATION UTAH CHAPTER (APWA) MANUAL OF STANDARD SPECIFICATIONS 2017 EDITION AND THE MANUAL OF STANDARD PLANS 2017 EDITION. SAID STANDARD SPECIFICATIONS AND PLANS SHALL BE SUBSIDIARY TO MORE STRINGENT REQUIREMENTS BY APPLICABLE LOCAL JURISDICTION.

6. THE CONTRACTOR SHALL BE SKILLED AND REGULARLY ENGAGED IN THE GENERAL CLASS AND TYPE OF WORK CALLED FOR IN THE PROJECT PLANS AND SPECIFICATIONS. THEREFORE, THE OWNER IS RELYING UPON THE EXPERIENCE AND EXPERTISE OF THE CONTRACTOR. IT SHALL BE EXPECTED THAT THE PRICES PROVIDED WITHIN THE CONTRACT DOCUMENTS SHALL INCLUDE ALL LABOR AND MATERIALS NECESSARY AND PROPER FOR THE WORK CONTEMPLATED AND THAT THE WORK BE COMPLETED IN ACCORDANCE WITH THEIR TRUE INTENT AND PURPOSE.

THE CONTRACTOR SHALL BE COMPETENT, KNOWLEDGEABLE AND HAVE SPECIAL SKILLS ON THE NATURE, EXTENT AND INHERENT CONDITIONS OF THE WORK TO BE PERFORMED. CONTRACTOR SHALL ALSO ACKNOWLEDGE THAT THERE ARE CERTAIN REGULAR AND INHERENT CONDITIONS EXISTENT IN THE CONSTRUCTION OF THE PARTICULAR FACILITIES WHICH MAY CREATE, DURING THE CONSTRUCTION PROGRAM, UNUSUAL OR PECULIAR UNSAFE CONDITIONS HAZARDOUS TO PERSONS, PROPERTY AND THE ENVIRONMENT. CONTRACTOR SHALL BE AWARE OF SUCH PECULIAR RISKS AND HAVE THE SKILL AND EXPERIENCE TO FORESEE AND TO ADOPT PROTECTIVE MEASURES TO ADEQUATELY AND SAFELY PERFORM THE CONSTRUCTION WORK WITH RESPECT TO SUCH HAZARDS.

7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PERMITS AND LICENSES REQUIRED FOR THE CONSTRUCTION AND COMPLETION OF THE PROJECT, AND SHALL PERFORM ALL WORK IN ACCORDANCE WITH THE REQUIREMENTS AND CONDITIONS OF ALL PERMITS AND APPROVALS APPLICABLE TO THE PROJECT. THE CONTRACTOR SHALL ENSURE THAT THE NECESSARY RIGHT-OF-WAY, EASEMENTS, AND/OR PERMITS ARE SECURED PRIOR TO CONSTRUCTION. CONTRACTOR SHALL OBTAIN APPROPRIATE PERMITS FOR ANY WORK PERFORMED WITHIN RIGHT-OF-WAY OR EASEMENTS FROM THE CITY AND/OR UDOT. CONTRACTOR SHALL NOTIFY CITY, COUNTY, AND/OR STATE, 24 HOURS IN ADVANCE OF COMMUNICATING THE WORK, OR AS REQUIRED BY SAID PERMITS.

8. CONCRETE PLACEMENTS SHALL BE CONTINUOUS BETWEEN CONSTRUCTION JOINTS. CONTRACTION JOINTS SHALL BE PLACED FOR SLAB-ON-GRADE SUCH THAT THE MAXIMUM DISTANCE BETWEEN JOINTS IS 20 FEET IN EITHER DIRECTION FOR LIGHT DUTY TRAFFIC AND 12 FEET IN EITHER DIRECTION FOR HEAVY DUTY TRAFFIC.

9. IT IS INTENDED THAT THESE PLANS AND SPECIFICATIONS REQUIRE ALL LABOR AND MATERIALS NECESSARY AND PROPER FOR THE WORK CONTEMPLATED AND THAT THE WORK BE COMPLETED IN ACCORDANCE WITH THEIR TRUE INTENT AND PURPOSE. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY REGARDING ANY DISCREPANCIES OR AMBIGUITIES WHICH MAY EXIST IN THE PLANS OR SPECIFICATIONS. THE ENGINEERS INTERPRETATION THEREOF SHALL BE CONCLUSIVE. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY FIELD CHANGES MADE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE OWNER AND/OR ENGINEER.

10. ALL WORK OUTSIDE THE SCOPE OF THESE PLANS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE RESPONSIBLE DESIGN. THESE PLANS DO NOT REPLACE ANY STRUCTURAL, ARCHITECTURAL, OR MECHANICAL PLANS. SHOULD A DISCREPANCY ARISE BETWEEN THESE PLANS AND ANOTHER PLAN SET, THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTACT BOTH PARTIES TO DETERMINE WHAT SHOULD BE CONSTRUCTED.

11. ALL STAIRS AND RAILINGS ARE DESIGNED BY OTHERS AND MUST COMPLY WITH THE ADA STANDARDS FOR ACCESSIBLE DESIGN. SAID STANDARD SPECIFICATIONS AND PLANS SHALL BE SUBSIDIARY TO MORE STRINGENT REQUIREMENTS BY APPLICABLE LOCAL JURISDICTION.

12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATELY SCHEDULING INSPECTION AND TESTING OF ALL FACILITIES CONSTRUCTED UNDER THIS CONTRACT. ALL TESTING SHALL CONFORM TO THE REGULATORY AGENCY'S STANDARD SPECIFICATIONS. ALL TESTING AND INSPECTION SHALL BE PAID FOR BY THE OWNER. ALL RE-TESTING AND/OR REINSPECTION SHALL BE PAID FOR BY THE CONTRACTOR.

13. IF EXISTING IMPROVEMENTS NEED TO BE DISTURBED AND/OR REMOVED FOR THE PROPER PLACEMENT OF IMPROVEMENTS TO BE CONSTRUCTED BY THESE PLANS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING IMPROVEMENTS FROM DAMAGE. COST OF REPLACING OR REPAIRING EXISTING IMPROVEMENTS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEMS REQUIRING REMOVAL AND/OR REPLACEMENT OF EXISTING IMPROVEMENTS AND ANYTHING THAT HAS ALREADY BEEN CONSTRUCTED. THERE WILL BE NO EXTRA COST DUE THE CONTRACTOR FOR REPLACING OR REPAIRING EXISTING IMPROVEMENTS. WHENEVER EXISTING FACILITIES ARE REMOVED, DAMAGED, BROKEN, OR CUT IN THE INSTALLATION OF THE WORK COVERED BY THESE PLANS OR SPECIFICATIONS, SAID FACILITIES SHALL BE REPLACED AT THE CONTRACTORS EXPENSE, AFTER PROPER BACKFILLING AND/OR CONSTRUCTION, WITH MATERIALS EQUAL TO OR BETTER THAN THE MATERIALS USED IN THE ORIGINAL EXISTING FACILITIES. THE FINISHED PRODUCT SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER, THE ENGINEER, AND THE RESPECTIVE REGULATORY AGENCY.

14. THE CONTRACTOR SHALL MAINTAIN A NEATLY MARKED SET OF FULL-SIZE AS-BUILT RECORD DRAWINGS SHOWING THE FINAL LOCATION AND LAYOUT OF ALL MECHANICAL, ELECTRICAL AND INSTRUMENTATION EQUIPMENT; PIPING AND CONDUITS; STRUCTURES AND OTHER FACILITIES. THE AS-BUILTS OF THE ELECTRICAL SYSTEM SHALL INCLUDE THE STREET LIGHT LAYOUT PLAN SHOWING LOCATION OF LIGHTS, CONDUITS, CONDUCTORS, POINTS OF CONNECTIONS TO SERVICES, PULLBOXES, AND WIRE SIZES. AS-BUILT RECORD DRAWINGS SHALL REFLECT CHANGE ORDERS, ACCOMMODATIONS, AND ADJUSTMENTS TO ALL IMPROVEMENTS CONSTRUCTED. WHERE NECESSARY, SUPPLEMENTAL DRAWINGS SHALL BE PREPARED AND SUBMITTED BY THE CONTRACTOR.

15. PRIOR TO ACCEPTANCE OF THE PROJECT, THE CONTRACTOR SHALL DELIVER TO ENGINEER, ONE SET OF NEATLY MARKED AS-BUILT RECORD DRAWINGS SHOWING THE INFORMATION REQUIRED ABOVE. AS-BUILT RECORD DRAWINGS SHALL BE REVIEWED AND THE COMPLETE AS-BUILT RECORD DRAWING SET SHALL BE CURRENT WITH ALL CHANGES AND DEVIATION REDLINES AS A PRECONDITION TO THE FINAL PROGRESS PAYMENT APPROVAL AND/OR FINAL ACCEPTANCE.

UTILITIES

16. CONTRACTOR TO SPACE UTILITIES TO PROVIDE MINIMUM DISTANCES AS REQUIRED BY LOCAL, COUNTY, STATE, AND INDIVIDUAL UTILITY CODES.

17. ALL UTILITES INSTALLED IN ACCORDANCE WITH THE RESPONSIBLE DISTRICTS OR AGENCIES STANDARDS AND SPECIFICATIONS.

18. COORDINATE ALL SERVICE LATERAL AND BUILDING CONNECTIONS WITH CORRESPONDING ARCHITECTURAL, MECHANICAL OR ELECTRICAL DRAWING FOR LOCATION AND ELEVATION. NOTIFY ENGINEER IMMEDIATELY IF ANY DISCREPANCIES ARE ENCOUNTERED.

19. ALL STORM DRAIN MANHOLES AND CATCH BASINS ARE TO BE PRECAST CONCRETE FROM APPROVED LOCAL MANUFACTURER UNLESS OTHERWISE NOTED. AND COMPLY WITH CITY/COUNTY STANDARD

20. ALL STORM WATER CONVEYANCE PIPING TO BE RCP - CLASS 3 OR ADS HDPE PIPE OR EQUAL UNLESS OTHERWISE NOTED.

21. ALL ELECTRICAL CONDUITS/LINES TO BE PVC SCH 40 OR BETTER.

22. ALL GAS LINES TO BE HDPE WITH COPPER TRACER WIRE AND DETECTA TAPE. TERMINATE TRACER WIRE AT APPROVED LOCATIONS.

23. ALL GAS LINE TAPS, VALVES AND CAPS TO BE FUSED USING ELECTRO - FUSION TECHNOLOGY.

24. ALL PHONE AND TV CONDUITS TO BE PVC SCH 40 OR BETTER.

25. NO GROUNDWATER OR DEBRIS TO BE ALLOWED TO ENTER THE NEW PIPE DURING CONSTRUCTION. THE OPEN END OF ALL PIPES IS TO BE COVERED AND EFFECTIVELY SEALED AT THE END OF EACH DAYS WORK.

26. THE CONTRACTOR SHALL PROVIDE ALL SHORING, BRACING, SLOPING OR OTHER PROVISIONS NECESSARY TO PROTECT WORKMEN FOR ALL AREAS TO BE EXCAVATED TO A DEPTH OF 4' OR MORE AND SHALL COMPLY WITH INDUSTRIAL COMMISSION OF UTAH SAFETY ORDERS SECTION 68 - EXCAVATIONS, AND SECTION 69 - TRENCHES. ALONG WITH ANY LOCAL CODES OR ORDINANCES.

27. PRIOR TO OPENING AN EXCAVATION, EFFORT SHALL BE MADE TO DETERMINE WHETHER UNDERGROUND INSTALLATIONS; I.E. SEWER, WATER, FUEL, ELECTRIC LINES, ETC., WILL BE ENCOUNTERED AND IF SO, WHERE SUCH UNDERGROUND INSTALLATIONS ARE LOCATED. WHEN THE EXCAVATION APPROACHES THE APPROXIMATE LOCATION OF SUCH AN INSTALLATION, THE EXACT LOCATION SHALL BE DETERMINED BY CAREFUL PROBING OR HAND DIGGING. AND, WHEN IT IS UNCOVERED, ADEQUATE PROTECTION SHALL BE PROVIDED FOR THE EXISTING INSTALLATION. ALL KNOWN OWNERS OF UNDERGROUND FACILITIES IN THE AREA CONCERNED SHALL BE ADVISED OF PROPOSED WORK AT LEAST 48 HOURS PRIOR TO THE START OF ACTUAL EXCAVATION.

28. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO INSTALL PIPE OF ADEQUATE CLASSIFICATION WITH SUFFICIENT BEDDING TO MEET ALL REQUIREMENTS AND RECOMMENDATIONS FOR H-20 LOAD REQUIREMENTS.

29. ACTUAL CONNECTIONS TO EXISTING WATER LINES WILL NOT BE PERMITTED PRIOR TO THE COMPLETION OF STERILIZATION AND TESTING OF NEW WATER MAINS. ALL EXISTING WATER VALVES TO BE OPERATED UNDER THE DIRECTION OF THE CITY/COUNTY PUBLIC WORKS DEPARTMENT PERSONNEL ONLY.

30. ALL UNDERGROUND UTILITIES SHALL BE IN PLACE INSPECTED, TESTED, AND APPROVED BY AUTHORITIES HAVING JURISDICTION PRIOR TO INSTALLATION OF CURB, GUTTER, SIDEWALK, AND STREET PAVING.

31. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH UTILITY COMPANIES FOR THE INSTALLATION OF ALL NEW AND THE REMOVAL, RELOCATION, AND/OR BURIAL OF ALL EXISTING DRY UTILITIES INCLUDING BUT NOT LIMITED TO POWER, GAS, AND COMMUNICATION LINES. IF THERE IS A CONFLICT WITH AN EXISTING DRY UTILITY THE CONTRACTOR SHALL COORDINATE THE REMOVAL OR RELOCATION OF THE EXISTING UTILITY WITH THE RESPONSIBLE DISTRICT OR AGENCY. ALL WORK FOR DRY UTILITIES SHALL BE COORDINATED WITH AND COMPLETED TO THE STANDARDS AND REQUIREMENTS OF THE RESPONSIBLE DISTRICT OR AGENCY.

SEWER

32. ALL SEWER LINE TO BE FLUSHED, PRESSURE TESTED TO 5 PSI VIDEO INSPECTED AND OTHERWISE TESTED IN ACCORDANCE WITH DISTRICT STANDARDS PRIOR TO PLACING IN SERVICE.

33. ALL SEWER PIPES ARE TO BE SDR-35 PVC PIPE.

34. SEWER MANHOLES, LATERALS AND CLEANOUTS TO BE INSTALLED PER RESPONSIBLE DISTRICT OR AGENCY STANDARDS. THE UNIT COST OF THE SEWER LATERAL INCLUDES CONNECTION TO THE SEWER MAIN. THE CLEANOUT RISER FOR EACH SERVICE SHALL BE INSTALLED BY THE CONTRACTOR.

35. SEWER CLEANOUTS MUST BE INSTALLED AT A MINIMUM OF EVERY 50 L.F. FOR 4 INCH Ø LATERALS AND EVERY 100 L.F. FOR 6 INCH Ø LATERALS, OR PER THE RESPONSIBLE DISTRICT OR AGENCY STANDARDS, WHICHEVER IS MORE FREQUENT.

36. A SEWER CLEANOUT MUST BE INSTALLED 5 L.F. TO 10 L.F. FROM ANY PROPOSED STRUCTURE, OR PER THE RESPONSIBLE DISTRICT OR AGENCY STANDARDS.

37. ALL SEWER LATERAL BENDS AND ANGLES TO BE INSTALLED AS SWEEPING BENDS WITH SEWER CLEANOUTS.

38. DURING CONSTRUCTION OF THE SEWERLINE, WYES NEED TO BE INSTALLED FOR THE LATERALS. LATERALS ARE 4" AND NEED TO COME IN AT THE TOP OF THE PIPE WITH A WYE. (SEE RESPONSIBLE DISTRICT OR AGENCY STANDARDS)

39. IT IS THE INTENT ON THESE PLANS THAT ALL SEWER PIPES SHALL SLOPE TO AN EXISTING SEWER CONNECTION VIA GRAVITY FLOW. CONTRACTOR TO START AT THE LOW END OF GRAVITY UTILITY LINES AND VERIFY THAT ALL INVERT ELEVATIONS PROVE SLOPE TO EXISTING CONNECTION VIA GRAVITY. SLOPES MUST MEET OR EXCEED THE SEWER DISTRICTS MINIMUM STANDARDS. NOTIFY ENGINEER IF THERE ARE DISCREPANCIES THAT WOULD CAUSE THE SEWER UTILITY NOT TO DRAIN VIA GRAVITY ON THE SITE.

WATER

40. WATERLINES TO BE PVC C-900. WATER LINES SHALL BE A MINIMUM OF 10' HORIZONTALLY FROM SEWER MAINS. CROSSINGS SHALL MEET STATE HEALTH STANDARDS. (MECHANICAL JOINTS REQUIRED WHEN LESS THAN 18" VERTICAL OR TEN FEET HORIZONTAL SEPARATION FROM SEWERLINE

41. ALL WATERLINES SHALL BE 8" MINIMUM SIZE AND SERVICE LATERALS SHALL BE 1-1/2" MINIMUM UNLESS OTHERWISE NOTED.

42. WATER SERVICE LATERALS TO INCLUDE ALL BRASS SADDLE, CORP, STOP LATERAL, DOUBLE CHECK VALVE AND BACKFLOW PREVENTION DEVICE, AND SHUTOFF VALVE IN BOX NEAR BUILDING EDGE.

43. ALL WATERLINES SHALL BE 48" BELOW FINISH GROUND TO TOP OF PIPE. ALL VALVE BOXES AND MANHOLES SHALL BE RAISED OR LOWERED TO FINISH GRADE AND SHALL INCLUDE A CONCRETE COLLAR IN PAVED AREAS. ALL WATER LINES SHALL BE LOOPED AROUND GRAVITY LINES OR ROPED PER RESPONSIBLE DISTRICT OR AGENCY INSPECTOR.

44. CONTRACTOR TO NOTIFY RESPONSIBLE DISTRICT OR AGENCY FOR CHLORINE TEST PRIOR TO FLUSHING LINES, CHLORINE LEFT IN PIPE 24 HRS. MINIMUM WITH 25 PPM RESIDUAL. ALL TURNING OF MAINLINE VALVES, CHLORINATION, FLUSHING, PRESSURE TESTING, BACTERIA TESTING, ETC. TO BE DEPERATED WITH RESPONSIBLE DISTRICT OR AGENCY. ALL TESTS TO BE IN ACCORDANCE WITH RESPONSIBLE DISTRICT OR AGENCY.

45. BOTTOM FLANGE OF FIRE HYDRANTS TO BE SET TO APPROXIMATELY 4 INCHES ABOVE BACK OF CURB ELEVATION. HYDRANTS TO INCLUDE TEE, 6" LINE VALVE, AND HYDRANT COMPLETE TO MEET RESPONSIBLE DISTRICT OR AGENCY STANDARDS, UNLESS OTHERWISE NOTED ON PLANS.

EXISTING UTILITIES

46. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL UTILITIES SHOWN OR NOT SHOWN. THE INFORMATION SHOWN ON THE PLANS WITH REGARDS TO THE EXISTING UTILITIES AND/OR IMPROVEMENTS WAS DERIVED FROM FIELD INVESTIGATION AND/OR RECORD INFORMATION. NO REPRESENTATION IS MADE AS TO THE ACCURACY OR COMPLETENESS OF SAID UTILITY INFORMATION. THE CONTRACTOR SHALL TAKE DUE PRECAUTIONARY MEASURES TO PROTECT THE FACILITIES SHOWN AND ANY OTHER FACILITIES NOT OF RECORD OR NOT SHOWN ON THESE PLANS. PRIOR TO CONSTRUCTION OR FABRICATION, IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO VERIFY ALL EXISTING IMPROVEMENT AND TO EXPOSE ALL EXISTING UNDERGROUND UTILITIES RELATED TO THE PROJECT, INCLUDING BUT NOT LIMITED TO, SEWER, STORM DRAIN, WATER IRRIGATION, GAS, ELECTRICAL, ETC. AND SHALL NOTIFY THE ENGINEER IN WRITING FORTY-EIGHT (48) HOURS IN ADVANCE OF EXPOSING THE UTILITIES SO, THAT THE EXACT LOCATION, ELEVATION, MATERIAL, ETC. CAN BE VERIFIED AND DOCUMENTED. THE COST ASSOCIATED TO PERFORM THIS WORK SHALL BE INCLUDED IN EITHER THE LUMP SUMP CLEARING COST OR IN THE VARIOUS ITEMS OF WORK. IF LOCATION AND/OR ELEVATION DIFFERS FROM THAT SHOWN ON THE DESIGN PLANS, PROVISIONS TO ACCOMMODATE NEW LOCATION BE MADE PRIOR TO CONSTRUCTION.

47. PRIOR TO COMMENCING ANY WORK, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO HAVE EACH UTILITY COMPANY LOCATE, IN THE FIELD, THEIR MAIN AND SERVICE LINES. THE CONTRACTOR SHALL NOTIFY BLUE STAKES 48 HOURS IN ADVANCE OF PERFORMING ANY EXCAVATION WORK THE CONTRACTOR SHALL RECORD THE BLUE STAKES ORDER NUMBER AND FURNISH ORDER NUMBER TO OWNER AND ENGINEER PRIOR TO ANY EXCAVATION. IT WILL BE THE CONTRACTORS SOLE RESPONSIBILITY TO DIRECTLY CONTACT ANY OTHER UTILITY COMPANIES THAT ARE NOT MEMBERS OF BLUE STAKES. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO PROTECT ALL EXISTING UTILITIES SO THAT NO DAMAGE RESULTS TO THEM DURING THE PERFORMANCE OF THIS CONTRACT. ANY REPAIRS NECESSARY TO DAMAGED UTILITIES SHALL BE PAID FOR BY THE CONTRACTORS AND UTILITY COMPANIES INSTALLING NEW STRUCTURES, UTILITIES AND SERVICE TO THE PROJECT.

48. ALL MANHOLE RIMS, LAMPHOLES, VALVE BOX COVERS, MONUMENT BOXES AND CATCH BASIN GRATES ARE TO BE ADJUSTED TO FIT THE FINISHED GRADE AFTER PAVING, UNLESS OTHERWISE NOTED. COST FOR THIS WORK SHALL BE INCLUDED IN THE UNIT PRICES FOR SAID FACILITIES.

49. IT SHALL BE THE RESPONSIBIL

SANDY CITY PUBLIC UTILITIES GENERAL NOTES

GENERAL NOTES:

1. INSTALL SURVEY RIVETS, OFFSET FROM EACH LOT'S PROPERTY CORNERS, IN CURB OR SIDEWALK.
2. BUILDER/OWNER SHALL SECURE AN EXCAVATION PERMIT FROM SANDY CITY PUBLIC WORKS DEPARTMENT PRIOR TO DOING ANY WORK IN THE SANDY CITY RIGHT OF WAY. TRAFFIC PLAN, BONDING, AND INSURANCE WILL BE REQUIRED.
3. NOTIFY SANDY CITY PUBLIC WORKS INSPECTION DEPARTMENT, 801-568-2999, 48 HOURS PRIOR TO BEGINNING CONSTSRUCTION OF ANY ROADWAYS OR PUBLIC IMPROVEMENTS, INCLUDING SEWER FACILITIES. ALL INSPECTION MUST BE DONE PRIOR TO, OR CONCURRENT WITH, CONSTRUCTION. FAILURE TO MAKE THIS NOTIFICATION MAY RESULT IN THE UNCOVERING AND/OR REMOVAL OF ALL CONSTRUCTION DONE WITHOUT NOTIFICATION, AT THE DISCRETION OF THE CITY ENGINEER.
4. ALL PUBLIC IMPROVEMENTS IN THE STATE RIGHT OF WAY SHALL BE CONSTRUCTED AS REQUIRED BY UTAH DEPARTMENT OF TRANSPORTATION REGION TWO.
5. ANY PROPOSED CHANGES TO THE APPROVED DESIGN SHALL BE REVIEWED AND APPROVED BY THE ENGINEER OF RECORD AND THE CITY ENGINEER.
6. UTILITY BOXES ARE TO BE PLACED AT LEAST 5' BEHIND THE ROW AND NEAR SIDE PROPERTY LINES.
7. INSTALL SURVEY MONUMENTS ACCORDING TO THE RECORDED PLAT PER SALT LAKE COUNTY SPECIFICATIONS.

EROSION CONTROL NOTES:

1. THE USE OF MOTOR OILS AND OTHER PETROLEUM-BASED OR TOXIC LIQUIDS, FOR DUST SUPPRESSION, IS ABSOLUTELY PROHIBITED.
2. DUST, MUD, AND EROSION SHALL BE ADEQUATELY CONTROLLED BY WHATEVER MEANS NECESSARY, AND THE ROADWAY SHALL BE KEPT FREE OF MUD AND DEBRIS AT ALL TIMES.

STORM WATER NOTES:

1. NOTIFY SANDY CITY PUBLIC UTILITIES INSPECTOR (801-568-7280), AT LEAST ONE BUSINESS DAY (24 HOURS) PRIOR TO BEGINNING CONSTRUCTION.
2. A PRE-CONSTRUCTION MEETING IS REQUIRED ONCE FINAL APPROVAL HAS BEEN GRANTED. THE PRE-CONSTRUCTION MEETING SHALL BE SCHEDULED THROUGH SANDY CITY PUBLIC WORKS DEPARTMENT.
3. ALL CONSTRUCTION SHALL CONFORM TO THE LATEST REVISION OF THE SANDY CITY STANDARD SPECIFICATIONS AND DETAILS FOR MUNICIPAL CONSTRUCTION AND/OR OTHER REQUIREMENTS AS SET FORTH IN THE PUBLIC UTILITIES FINAL REVIEW AND APPROVAL LETTER ESTABLISHED FOR THE DEVELOPMENT. SPECIFICATIONS AND DETAILS CAN BE OBTAINED ON THE SANDY CITY WEBSITE.
4. SUBMITTALS ARE REQUIRED TO BE APPROVED BY THE CONSULTING ENGINEER FOR ALL BEDDING, BACKFILL, PIPE AND STRUCTURES (INLET BOXES, COMBO BOXES, AND JUNCTION BOXES). SUBMITTALS MUST HAVE SUFFICIENT INFORMATION TO SHOW THAT THE PROPOSED ITEMS CONFORM TO SANDY CITY STANDARDS AND SPECIFICATIONS.
5. CONSTRUCTION WORK SHALL BE CONDUCTED IN ACCORDANCE WITH THE UTAH POLLUTION DISCHARGE ELIMINATION SYSTEM (UPDES) REGULATIONS.
6. ALL MATERIALS AND WORK DONE IN UDOT RIGHT-OF-WAY SHALL CONFORM TO UDOT STANDARDS AND SPECIFICATIONS.
7. NON-SHRINK GROUT SHALL BE USED WHEREVER GROUT IS REQUIRED FOR THE STORM DRAIN FACILITIES.
8. CUT PIPES OFF FLUSH WITH THE INSIDE WALL OF THE BOX OR MANHOLE AND GROUT AT CONNECTION OF PIPE TO BOX TO A SMOOTH FINISH. ADDITIONALLY, ALL JAGGED OR SHARP EDGES AT PIPE CONNECTIONS ARE TO BE REMOVED AND GROUTED SMOOTH.
9. GROUT BETWEEN GRADE RINGS. FOR EACH INLET BOX THAT IS LOCATED NEXT TO A CURB, THE CURB AND GUTTER CONTRACTOR IS RESPONSIBLE TO REMOVE ALL PROTRUDING, JAGGED OR SHARP CONCRETE EDGES AND TO GROUT BETWEEN BOTTOM OF INLET LID FRAME AND TOP OF CONCRETE BOX. GROUT TO CREATE A SMOOTH, BEVELED TRANSITION AT ALL EDGES IN CLEAN OUT AND INLET BOXES. GROUT AROUND ALL EDGES OF THE RESTRICTIVE ORIFICE PLATE.
10. REMOVE SNAP TIES, NAILS, REBAR AND OTHER PROTRUSIONS FROM THE BOX OR PIPE INSIDE SURFACE, AS WELL AS ALL FORM WORK, PLASTIC AND CARDBOARD.
11. SILT AND DEBRIS ARE TO BE CLEANED OUT OF ALL INLET BOXES, COMBO BOXES, JUNCTION BOXES AND PIPE. THE BOXES AND PIPES ARE TO BE MAINTAINED IN A CLEAN CONDITION UNTIL AFTER THE FINAL BOND RELEASE INSPECTION.
12. CLEAN OFF ALL MANHOLE LIDS AND INLET GRATES OF ASPHALT, CONCRETE, TAR OR OTHER ADHESIVES TO ALLOW ACCESS.
13. WHERE A SUMP IS REQUIRED, THE SANDY CITY PUBLIC UTILITIES INSPECTOR SHALL BE CONTACTED PRIOR TO CONSTRUCTION TO PROVIDE AN OPPORTUNITY TO CHECK THE VOLUME OF GRAVEL AND GRAVEL GRADATION.
14. SIGNS MUST BE POSTED NEAR EACH INLET BOX LOCATED IN A DRINKING WATER RECHARGE ZONE WITH THE FOLLOWING WORDS "WARNING THIS IS A DRINKING WATER AQUIFER RECHARGE AREA. DISPOSAL OF ANY WASTE MATERIALS IN THE STORM WATER IS STRICTLY PROHIBITED."
15. ALL INLET, COMBO, AND JUNCTION BOXES SHALL BE PLACED ON 12-INCH (MIN.) COMPACTED STABILIZATION MATERIAL.
16. A VIDEO OF ALL PIPES MUST BE COMPLETED BEFORE THE 80% OR 90% BOND RELEASE AND AGAIN BEFORE FINAL BOND RELEASE.
17. A REPRESENTATIVE OF THE MANUFACTURER OR SUPPLIER SHALL BE ON-SITE DURING INSTALLATION OF OIL/WATER SEPARATORS AND UNDERGROUND DETENTION/RETENTION SYSTEMS. THE MANUFACTURER OR SUPPLER SHALL PROVIDE A LETTER STATING THAT THE SYSTEM WAS INSTALLED PER MANUFACTURER'S SPECIFICATIONS. IF IT IS UNKNOWN WHETHER A REPRESENTATIVE IS REQUIRED TO BE PRESENT DURING INSTALLATION, CONTACT THE SANDY CITY PUBLIC UTILITIES INSPECTOR.
18. A LETTER FROM THE CONSULTANT ENGINEER IS REQUIRED TO BE SUBMITTED TO SANDY CITY PUBLIC UTILITIES DEPARTMENT, PRIOR TO 90% BOND RELEASE, VERIFYING THAT THE VOLUME FOR RETENTION/DETENTION PONDS WAS INSTALLED PER THE APPROVED PLANS.

WATER NOTES:

1. NOTIFY SANDY CITY PUBLIC UTILITIES INSPECTOR (801-568-7280), AT LEAST ONE BUSINESS DAY (24 HOURS) PRIOR TO BEGINNING CONSTRUCTION.
2. A PRE-CONSTRUCTION MEETING IS REQUIRED ONCE FINAL APPROVAL HAS BEEN GRANTED. THE PRE-CONSTRUCTION MEETING SHALL BE SCHEDULED THROUGH SANDY CITY PUBLIC WORKS DEPARTMENT.
3. ALL CONSTRUCTION SHALL CONFORM TO THE LATEST REVISION OF THE SANDY CITY STANDARD SPECIFICATIONS AND DETAILS FOR MUNICIPAL CONSTRUCTION AND/OR OTHER REQUIREMENTS AS SET FORTH IN THE PUBLIC UTILITIES FINAL REVIEW AND APPROVAL LETTER ESTABLISHED FOR THE DEVELOPMENT. SPECIFICATIONS AND DETAILS CAN BE OBTAINED ON THE SANDY CITY WEBSITE.
4. SUBMITTALS ARE REQUIRED TO BE APPROVED BY THE CONSULTING ENGINEER FOR ALL BEDDING, BACKFILL, PIPE, METERS, BOXES, VAULTS, VALVES, FIRE HYDRANTS, BLOWOFFS, VAULTS, ETC. RELATING TO THE WATER SYSTEM. SUBMITTALS MUST HAVE SUFFICIENT INFORMATION TO SHOW THAT THE PROPOSED ITEMS CONFORM TO SANDY CITY STANDARDS AND SPECIFICATIONS.
5. CONSTRUCTION WORK SHALL BE CONDUCTED IN ACCORDANCE WITH THE UTAH POLLUTION DISCHARGE ELIMINATION SYSTEM (UPDES) REGULATIONS.
6. LOCATE WATER LINE 4-FEET OFF LIP OF GUTTER ON THE NORTH AND/OR EAST SIDE OF ROADWAY.
7. A MINIMUM OF 48-INCHES AND A MAXIMUM OF 60-INCHES OF COVER FROM THE TOP OF THE PIPE TO THE FINISH GRADE IS REQUIRED.
8. FOR DUCTILE IRON PIPE, USE THICKNESS CLASS 52 OR BETTER
9. FOR POLYVINYL CHLORIDE (PVC) PIPE, USE CLASS DR-14 OR BETTER. 10 GAUGE WIRE SHALL BE PLACED ON TOP OF THE PIPE (PER SANDY CITY SPECIFICATIONS) FOR FUTURE RELOCATION. NO DEFLECTION IN PIPE JOINTS WILL BE ALLOWED ON PVC PIPES
10. ALL MECHANICAL JOINTS MUST BE RESTRAINED USING MEGA LUGS OR APPROVED EQUAL.
11. USE 6-INCH COMPRESSION TYPE HYDRANT BY MUELLER CENTURION OR CLOW MEDALLION. EXISTING HYDRANTS REQUIRED FOR FIRE PROTECTION THAT DO NOT MEET CURRENT STANDARDS SHALL BE UPGRADED TO MEET CURRENT SANDY CITY STANDARDS AND SPECIFICATIONS
12. WHEN THE DISTANCE FROM THE WATER MAIN TO THE FIRE HYDRANT IS GREATER THAN 6-FEET AN ADDITIONAL AUXILLARY VALVE SHALL BE FLANGED TO THE FIRE HYDRANT.
13. ALL DEAD ENDS SHALL BE PLUGGED WITH A 2-INCH WASHOUT OR END WITH A FIRE HYDRANT.
14. ALL DUCTILE IRON WATER LINES, FITTING, AND VALVES SHALL BE POLY-BAGGED IN ACCORDANCE WITH SANDY CITY STANDARDS AND SPECIFICATIONS.
15. ALL WATER LINES SHALL BE BEDDED WITH SAND (6-INCHES MINIMUM BELOW AND 12-INCHES MINIMUM ON EACH SIDE AND ON TOP OF THE PIPE).
16. WATER METERS SHALL NOT BE INSTALLED IN DRIVEWAY

SEWER CONSTRUCTION NOTES:

1. SEWER IMPROVEMENTS SHALL BE CONSTRUCTED IN STRICT ACCORDANCE WITH SANDY SUBURBAN IMPROVEMENT DISTRICT (SSID) DESIGN STANDARDS AND CONSTRUCTION SPECIFICATIONS. COPIES OF THE DISTRICT STANDARDS AND SPECIFICATIONS ARE AVAILABLE AT THE DISTRICT OFFICE, 8855 S. 700 W. SANDY, UTAH 84070.
2. VIDEO INSPECTION, AIR TESTS, VACUUM TESTS OF MANHOLES AND DEFLECTION TESTS SHALL BE PERFORMED ON ALL INSTALLED SEWER IMPROVEMENTS PRIOR TO FINAL ACCCEPTANCE. ADDITIONAL TESTS MAY BE REQUIRED BY THE DISTRICT ENGINEER OR INSPECTOR. DEFECTS DESIGNATED BY THE DISTRICT ENGINEER OR INSPECTOR SHALL BE REPAIRED AT NO COST TO THE DISTRICT PRIOR TO ACCEPTANCE OF THE SEWER IMPROVEMENTS.

No.	DATE	DESCRIPTION
9	04/23/2024	REVISED PER CITY COMMENTS
10	05/02/2024	REVISED PER ARCHITECT COMMENTS
11	06/05/2024	REVISED PER CITY COMMENTS
12	07/29/2024	REVISED PER CITY COMMENTS
13	09/06/2024	REVISED PER CITY COMMENTS
14	11/26/2024	REVISED PER CITY COMMENTS

DRAWN BY FAC
CHECKED BY AGA
FIELD CREW BJB
DATE 08/03/2023
DWG. FILE 2212304_SITE

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SCALE MEASURES 1-INCH ON FULL SIZE SHEETS
ADJUST ACCORDINGLY FOR REDUCED SIZE SHEETS

PROFESSIONAL ENGINEER
11/26/24
No. 12655175
J. HYRUM OSGUTHORPE
STATE OF UTAH

BENCHMARK CIVIL
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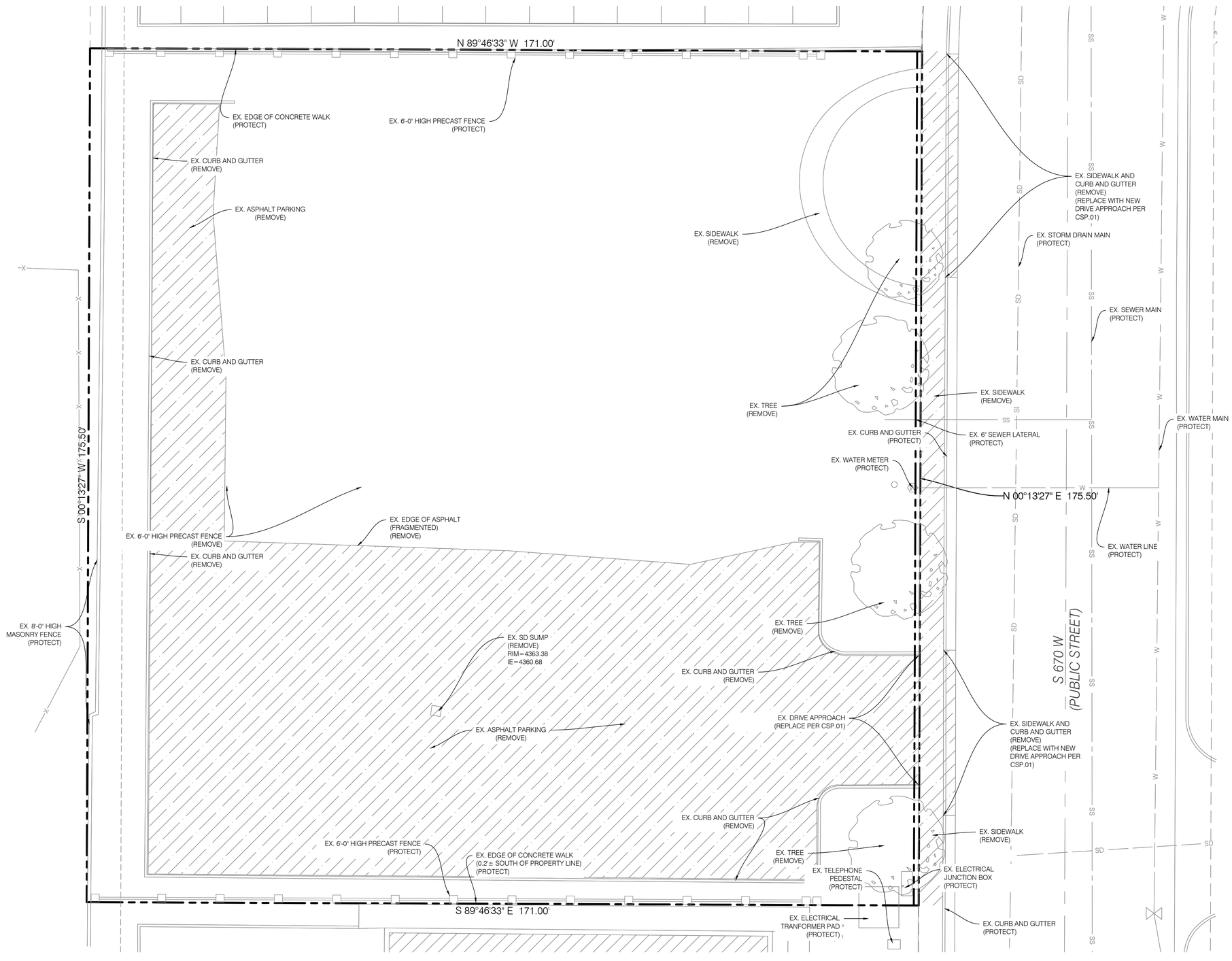
SANDY, UTAH

PROJECT NO. 2212304

SANDY GENERAL NOTES

CGN.02
3 OF 13



NORTH

GRAPHIC SCALE

10 0 5 10 20

(IN FEET)
1 inch = 10ft.

No.	DATE	DESCRIPTION
9	04/23/2025	REVISED PER CITY COMMENTS
10	05/02/2025	REVISED PER ARCHITECT COMMENTS
11	06/25/2025	REVISED PER CITY COMMENTS
12	07/28/2025	REVISED PER CITY COMMENTS
13	09/26/2025	REVISED PER CITY COMMENTS
14	11/26/2025	REVISED PER CITY COMMENTS

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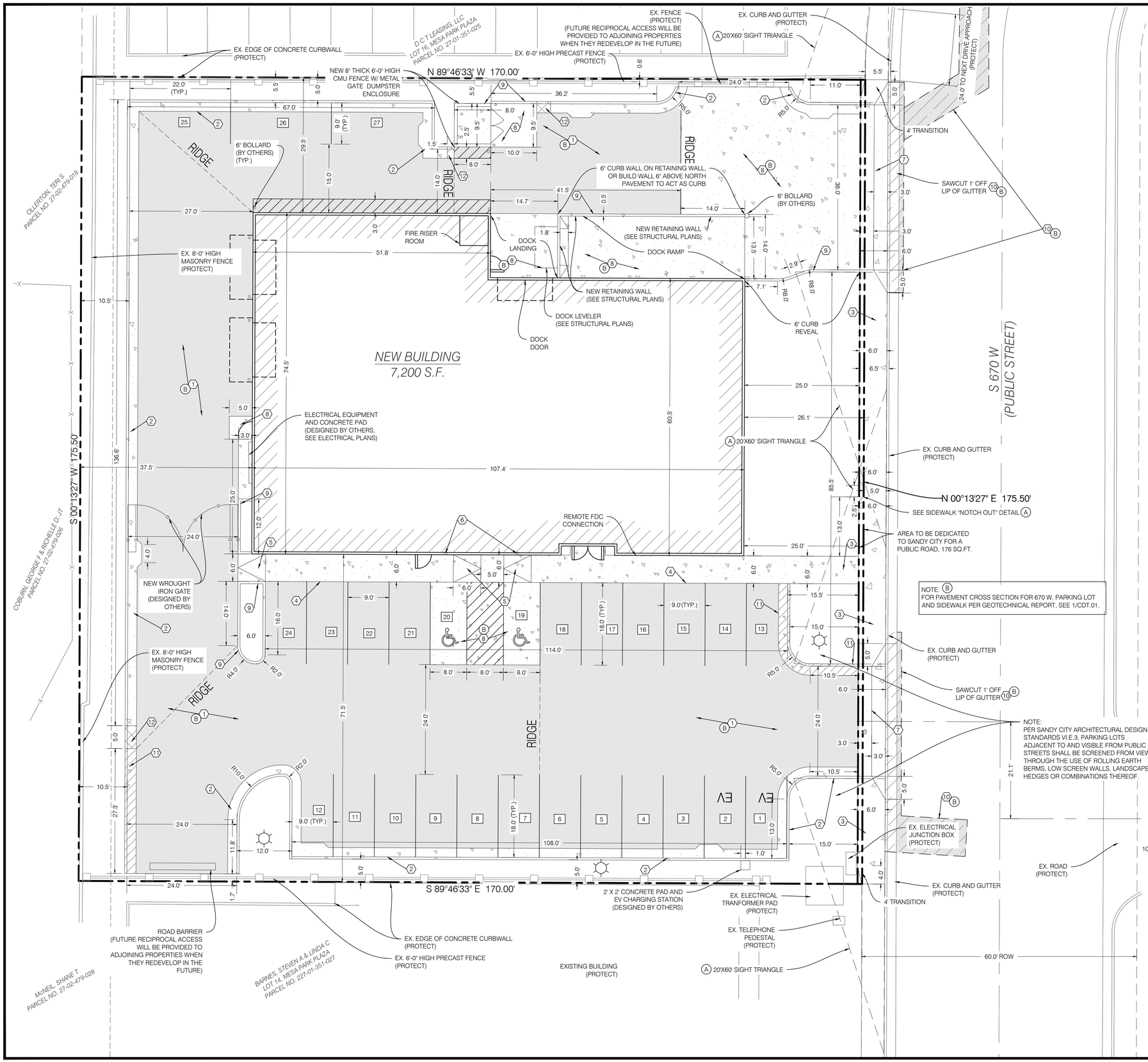
DEMO PLAN

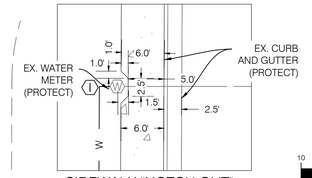
CDP.01
4 OF 13

Blue Stakes of UTAH811
Bluestakes.org



NOTE: (B)
FOR PAVEMENT CROSS SECTION FOR 670 W, PARKING LOT AND SIDEWALK PER GEOTECHNICAL REPORT, SEE 1/CDT.01.

NOTE:
PER SANDY CITY ARCHITECTURAL DESIGN STANDARDS VI.E.3, PARKING LOTS ADJACENT TO AND VISIBLE FROM PUBLIC STREETS SHALL BE SCREENED FROM VIEW THROUGH THE USE OF ROLLING EARTH BERMS, LOW SCREEN WALLS, LANDSCAPE HEDGES OR COMBINATIONS THEREOF.



SIDEWALK "NOTCH OUT" (A)
SCALE: 1"= 10'

NORTH

GRAPHIC SCALE
10 0 5 10 20
(IN FEET)
1 inch = 10ft.

CONSTRUCTION KEY NOTE REFERENCE		
NO.	DESCRIPITON	DETAIL
1	ASPHALT PAVEMENT WITH GRANULAR BASE (B)	1/CDT.01
2	CONCRETE CURB AND GUTTER PER APWA #205 TYPE 'A'	
3	SIDEWALK PER SANDY STDS "SW-03"	2/CDT.02
4	SIDEWALK THICKENED EDGE	4/CDT.02
5	ADA RAMP	1/CDT.02
6	VAN ADA SIGN	1/CDT.02
7	DIP DRIVEWAY APPROACH PER SANDY STDS "DA-05"	5/CDT.02
8	CONCRETE PAVEMENT WITH GRANULAR BASE (B)	1/CDT.01
9	6" CURB WALL PER APWA #209 TYPE 'F'	
10	SAWCUT AND REPAIR PER SANDY CITY STDS. "RC-02" (B)	4/CDT.04
11	RELEASE CURB AND GUTTER	2/CDT.01
12	TRANSITION CURB AND GUTTER	

AREA TABLE*		
PARTICULARS	S.F.	%
BUILDING	7,200	24.1
HARDSCAPE	17,064	57.2
LANDSCAPE	5,572	18.7
TOTAL	29,836	100

* AREA TOTAL EXCLUDES 1' OF FRONTAGE TO BE DEDICATED TO SANDY CITY

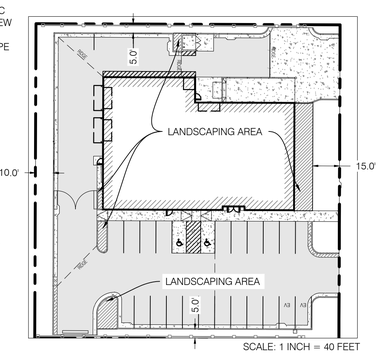
PARKING COUNT		
PARTICULARS	PROVIDED	
	STANDARD	ADA
PARKING STALLS	25	2
TOTAL	27	
KEY	X	

NOTE:
SLOPE ACROSS THE ACCESSIBLE PARKING STALLS & ACCESS ISLE SHALL NOT EXCEED A 1:48 (2.00%) SLOPE, THE MAX GRADE DIFFERENCE BETWEEN THE ASPHALT SURFACE, ACCESSIBLE RAMP, AND SIDEWALK SHALL NOT EXCEED 1/4 INCH VERTICAL OR 1/2 INCH WHEN BEVELED. THE ACCESSIBLE MEANS OF EGRESS INCLUDING THE DRIVEWAY PORTION SHALL NOT EXCEED A SLOPE OF 1:20 (5.0%) & A CROSS SLOPE OF 1:48 (2.0%). ALL EXTERIOR DOOR WAY ACCESS REQUIRE AN EXTERIOR LANDING 60 INCHES IN LENGTH WITH A SLOPE NOT EXCEEDING A 1:48 (2.0%) SLOPE

NOTE:
SAWCUT WIDTH, LOCATIONS AND TIE-IN ELEVATIONS TO EXISTING GRADE ARE APPROXIMATE. CONTRACTOR TO FIELD VERIFY LOCATION, EXTENT OF SAWCUTTING, AND TIE-IN SLOPES TO EXISTING GRADE PRIOR TO CONSTRUCTION. IT IS THE INTENT ON THESE PLANS THAT ALL PAVEMENT SHALL TIE INTO EXISTING GRADE PER SLOPES LISTED ON CGN.01 NOTE 70. SEE NOTES 66, 70, 82, & 83 ON CGN.01 FOR FURTHER DETAIL.

NOTE:
ALL WORK WITHIN PUBLIC ROADS TO BE DONE IN STRICT ACCORDANCE WITH SANDY CITY STANDARDS AND SPECIFICATIONS

NOTE: (A)
20'x60' (CLEAR-VIEW SIGHT TRIANGLE, NO OBSTACLES (INCLUDING VEGETATION) OVER THREE FEET HIGH, AS MEASURED FROM TOP BACK OF CURB, ARE ALLOWED WITHIN THE SIGHT TRIANGLE.



SCALE: 1 INCH = 40 FEET

INTERIOR LANDSCAPING AREA		
HARSCAPE AREA (S.F)	LANDSCAPING AREA (S.F)	LANDSCAPING AREA (%)
17,064	942	5.7

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14	11/26/2023	REVISED PER CITY COMMENTS
		SCALE MEASURES 1-INCH ON FULL SIZE SHEETS ADJUST ACCORDINGLY FOR REDUCED SIZE SHEETS

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FIELD CREW BJB
DATE 08/03/2023
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PROFESSIONAL ENGINEER
11/26/23
No. 12655175
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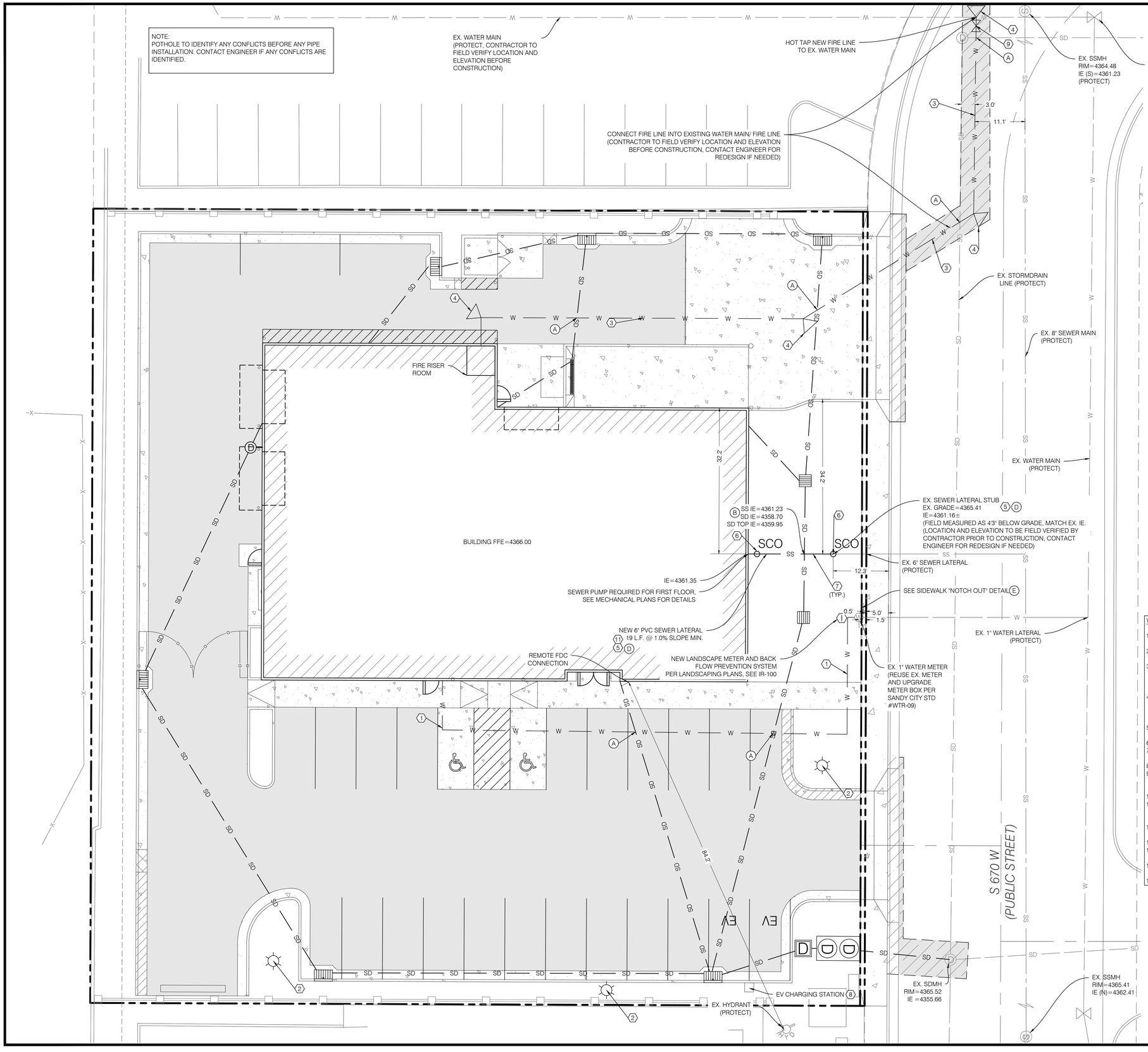
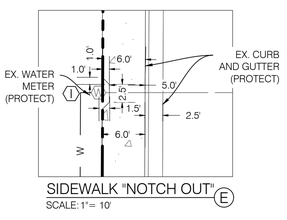
PROJECT NO. 2212304

SITE PLAN

CSP.01
5 OF 13

Blue Stakes of UTAH811
Bluestakes.org





SIDEWALK "NOTCH OUT" (E)
SCALE: 1"= 10'

NORTH

GRAPHIC SCALE

10 0 5 10 20

(IN FEET)
1 inch = 10ft.

CONSTRUCTION KEY NOTE REFERENCE		
NO.	DESCRIPITON	DETAIL
1	1" TYPE K COPPER WATER SERVICE LINE PER SANDY CITY STD. #WTR-09	2/CDT.04
2	NEW LIGHT POLE (DESIGN BY OTHERS)	
3	6" PVC C900 DR 14 FIRELINE PER SANDY CITY STD. #WTR-01	2/CDT.03
4	THRUST BLOCK PER SANDY CITY STD. #WTR-08	1/CDT.04
5	6" PVC SDR-35 SEWER LATERAL PER SSID STDS.	3/CDT.01
6	SEWER CLEAN OUT PER SSID STDS.	3/CDT.01
7	PIPE INSTALLATION PER SSID STDS.	5/CDT.01
8	CP6000 COMMERCIAL EV CHARGING STATION (DESIGNED BY OTHERS)	
9	GATE VALVE PER SANDY CITY #WTR-03	2/CDT.03

NOTE A: (A)
12" OF VERTICAL SEPARATION REQUIRED BETWEEN STORM AND WATER LINES. LOOP WATER MAIN IF IN CONFLICT.

NOTE B: (B)
12" OF VERTICAL SEPARATION REQUIRED BETWEEN SEWER AND STORM. CONTACT ENGINEER FOR REDESIGN IF NECESSARY

NOTE C: (C)
18" OF VERTICAL SEPARATION REQUIRED BETWEEN SEWER AND WATER LINES. CONTACT ENGINEER FOR REDESIGN IF NECESSARY

SHALLOW SEWER DEPTH NOTE: (D)
PER GEOTECHNICAL REPORT (#1240196 AGCE) THE FROST DEPTH IS 30".
UTILITIES ARE TO MAINTAIN FROST COVER WHEREVER POSSIBLE. FOR ANY SECTIONS OF LATERAL PIPE INSTALLED ABOVE THE FROST COVER, RIGID INSULATION MUST BE PROVIDED ABOVE THAT SECTION.

NOTE:
UTILITY BOXES ARE TO BE PLACED AT LEAST 5' BEHIND THE ROW AND NEAR SIDE PROPERTY LINES.

NOTE:
WATER METERS SHALL NOT BE INSTALLED IN DRIVEWAY.

NOTE:
PRIOR TO FABRICATION OR CONSTRUCTION, BEGIN AT THE LOW END OF ALL GRAVITY UTILITY LINES AND VERIFY THE INVERT ELEVATION OF THE POINT OF CONNECTION. NOTIFY ENGINEER FOR REDESIGN IF CONNECTION POINT IS HIGHER THAN SHOWN OR IF ANY UTILITY CONFLICTS OCCUR. GRAVITY CONNECTIONS MUST BE DONE PRIOR TO BUILDING FOOTINGS AND ROUGH PLUMBING ARE CONSTRUCTED.

WATER NOTES:

1. NOTIFY SANDY CITY PUBLIC UTILITIES INSPECTOR (801-568-7280), AT LEAST ONE BUSINESS DAY (24 HOURS) PRIOR TO BEGINNING CONSTRUCTION.
2. A PRE-CONSTRUCTION MEETING IS REQUIRED ONCE FINAL APPROVAL HAS BEEN GRANTED. THE PRE-CONSTRUCTION MEETING SHALL BE SCHEDULED THROUGH SANDY CITY PUBLIC WORKS DEPARTMENT.
3. ALL CONSTRUCTION SHALL CONFORM TO THE LATEST REVISION OF THE SANDY CITY STANDARD SPECIFICATIONS AND DETAILS FOR MUNICIPAL CONSTRUCTION AND/OR OTHER REQUIREMENTS AS SET FORTH IN THE PUBLIC UTILITIES FINAL REVIEW AND APPROVAL LETTER ESTABLISHED FOR THE DEVELOPMENT. SPECIFICATIONS AND DETAILS CAN BE OBTAINED ON THE SANDY CITY WEBSITE.
4. SUBMITTALS ARE REQUIRED TO BE APPROVED BY THE CONSULTING ENGINEER FOR ALL BEDDING, BACKFILL, PIPE, METERS, BOXES, VAULTS, VALVES, FIRE HYDRANTS, BLOWOFFS, VAULTS, ETC. RELATING TO THE WATER SYSTEM. SUBMITTALS MUST HAVE SUFFICIENT INFORMATION TO SHOW THAT THE PROPOSED ITEMS CONFORM TO SANDY CITY STANDARDS AND SPECIFICATIONS.
5. CONSTRUCTION WORK SHALL BE CONDUCTED IN ACCORDANCE WITH THE UTAH POLLUTION DISCHARGE ELIMINATION SYSTEM (UPDES) REGULATIONS.
6. LOCATE WATER LINE 4-FEET OFF LIP OF GUTTER ON THE NORTH AND/OR EAST SIDE OF ROADWAY.
7. A MINIMUM OF 48-INCHES AND A MAXIMUM OF 60-INCHES OF COVER FROM THE TOP OF THE PIPE TO THE FINISH GRADE IS REQUIRED.
8. FOR DUCTILE IRON PIPE, USE THICKNESS CLASS 52 OR BETTER
9. FOR POLYVINYL CHLORIDE (PVC) PIPE, USE CLASS DR-14 OR BETTER. 10 GAUGE WIRE SHALL BE PLACED ON TOP OF THE PIPE (PER SANDY CITY SPECIFICATIONS) FOR FUTURE RELOCATION. NO DEFLECTION IN PIPE JOINTS WILL BE ALLOWED ON PVC PIPES
10. ALL MECHANICAL JOINTS MUST BE RESTRAINED USING MEGA LUGS OR APPROVED EQUAL.
11. USE 6-INCH COMPRESSION TYPE HYDRANT BY MUELLER CENTURION OR CLOW MEDALLION. EXISTING HYDRANTS REQUIRED FOR FIRE PROTECTION THAT DO NOT MEET CURRENT STANDARDS SHALL BE UPGRADED TO MEET CURRENT SANDY CITY STANDARDS AND SPECIFICATIONS
12. WHEN THE DISTANCE FROM THE WATER MAIN TO THE FIRE HYDRANT IS GREATER THAN 6-FEET AN ADDITIONAL AUXILLARY VALVE SHALL BE FLANGED TO THE FIRE HYDRANT.
13. ALL DEAD ENDS SHALL BE PLUGGED WITH A 2-INCH WASHOUT OR END WITH A FIRE HYDRANT.
14. ALL DUCTILE IRON WATER LINES, FITTING, AND VALVES SHALL BE POLY-BAGGED IN ACCORDANCE WITH SANDY CITY STANDARDS AND SPECIFICATIONS.
15. ALL WATER LINES SHALL BE BEDDED WITH SAND (6-INCHES MINIMUM BELOW AND 12-INCHES MINIMUM ON EACH SIDE AND ON TOP OF THE PIPE).
16. WATER METERS SHALL NOT BE INSTALLED IN DRIVEWAY

No.	DATE	DESCRIPTION
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13	09/26/2025	REVISED PER CITY COMMENTS
14	11/26/2025	REVISED PER CITY COMMENTS

SCALE MEASURES 1-INCH ON FULL SIZE SHEETS
ADJUST ACCORDINGLY FOR REDUCED SIZE SHEETS

DRAWN BY FAC
CHECKED BY AGA
FIELD CREW BJB
DATE 08/03/2023
DWG FILE 2212304_SITE

PROFESSIONAL ENGINEER
11/26/25
No. 12655175
J. HYRUM OSGUTHORPE
STATE OF UTAH

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AC HQ
9352 SOUTH 670 WEST
SANDY, UTAH

PROJECT NO. 2212304

UTILITY PLAN

CUP.01
6 OF 13

Blue Stakes of UTAH 811
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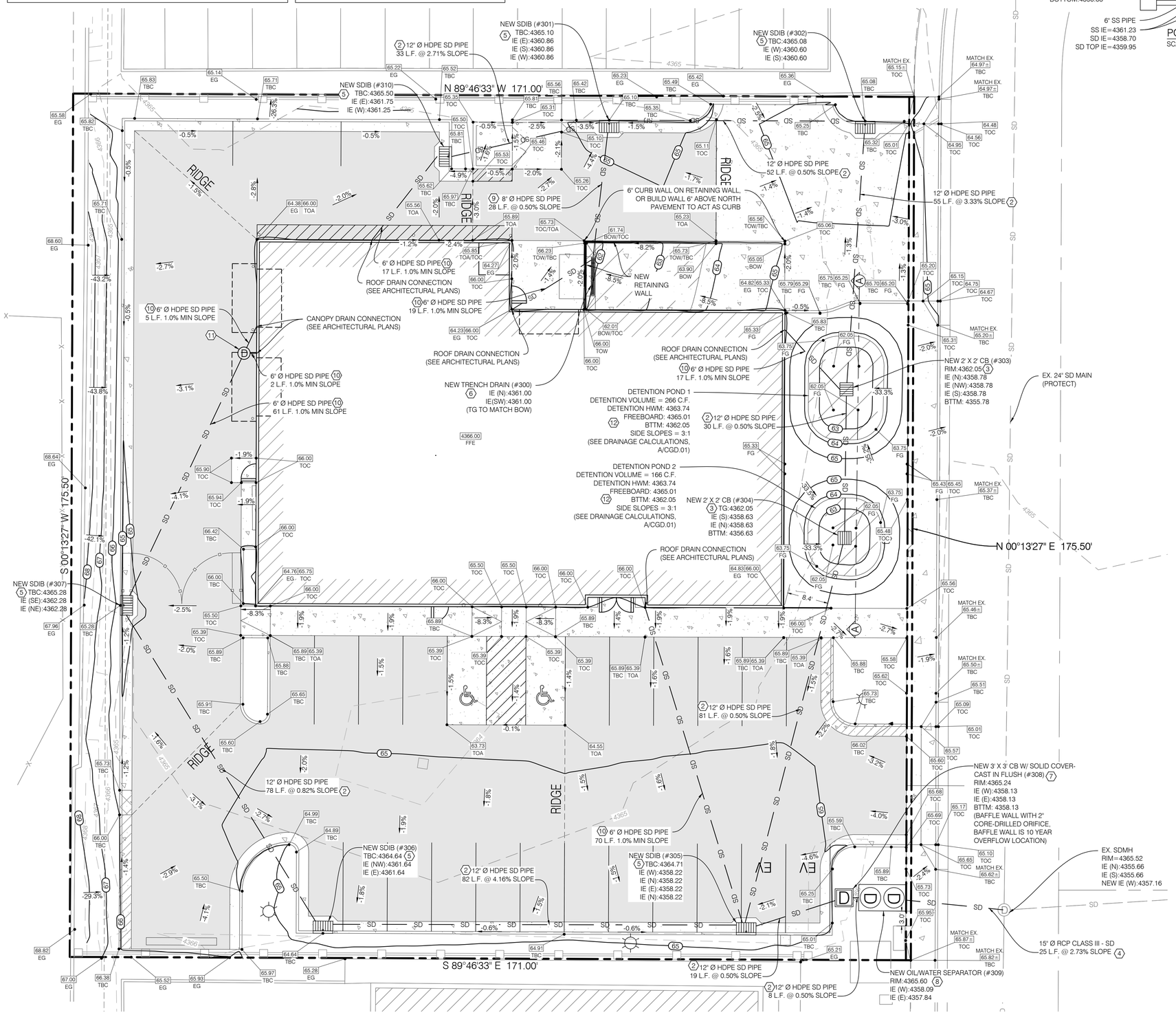
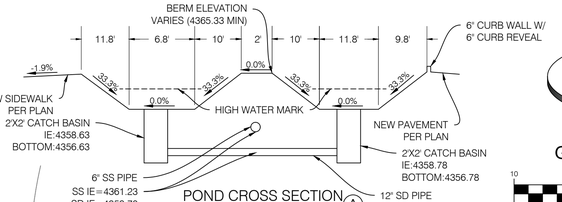
NOTE:
POTHOLE TO IDENTIFY ANY CONFLICTS BEFORE ANY PIPE INSTALLATION. CONTACT ENGINEER IF ANY CONFLICTS ARE IDENTIFIED.

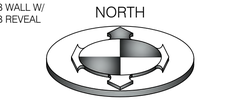
NOTE:
PRIOR TO FABRICATION OR CONSTRUCTION, BEGIN AT THE LOW END OF ALL GRAVITY UTILITY LINES AND VERIFY THE INVERT ELEVATION OF THE POINT OF CONNECTION. NOTIFY ENGINEER FOR REDESIGN IF CONNECTION POINT IS HIGHER THAN SHOWN OR IF ANY UTILITY CONFLICTS OCCUR. GRAVITY CONNECTIONS MUST BE DONE PRIOR TO BUILDING FOOTINGS AND ROUGH PLUMBING ARE CONSTRUCTED.

NOTE:
SAWCUT WIDTH, LOCATIONS AND TIE-IN ELEVATIONS TO EXISTING GRADE ARE APPROXIMATE. CONTRACTOR TO FIELD VERIFY LOCATION, EXTENT OF SAWCUTTING, AND TIE-IN SLOPES TO EXISTING GRADE PRIOR TO CONSTRUCTION. IT IS THE INTENT ON THESE PLANS THAT ALL PAVEMENT SHALL TIE INTO EXISTING GRADE PER SLOPES LISTED ON CGN.01 NOTE 70. SEE NOTES 66, 70, 82, & 83 ON CGN.01 FOR FURTHER DETAIL.





POND CROSS SECTION (A)
SCALE:NTS



GRAPHIC SCALE
10 0 5 10 20
(IN FEET)
1 inch = 10ft.

GRADING AND DRAINAGE KEY NOTE REFERENCE

NO.	DESCRIPITON	DETAIL
1	GRADE SITE TO ELEVATIONS SHOWN ON PLAN	
2	12" DIAMETER HDPE ADS N-12 STORM DRAIN LINE	
3	2'X2' CATCH BASIN	3/CDT.02
4	15" DIAMETER RCP CLASS III STORM DRAIN LINE	
5	NEW SDIB PER SANDY CITY STANDARD SD-02	1/CDT.03
6	ZURN TRENCH DRAIN Z886-HDG-LD (TRENCH NO. 8609) (OR EQUIVALENT)	3/CDT.04
7	3'X3' SDCB WITH SOLID LID, BAFFLE WALL AND 2" DRILLED ORIFICE	6/CDT.01
8	NEW 1,200 GAL. OIL WATER SEPARATOR BY OLDCASTLE	4/CDT.01
9	8" DIAMETER HDPE ADS N-12 STORM DRAIN LINE	
10	6" DIAMETER HDPE ADS N-12 STORM DRAIN LINE	
11	ROOF DRAIN CLEANOUT (DESINGED BY OTHERS)	
12	DRAINAGE CALCULATIONS (A)	5/CDT.04

ALL HDPE/RCP CLASS III PIPE TO HAVE SOIL TIGHT JOINTS

SURVEY CONTROL NOTE:
THE CONTRACTOR OR SURVEYOR PERFORMING THE CONSTRUCTION SURVEYING SHALL BE RESPONSIBLE TO PROVIDE CONSTRUCTION LAYOUT PER THE APPROVED PLANS ONLY. THE SURVEYOR SHALL ALSO BE RESPONSIBLE FOR VERIFYING HORIZONTAL CONTROL FROM THE SURVEY MONUMENTS AND FOR VERIFYING ANY ADDITIONAL CONTROL POINTS SHOWN ON THE SURVEY OR IMPROVEMENTS PLANS OR ON ELECTRONIC DATA PROVIDED BY BENCHMARK ENGINEERING AND LAND SURVEYING. THE SURVEYOR SHALL ALSO USE THE BENCHMARKS AS SHOWN ON THE PLAN, AND VERIFY THEM AGAINST NO LESS THAN THREE EXISTING HARD IMPROVEMENT ELEVATIONS INCLUDED ON THESE PLANS OR ON ELECTRONIC DATA PROVIDED BY BENCHMARK ENGINEERING AND LAND SURVEYING. IF ANY DISCREPANCIES ARE ENCOUNTERED, THE SURVEYOR SHALL IMMEDIATELY NOTIFY THE ENGINEER AND RESOLVE THE DISCREPANCIES BEFORE PROCEEDING WITH ANY CONSTRUCTION SURVEYING. IT IS ALSO THE RESPONSIBILITY OF THE SURVEYOR TO VERIFY ANY ELECTRONIC DATA WITH THE APPROVED STAMPED AND SIGNED PLANS AND NOTIFY THE ENGINEER WITH ANY DISCREPANCIES.

STORM WATER NOTES:

1. NOTIFY SANDY CITY PUBLIC UTILITIES INSPECTOR (801-568-7280), AT LEAST ONE BUSINESS DAY (24 HOURS) PRIOR TO BEGINNING CONSTRUCTION.
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3. ALL CONSTRUCTION SHALL CONFORM TO THE LATEST REVISION OF THE SANDY CITY STANDARD SPECIFICATIONS AND DETAILS FOR MUNICIPAL CONSTRUCTION AND/OR OTHER REQUIREMENTS AS SET FORTH IN THE PUBLIC UTILITIES FINAL REVIEW AND APPROVAL LETTER ESTABLISHED FOR THE DEVELOPMENT. SPECIFICATIONS AND DETAILS CAN BE OBTAINED ON THE SANDY CITY WEBSITE.
4. SUBMITTALS ARE REQUIRED TO BE APPROVED BY THE CONSULTING ENGINEER FOR ALL BEDDING, BACKFILL, PIPE AND STRUCTURES (INLET BOXES, COMBO BOXES, AND JUNCTION BOXES). SUBMITTALS MUST HAVE SUFFICIENT INFORMATION TO SHOW THAT THE PROPOSED ITEMS CONFORM TO SANDY CITY STANDARDS AND SPECIFICATIONS.
5. CONSTRUCTION WORK SHALL BE CONDUCTED IN ACCORDANCE WITH THE UTAH POLLUTION DISCHARGE ELIMINATION SYSTEM (UPDES) REGULATIONS.
6. ALL MATERIALS AND WORK DONE IN UDOT RIGHT-OF-WAY SHALL CONFORM TO UDOT STANDARDS AND SPECIFICATIONS.
7. NON-SHRINK GROUT SHALL BE USED WHEREVER GROUT IS REQUIRED FOR THE STORM DRAIN FACILITIES.
8. CUT PIPES OFF FLUSH WITH THE INSIDE WALL OF THE BOX OR MANHOLE AND GROUT AT CONNECTION OF PIPE TO BOX TO A SMOOTH FINISH. ADDITIONALLY, ALL JAGGED OR SHARP EDGES AT PIPE CONNECTIONS ARE TO BE REMOVED AND GROUTED SMOOTH.
9. GROUT BETWEEN GRADE RINGS. FOR EACH INLET BOX THAT IS LOCATED NEXT TO A CURB, THE CURB AND GUTTER CONTRACTOR IS RESPONSIBLE TO REMOVE ALL PROTRUDING, JAGGED OR SHARP CONCRETE EDGES AND TO GROUT BETWEEN BOTTOM OF INLET LID FRAME AND TOP OF CONCRETE BOX. GROUT TO CREATE A SMOOTH, BEVELED TRANSITION AT ALL EDGES IN CLEAN OUT AND INLET BOXES. GROUT AROUND ALL EDGES OF THE RESTRICTIVE ORIFICE PLATE.
10. REMOVE SNAP TIES, NAILS, REBAR AND OTHER PROTRUSIONS FROM THE BOX OR PIPE INSIDE SURFACE, AS WELL AS ALL FORM WORK, PLASTIC AND CARDBOARD.
11. SILT AND DEBRIS ARE TO BE CLEANED OUT OF ALL INLET BOXES, COMBO BOXES, JUNCTION BOXES AND PIPE. THE BOXES AND PIPES ARE TO BE MAINTAINED IN A CLEAN CONDITION UNTIL AFTER THE FINAL BOND RELEASE INSPECTION.
12. CLEAN OFF ALL MANHOLE LIDS AND INLET GRATES OF ASPHALT, CONCRETE, TAR OR OTHER ADHESIVES TO ALLOW ACCESS.
13. WHERE A SUMP IS REQUIRED, THE SANDY CITY PUBLIC UTILITIES INSPECTOR SHALL BE CONTACTED PRIOR TO CONSTRUCTION TO PROVIDE AN OPPORTUNITY TO CHECK THE VOLUME OF GRAVEL AND GRAVEL GRADATION.
14. SIGNS MUST BE POSTED NEAR EACH INLET BOX LOCATED IN A DRINKING WATER RECHARGE ZONE WITH THE FOLLOWING WORDS "WARNING THIS IS A DRINKING WATER AQUIFER RECHARGE AREA. DISPOSAL OF ANY WASTE MATERIALS IN THE STORM WATER IS STRICTLY PROHIBITED."
15. ALL INLET, COMBO, AND JUNCTION BOXES SHALL BE PLACED ON 12-INCH (MIN.) COMPACTED STABILIZATION MATERIAL.
16. A VIDEO OF ALL PIPES MUST BE COMPLETED BEFORE THE 80% OR 90% BOND RELEASE AND AGAIN BEFORE FINAL BOND RELEASE.
17. A REPRESENTATIVE OF THE MANUFACTURER OR SUPPLIER SHALL BE ON-SITE DURING INSTALLATION OF OIL/WATER SEPARATORS AND UNDERGROUND DETENTION/RETENTION SYSTEMS. THE MANUFACTURER OR SUPPLER SHALL PROVIDE A LETTER STATING THAT THE SYSTEM WAS INSTALLED PER MANUFACTURER'S SPECIFICATIONS. IF IT IS UNKNOWN WHETHER A REPRESENTATIVE IS REQUIRED TO BE PRESENT DURING INSTALLATION, CONTACT THE SANDY CITY PUBLIC UTILITIES INSPECTOR.
18. A LETTER FROM THE CONSULTANT ENGINEER IS REQUIRED TO BE SUBMITTED TO SANDY CITY PUBLIC UTILITIES DEPARTMENT, PRIOR TO 90% BOND RELEASE, VERIFYING THAT THE VOLUME FOR RETENTION/DETENTION PONDS WAS INSTALLED PER THE APPROVED PLANS.

BENCHMARK:
WITNESS TO THE SOUTHWEST CORNER OF SECTION 1, TOWNSHIP 3 SOUTH, RANGE 1 WEST, SALT LAKE BASE AND MERIDIAN
FOUND BRASS CAP MONUMENT
(RING AND LID)

Blue Stakes of UTAH811 Bluestakes.org

No.	DATE	DESCRIPTION
9	04/23/2023	REVISED PER CITY COMMENTS
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11	06/05/2023	REVISED PER CITY COMMENTS
12	07/26/2023	REVISED PER CITY COMMENTS
13	09/06/2023	REVISED PER CITY COMMENTS
14	11/06/2023	REVISED PER CITY COMMENTS

SCALE MEASURES 1-INCH ON FULL SIZE SHEETS
ADJUST ACCORDINGLY FOR REDUCED SIZE SHEETS

DRAWN BY FAC
CHECKED BY AGA
FIELD CREW BJB
DATE 08/03/2023
BNCH FILE 221230A_SITE

PROFESSIONAL ENGINEER 11/26/23 No. 12655175 J. HYRUM OSGUTHORPE STATE OF UTAH

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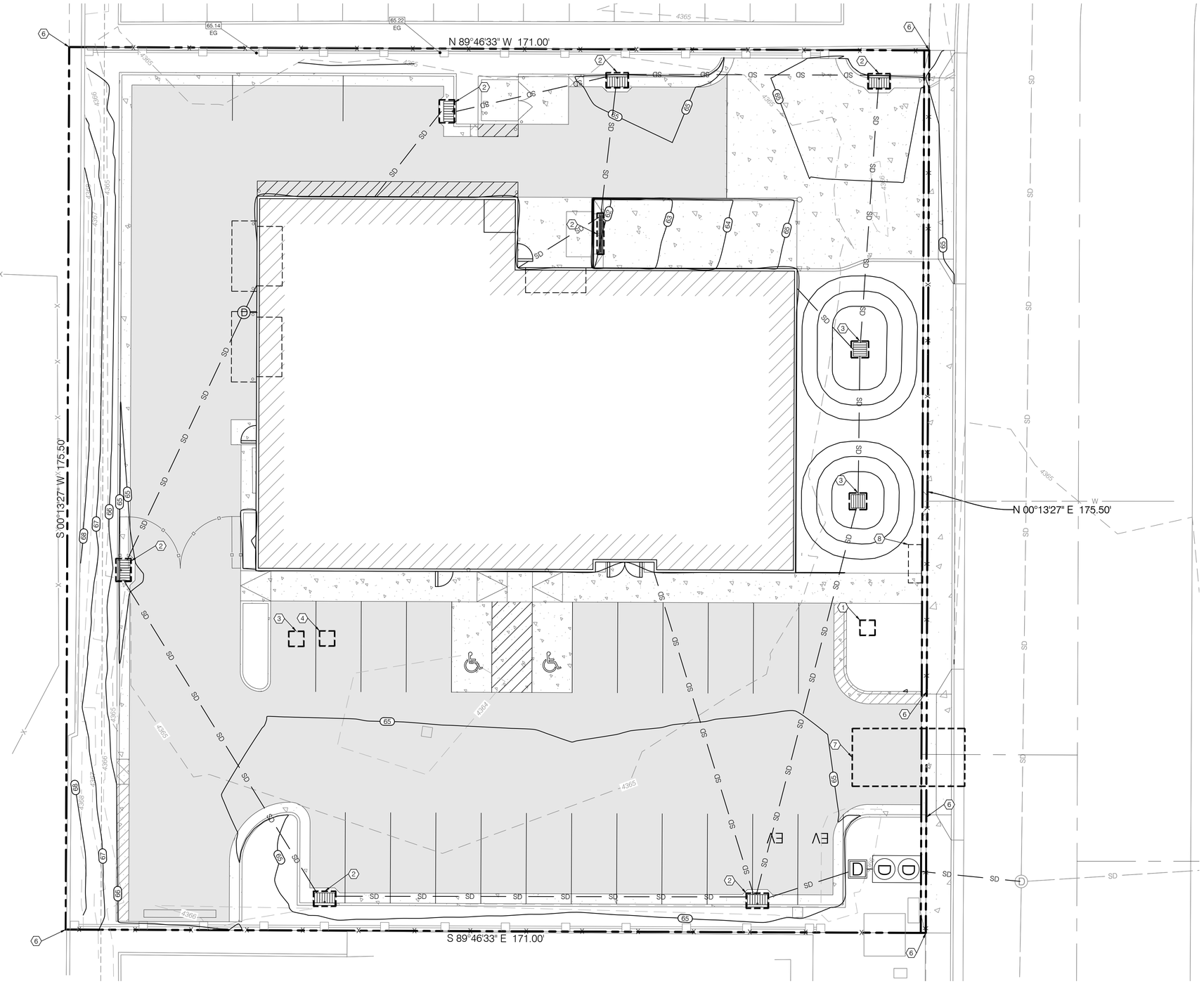
9352 SOUTH 670 WEST
SANDY, UTAH

PROJECT NO. 2212304

GRADING & DRAINAGE PLAN

CGD.01
7 OF 13



NORTH

GRAPHIC SCALE

10 0 5 10 20

(IN FEET)
1 inch = 10ft.

SWPPP KEY NOTES REFERENCE

PROVIDE, INSTALL AND/OR CONSTRUCT THE FOLLOWING PER THE SPECIFICATIONS GIVEN OR REFERENCED AND THE DETAILS NOTED AND AS SHOWN ON THE CONSTRUCTION DRAWINGS.

NO.	DESCRIPTION	DETAIL
1	CONCRETE WASTE MANAGEMENT	1/CEP.02
2	INLET PROTECTION WATTLE	2/CEP.02
3	MATERIALS STORAGE	3/CEP.02
4	PORTABLE TOILETS	4/CEP.02
5	SPILL CLEAN UP	5/CEP.02
6	SILT FENCE	6/CEP.02
7	TEMPORARY CONSTRUCTION ENTRANCE	7/CEP.02
8	SWPPP INFORMATION SIGN	8/CEP.02

NOTE: CONTRACTOR SHALL INSTALL EROSION CONTROLS (SILT FENCES, STRAW BALES, ETC) AS REQUIRED BY REGULATORY AGENCIES. SAID CONTROLS SHALL BE INSTALLED IN ACCORDANCE WITH AGENCY STANDARDS AND FOLLOWING BEST MANAGEMENT PRACTICES FOR ACTUAL PLACEMENT ON SITE. STRAW BALES SHOWN ON THESE DRAWINGS ARE INTENDED AS A MINIMUM REQUIREMENT. ADDITIONAL CONTROLS REQUESTED BY AGENCY INSPECTORS SHALL BE REQUIRED. DUST CONTROL SHALL BE PROVIDED AT ALL TIMES, AT THE CONTRACTOR'S EXPENSE, TO MINIMIZE ANY DUST NUISANCE AND SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY.

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12	07/28/2025	REVISED PER CITY COMMENTS
13	09/08/2025	REVISED PER CITY COMMENTS
14	11/26/2025	REVISED PER CITY COMMENTS

SCALE MEASURES 1"INCH ON FULL SIZE SHEETS
ADJUST ACCORDINGLY FOR REDUCED SIZE SHEETS

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CHECKED BY AGA
FIELD CREW BJB
DATE 08/03/2023
DWG. FILE 221/2304_SITE

0 0.5 1

PROFESSIONAL ENGINEER
11/26/25
No. 12655175
J. HYRUM OSGUTHORPE
STATE OF UTAH

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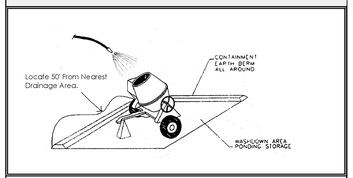
PROJECT NO. 2212304

EROSION CONTROL PLAN

CEP.01
8 OF 13

BMP: Concrete Waste Management



DESCRIPTION:
Prevent or reduce the discharge of pollutants to storm water from concrete waste by conducting washout off-site, performing on-site washout in a designated area, and training employees and subcontractors.

APPLICATIONS:
This technique is applicable to all types of sites.

INSTALLATION/APPLICATION CRITERIA:
- Store dry and wet materials under cover, away from drainage areas.
- Avoid mixing excess amounts of fresh concrete or cement on-site.
- Perform washout of concrete trucks off-site or in designated areas only.
- Do not wash out concrete trucks into storm drains, open ditches, streets, or streams.
- Do not allow excess concrete to be dumped on-site, except in designated areas.
- When washing concrete to remove fine particles and expose the aggregate, avoid creating runoff by draining the water within a bermed or level area. (See Earth Berm Barrier information sheet.)
- Train employees and subcontractors in proper concrete waste management.

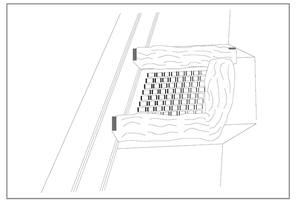
LIMITATIONS:
- Off-site washout of concrete wastes may not always be possible.

MAINTENANCE:
- Inspect subcontractors to ensure that concrete wastes are being properly managed.
- If using a temporary pit, dispose hardened concrete on a regular basis.

CONCRETE WASTE MANAGEMENT (1)
SCALE: NTS

BMP: Inlet Protection – Wattle

IP-W
CONSTRUCTION



DESCRIPTION:
Sediment barrier erected around storm drain inlet.

APPLICATION:
Construct at storm drainage inlets located down-gradient of areas to be disturbed by construction.

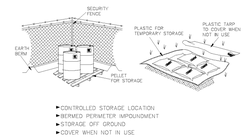
INSTALLATION/APPLICATION CRITERIA:
- Provide up-gradient sediment controls, such as silt fence during construction of inlet
- When construction of curb and gutter and roadways is complete, install gravel filled wattles around perimeter of inlet

LIMITATIONS:
- Recommended maximum contributing drainage area of one acre
- Requires shallow slopes adjacent to inlet

MAINTENANCE:
- Inspect inlet protection following storm event and at a minimum of once every 14 days.
- Remove accumulated sediment when it reaches 4 inches in depth.
- Look for bypassing or undercutting and repair or realign as needed.

INLET PROTECTION WATTLE (2)
SCALE: NTS

BMP: Materials Storage



DESCRIPTION:
Controlled storage of on-site materials.

APPLICATION:
- Storage of hazardous, toxic, and all chemical substances.
- Any construction site with outside storage of materials.

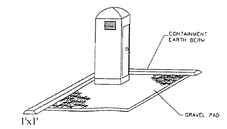
INSTALLATION/APPLICATION CRITERIA:
- Designate a secured area with limited access as the storage location. Ensure no waterways or drainage paths are nearby.
- Construct compacted earthen berm (See Earth Berm Barrier Information Sheet), or similar perimeter containment around storage location for impoundment in the case of spills.
- Ensure all on-site personnel utilize designated storage area. Do not store excessive amounts of material that will not be utilized on site.
- For active use of materials away from the storage area ensure materials are not set directly on the ground and are covered when not in use. Protect storm drainage during use.

LIMITATIONS:
- Does not prevent contamination due to mishandling of products.
- Spill Prevention and Response Plan still required.
- Only effective if materials are actively stored in controlled location.

MAINTENANCE:
- Inspect daily and repair any damage to perimeter impoundment or security fencing.
- Check materials are being correctly stored (i.e. standing upright, in labeled containers, tightly capped) and that no materials are being stored away from the designated location.

MATERIALS STORAGE (3)
SCALE: NTS

BMP: Portable Toilets



DESCRIPTION:
Temporary on-site sanitary facilities for construction personnel.

APPLICATION:
All sites with no permanent sanitary facilities or where permanent facility is too far from activities.

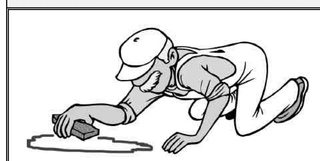
INSTALLATION/APPLICATION CRITERIA:
- Locate portable toilets in convenient locations throughout the site.
- Prepare level, gravel surface and provide clear access to the toilets for servicing and for on-site personnel.
- Construct earth berm perimeter (See Earth Berm Barrier Information Sheet), control for spill/protection leak.

LIMITATIONS:
No limitations.

MAINTENANCE:
- Portable toilets should be maintained in good working order by licensed service with daily observation for leak detection.
- Regular waste collection should be arranged with licensed service.
- All waste should be deposited in sanitary sewer system for treatment with appropriate agency approval.

PORTABLE TOILETS (4)
SCALE: NTS

BMP: Spill Clean-Up



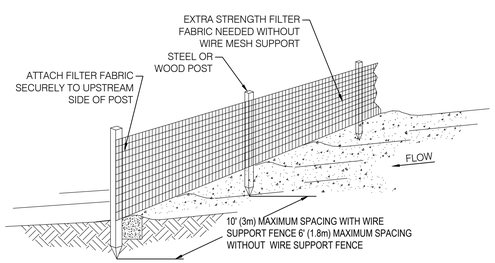
DESCRIPTION:
Practices to clean-up leakage/spillage of on-site materials that may be harmful to receiving waters.

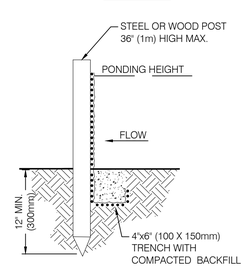
APPLICATION:
All sites

GENERAL:
- Store controlled materials within a storage area.
- Educate personnel on prevention and clean-up techniques.
- Designate an Emergency Coordinator responsible for employing preventative practices and for providing spill response.
- Maintain a supply of clean-up equipment on-site and post a list of local response agencies with phone numbers.

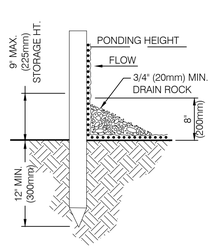
METHODS:
- Clean-up spills/leaks immediately and remediate cause.
- Use as little water as possible. NEVER HOSE DOWN OR BURY SPILL CONTAMINATED MATERIAL.
- Use rags or absorbent material for clean-up. Excavate contaminated soils. Dispose of clean-up material and soil as hazardous waste.
- Document all spills with date, location, substance, volume, actions taken and other pertinent data.
- Contact local Fire Department and State Division of Environmental Response and Remediation (Phone #536-4100) for any spill of reportable quantity.

SPILL CLEAN UP (5)
SCALE: NTS





TRENCH DETAIL



INSTALLATION WITHOUT TRENCHING

NOT TO SCALE

NOTES:
1. SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.

2. INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY. 9" (225mm) MAXIMUM RECOMMENDED STORAGE HEIGHT.

3. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.

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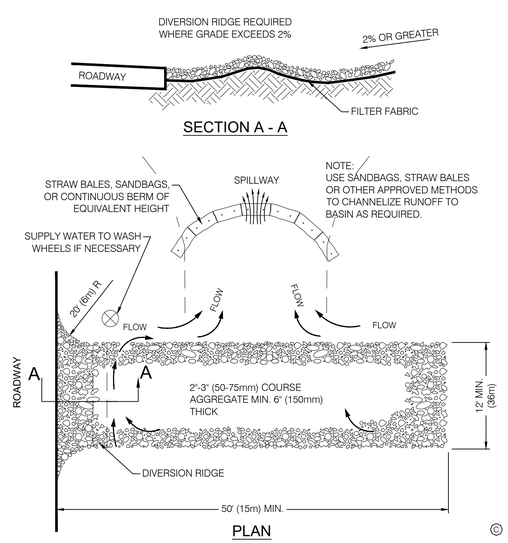
SILT FENCE (6)
SCALE: NTS



© REF: FROM 1994 JOHN McCULLAH

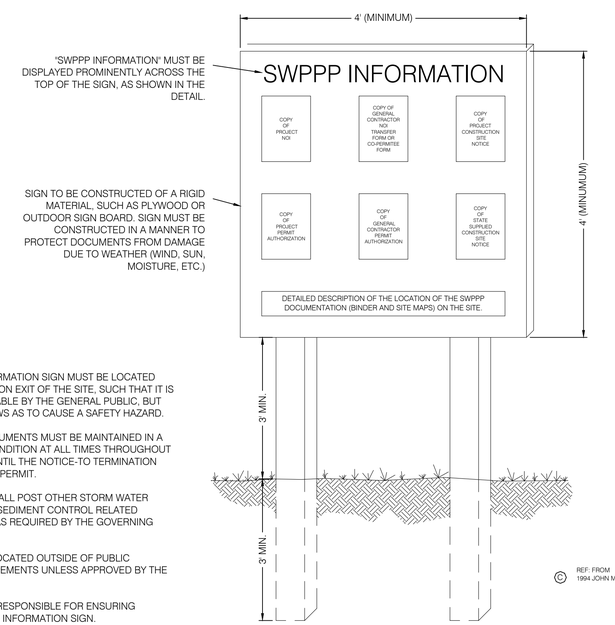
NOTES:
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT.

2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.

3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT (7)
SCALE: NTS

Blue Stakes of UTAH811
Bluestakes.org



NOTES:
1) THE SWPPP INFORMATION SIGN MUST BE LOCATED NEAR THE CONSTRUCTION EXIT OF THE SITE, SUCH THAT IT IS ACCESSIBLE AND VIEWABLE BY THE GENERAL PUBLIC, BUT NOT OBSTRUCTING VIEWS AS TO CAUSE A SAFETY HAZARD.

2) ALL POSTED DOCUMENTS MUST BE MAINTAINED IN A CLEARLY READABLE CONDITION AT ALL TIMES THROUGHOUT CONSTRUCTION AND UNTIL THE NOTICE-TO TERMINATION (NOT) IS FILED FOR THE PERMIT.

3) CONTRACTOR SHALL POST OTHER STORM WATER AND/OR EROSION AND SEDIMENT CONTROL RELATED PERMITS ON THE SIGN AS REQUIRED BY THE GOVERNING AGENCY.

4) SIGN SHALL BE LOCATED OUTSIDE OF PUBLIC RIGHT-OF-WAY AND EASEMENTS UNLESS APPROVED BY THE GOVERNING AGENCY.

5) CONTRACTOR IS RESPONSIBLE FOR ENSURING STABILITY IF THE SWPPP INFORMATION SIGN.

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SWPPP INFORMATION SIGN (8)
SCALE: NTS

No.	DATE	DESCRIPTION
9	04/03/2025	REVISED PER CITY COMMENTS
10	05/02/2025	REVISED PER ARCHITECT COMMENTS
11	06/25/2025	REVISED PER CITY COMMENTS
12	07/29/2025	REVISED PER CITY COMMENTS
13	09/09/2025	REVISED PER CITY COMMENTS
14	11/06/2025	REVISED PER CITY COMMENTS

SCALE MEASURES 1-INCH ON FULL SIZE SHEETS
ADJUST ACCORDINGLY FOR REDUCED SIZE SHEETS

DRAWN BY FAC
CHECKED BY AGA
FIELD CREW BJB
DATE 08/03/2023
DWG. FILE 221Z304_SITE

PROFESSIONAL ENGINEER
11/26/25
No. 12655175
J. HYRUM OSGUTHORPE
STATE OF UTAH

BENCHMARK ENGINEERING & LAND SURVEYING
9138 SOUTH STATE STREET SUITE #100
SANDY, UTAH 84070, (801) 542-7192
www.benchmarkcivil.com

AC HQ
9352 SOUTH 670 WEST
SANDY, UTAH

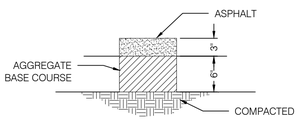
PROJECT NO. 2212304

EROSION CONTROL DETAILS

CEP.02
9 OF 13

Traffic	Rigid Pavement: Portland Cement Concrete	Flexible Pavement: Asphaltic Concrete	Flexible Pavement: Base Course	Flexible Pavement: Granular Borrow
Predominantly Car Traffic	5"	3"	6"	—
2 Semis per Day	5½"	3"	6"	8"
10 Semis per Day	6"	4"	6"	12"

ABOVE FROM GEOTECHNICAL REPORT:



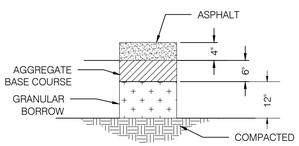
LIGHT DUTY TRAFFIC
(DRIVEWAY AND PARKING STALLS)

ALTERNATE: STANDARD

CONCRETE	6"
GRAVEL	5"

DUMPSTER PAD STANDARD:

PAD CONCRETE	6.5" MIN
AGGREGATE BASE COURSE	4" MIN



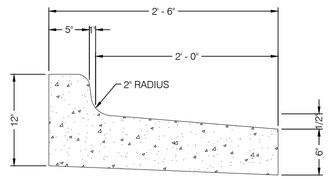
HEAVY DUTY TRAFFIC*
(670 WEST PUBLIC STREET)

NOTE:
1. FOR REINFORCEMENT DESIGN OF PCC PAVEMENT SECTIONS SEE STRUCTURAL ENGINEER
2. FOR DOWEL DESIGN OF PCC PAVEMENT SECTIONS SEE GEOTECHNICAL ENGINEER.
3. FOR FULL PAVEMENT RECOMMENDATIONS, SEE AGCE REPORT DATED APRIL 4, 2024. (PROJECT NO. 1240196)

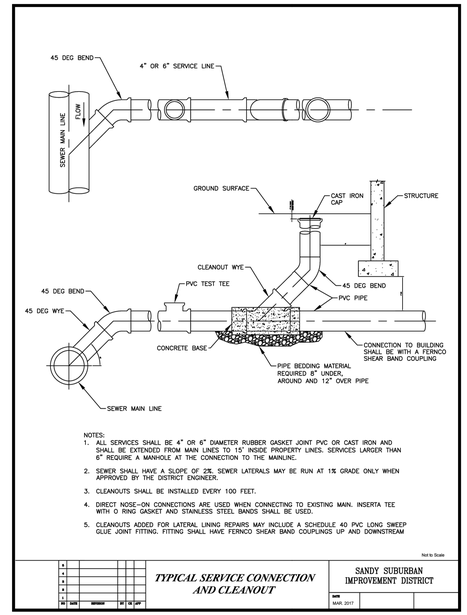
NOTE:
CONTRACTOR TO VERIFY PAVEMENT PLACEMENT AND DESIGN WITH OWNER

PAVEMENT SECTIONS (1)
SCALE: NTS

NOTE: 6" MIN. OF UNTREATED BASE COURSE REQ'D UNDER CURB AND GUTTER. COMPACT TO 95% ASSHTO T-180 - METHOD D.



TYPICAL RELEASE CURB & GUTTER (2)
SCALE: NTS



NOTES:
1. ALL SERVICES SHALL BE 4" OR 6" DIAMETER RUBBER GASKET JOINT PVC OR CAST IRON AND SHALL BE EXTENDED FROM MAIN LINES TO 15' INSIDE PROPERTY LINES. SERVICES LARGER THAN 6" REQUIRE A MANHOLE AT THE CONNECTION TO THE MAINLINE.
2. SEWER SHALL HAVE A SLOPE OF 2%. SEWER LATERALS MAY BE RUN AT 1% GRADE ONLY WHEN APPROVED BY THE DISTRICT ENGINEER.
3. CLEANOUTS SHALL BE INSTALLED EVERY 100 FEET.
4. DIRECT NOSE-ON CONNECTIONS ARE USED WHEN CONNECTING TO EXISTING MAIN. INSERTA TEE WITH O RING GASKET AND STAINLESS STEEL BANDS SHALL BE USED.
5. CLEANOUTS ADDED FOR LATERAL LINING REPAIRS MAY INCLUDE A SCHEDULE 40 PVC LONG SWEEP GLUE JOINT FITTING. FITTING SHALL HAVE FERNCO SHEAR BAND COUPLINGS UP AND DOWNSTREAM

Not to Scale

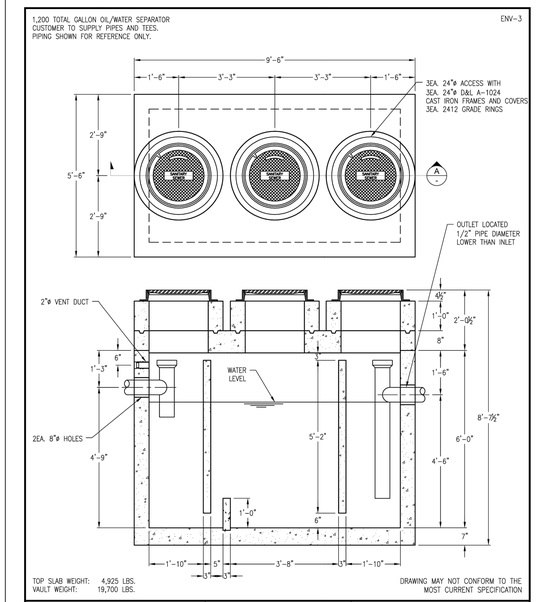
NO.	DATE	REVISION	BY	CK	APP

TYPICAL SERVICE CONNECTION AND CLEANOUT

SANDY SUBURBAN IMPROVEMENT DISTRICT

DATE MAR. 2017

SSID SEWER SERVICE & CLEANOUT (3)
SCALE: NTS



TOP SLAB WEIGHT: 4,925 LBS.
VAULT WEIGHT: 19,700 LBS.

DRAWING MAY NOT CONFORM TO THE MOST CURRENT SPECIFICATION

Oldcastle Precast®
Northern California
Madera • Morgan Hill • Pleasanton • Santa Rosa • Stockton • Tulare
Phone: 925-730-6650 Fax: 925-730-6660

OWS-4686
FILE NAME: ENV-3.DWG
REVISED: MARCH 2016
www.oldcastleprecast.com

4'-6" X 8'-6" X 6'-0" (I.D.)
ENVIRONMENTAL VAULT
OIL WATER SEPARATOR

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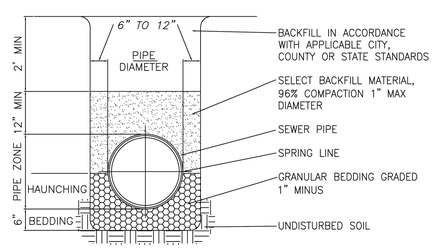
OLDCASTLE OIL & WATER SEPARATOR (4)
SCALE: NTS



GENERAL NOTES

1. SELECT BACKFILL SHALL BE CLEAN PROCESSED MATERIAL FREE FROM ORGANIC MATERIAL, DEBRIS, CLODS OR FROZEN MATERIAL. THE MATERIAL SHALL BE 1" MINUS IN GRADATION.

2. GRANULAR BEDDING GRADED 1" MINUS SHALL BE 1/4" TO 1" CLEAN ANGULAR ROCK.

3. PIPE INSTALLATION DETAIL APPLIES TO FLEXIBLE AND RIGID PIPE

4. FABRIC WRAP (MIRIFI 140N OR EQUAL) SHALL BE USED AROUND BEDDING MATERIAL WHEN REQUIRED BY DISTRICT INSPECTOR.

Not to Scale

NO.	DATE	REVISION	BY	CK	APP

PIPE INSTALLATION DETAIL

SANDY SUBURBAN IMPROVEMENT DISTRICT

DATE FEB. 2010

PIPE INSTALLATION PER SSID (5)
SCALE: NTS

3'x3' Basin — 3'x3' Catch Basin Bases, Risers and Lid

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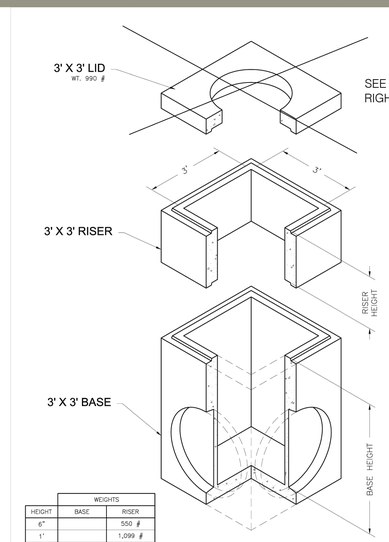
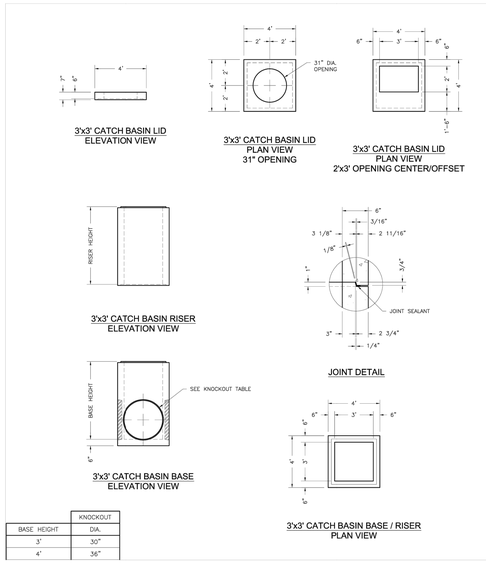


HEIGHT	WEIGHTS: BASE	WEIGHTS: RISER
6"		550 #
1'		1,099 #
2'		2,198 #
3'	3,171 #	3,297 #
4'	4,796 #	4,207 #
5'	5,896 #	5,259 #
6'	6,994 #	7,694 #

NOTES:
1. Vault design complies with ASTM C-857 and C-858 with less than 2' of earth cover and an AASHTO HS-20 loading.
2. Lifting insert type and location may change without notice.



BASE HEIGHT	KNOCKOUT DIA.
3'	30"
4'	36"

Oldcastle Precast
801 West 12th Street
Ogden, Utah 84404

Phone: (801) 399-1171
Fax: (801) 392-7849

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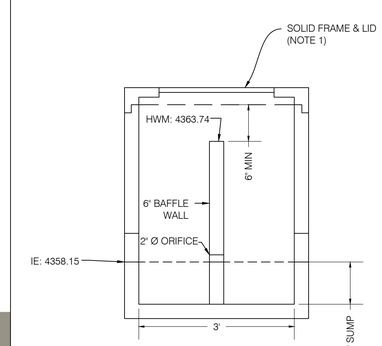
OLDCASTLE 3'X3' CB (6)
SCALE: NTS

NOTE:
1. INSTALL OLDCASLE 332P FRAME AND COVER (CAST IN FLUSH) & 55-332P-PCORP. NOT THE TYPICAL LID & GRATE
2. A 6" BAFFLE WALL MUST BE ADDED TO THE CATCH BASIN SEPARATING THE WEST AND EAST PIPE INVERTS. THE TOP OF THE BAFFLE WALL MUST BE AT THE ELEVATION 4363.74.
3. A 2" Ø CORE DRILLED ORIFICE MUST BE ADDED TO THE BAFFLE WALL MATCHING THE ELEVATION OF THE PIPE INVERTS. SEE CGD.01 FOR INVERT ELEVATIONS.



NORTH SIDE SECTION VIEW
NOT TO SCALE

No.	DATE	DESCRIPTION
9	04/23/2025	REVISED PER CITY COMMENTS
10	05/02/2025	REVISED PER ARCHITECT COMMENTS
11	06/25/2025	REVISED PER CITY COMMENTS
12	07/29/2025	REVISED PER CITY COMMENTS
13	09/26/2025	REVISED PER CITY COMMENTS
14	11/26/2025	REVISED PER CITY COMMENTS

SCALE MEASURES 1-INCH ON FULL SIZE SHEETS
ADJUST ACCORDINGLY FOR REDUCED SIZE SHEETS

DRAWN BY: FAC
CHECKED BY: AGA
FIELD CREW: BJB
DATE: 08/03/2023
DWG FILE: 2212304_SITE

PROFESSIONAL ENGINEER
11/26/25
No. 12655175
J. HYRUM OSGUTHORPE
STATE OF UTAH

BENCHMARK CIVIL
BENCHMARK ENGINEERING & LAND SURVEYING
9138 SOUTH STATE STREET SUITE #100
SANDY, UTAH 84070 (801) 542-7192
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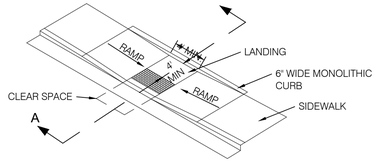
AC HQ
9352 SOUTH 670 WEST
SANDY, UTAH

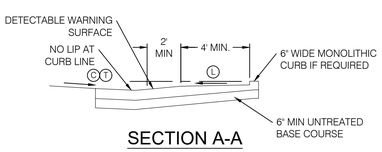
PROJECT NO. 2212304

DETAIL SHEET

CDT.01
10OF 13

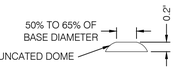


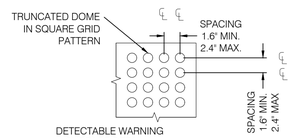
PARALLEL PEDESTRIAN RAMP



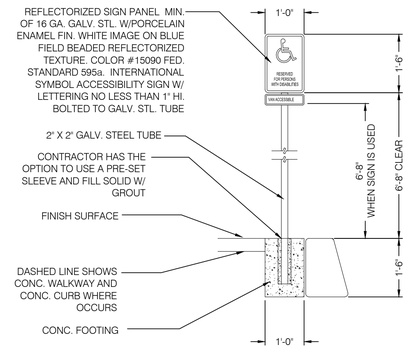
SECTION A-A

TRANSITION DETAIL





THIS DRAWING PRODUCED BY THE U.S. ACCESS BOARD



ADA SIGN POST DETAIL

TABLE OF DIMENSIONS	
ELEMENT	DIMENSION
Ⓣ Ⓡ	4 FEET WIDE MINIMUM
Ⓛ Ⓒ	4 FEET SQUARE MINIMUM*

* WHERE LANDING SPACE IS CONSTRAINED ON 2 SIDES, PROVIDE 5 FEET IN THE DIRECTION OF THE CROSSWALK

DIRECTION OF TRAVEL OR APPROACH

THIS DRAWING PRODUCED BY THE U.S. ACCESS BOARD

INTERNATIONAL SYMBOL OF ACCESSIBILITY

THIS DRAWING PRODUCED BY THE U.S. ACCESS BOARD

STRIPING SYMBOLS

SCALE: N.T.S.

NOTES:

1. CONFIGURATION OF RAMPS AND LANDINGS MAY BE CHANGED BUT MUST MEET PEDESTRIAN RAMP DIMENSIONS AND SLOPE REQUIREMENTS. SPECIFIC SITE CONDITIONS WILL VARY. THE USE OF FLARES, CURBWALLS, ETC. ARE AT THE DISCRETION OF THE ENGINEER.
2. PERPENDICULAR AND PARALLEL PEDESTRIAN RAMPS SHOWN ON THIS DRAWING ARE ACCEPTABLE FOR USE AT MID BLOCK OR CORNER INSTALLATIONS.
3. PROVIDE DETECTABLE WARNING SURFACE FOR FULL WIDTH OF RAMP, LANDING OR CURB CUT. SEE DETAIL A FOR DETECTABLE WARNING SURFACE DIMENSIONS.
4. LOCATE DETECTABLE WARNING SURFACE SO THAT THE EDGE NEAREST THE STREET IS 4 TO 6 INCHES FROM THE TOP BACK OF CURB.
5. PROVIDE DETECTABLE WARNING SURFACE. COLOR SHALL BE YELLOW.
6. USE CLASS AA (AE) CONCRETE.
7. USE 6" MIN. DEPTH OR UNTREATED BASE COURSE UNDER ALL CONCRETE FLATWORK COMPACTED TO 96% MAXIMUM DRY DENSITY.

SLOPE TABLE			
	ITEM	RUNNING SLOPE*	CROSS SLOPE
Ⓛ	LANDING	1.5-2% (1V:48H) (b)	1.5-2% (1V:48H) (b)
Ⓡ	RAMP	8.33% (1V:12H) (c)	1.5-2% (1V:48H) (d)
Ⓣ	TRANSITION	5% (1V:20H) (a)	1.5-2% (1V:48H) (d)
Ⓒ	CLEAR SPACE	5% (1V:20H) (a)	1.5-2% (1V:48H) (d)
	SIDEWALK	--	1.5-2% (1V:48H)
	FLARE	10% (1V:10H)	--

* RUNNING SLOPE IS IN THE DIRECTION OF PEDESTRIAN TRAVEL, WHILE CROSS SLOPE IS PERPENDICULAR TO PEDESTRIAN TRAVEL.

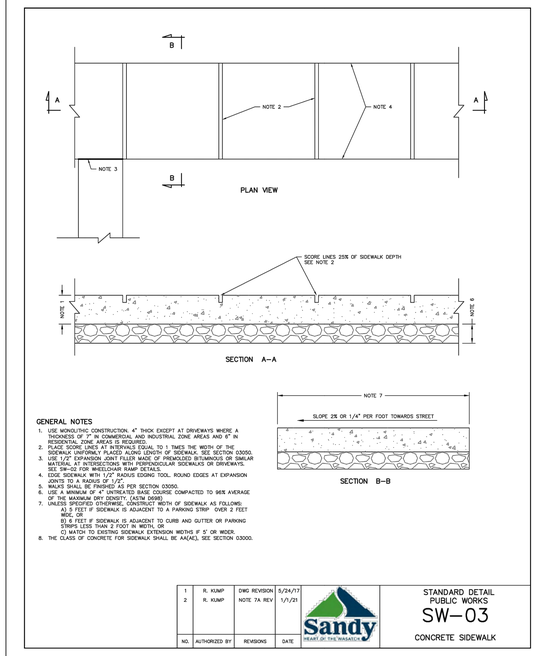
(a) TRANSITION RUNNING SLOPE NEEDS TO BE CONSTANT ACROSS ENTIRE CURB CUT. WARP GUTTER PAN TO MEET REQUIRED TRANSITION SLOPE AT CURB CUT (0.10' MAX. ABOVE FLOWLINE.)

EXCEPTION:

(b) IF SLOPE REQUIREMENTS CAN'T BE ACHIEVED ON MID-BLOCK RAMPS CONTACT THE ENGINEER.

(c) PARALLEL RAMPS ARE NOT REQUIRED TO EXCEED 15-FEET IN LENGTH.

(d) CROSS SLOPE REQUIREMENT DOES NOT APPLY AT PERPENDICULAR RAMP MID-BLOCK CROSSING.



GENERAL NOTES

1. USE MONOLITHIC CONSTRUCTION. 4" THICK EXCEPT AT DRIVEWAYS WHERE A MINIMUM OF 6" IS REQUIRED. COMMERCIAL AND INDUSTRIAL ZONE AREAS AND 6" IN RESIDENTIAL ZONE AREAS IS REQUIRED.
2. PLACE SCORE LINES AT INTERVALS EQUAL TO 1 TIMES THE WIDTH OF THE SIDEWALK UNIFORMLY PLACED ALONG LENGTH OF SIDEWALK. SEE SECTION 03050.
3. USE 1/2" EXPANSION JOINT FILLER MADE OF PREMOLDED BITUMINOUS OR SIMILAR MATERIAL AT ALL INTERSECTIONS OF PERPENDICULAR SIDEWALKS OR DRIVEWAYS. SEE SW-02 FOR WHEELCHAIR RAMP DETAILS.
4. EDGE SIDEWALK WITH 1/2" RADIUS EDGING TOOL. ROUND EDGES AT EXPANSION JOINTS TO A RADIUS OF 1/2".
5. WALKS SHALL BE FINISHED AS PER SECTION 03050.
6. 6" MIN. DEPTH OR UNTREATED BASE COURSE COMPACTED TO 96% AVERAGE OF THE MAXIMUM DRY DENSITY (ASTM D698).
7. UNLESS SPECIFIED OTHERWISE, CONSTRUCT WIDTH OF SIDEWALK AS FOLLOWS:
   A) 5 FEET IF SIDEWALK IS ADJACENT TO A PARKING STRIP OVER 2 FEET WIDE.
   B) 7 FEET IF SIDEWALK IS ADJACENT TO CURB AND GUTTER OR PARKING STRIPS LESS THAN 2 FOOT IN WIDTH, OR
   C) MATCH TO EXISTING SIDEWALK EXTENSION WIDTHS IF 5' OR WIDER.
8. THE CLASS OF CONCRETE FOR SIDEWALK SHALL BE AA(AE). SEE SECTION 03000.

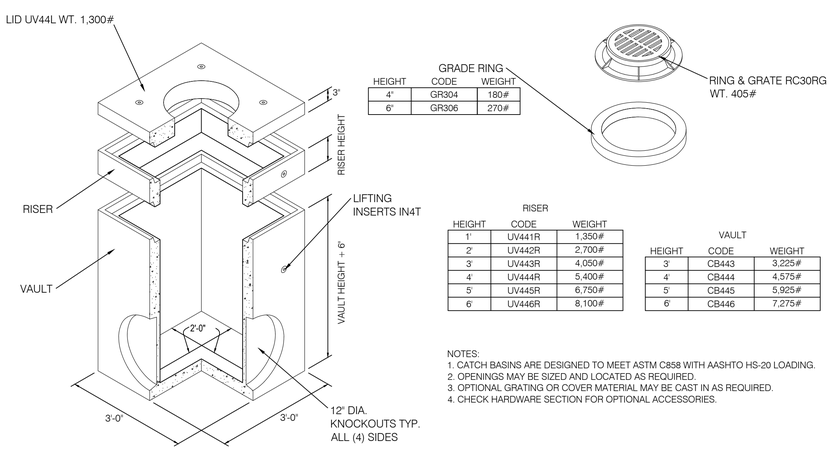
NO.	AUTHORIZED BY	REVISIONS	DATE
1	R. KUMP	DWG REVISION	5/24/17
2	R. KUMP	NOTE 7A REV.	1/1/21

Sandy HEART OF THE WASATCH

STANDARD DETAIL
PUBLIC WORKS
SW–03
CONCRETE SIDEWALK

CONCRETE SIDEWALK PER SANDY CITY STANDARD SW-03 (2)

SCALE: NTS



GRADE RING		
HEIGHT	CODE	WEIGHT
4"	GR304	180#
6"	GR306	270#

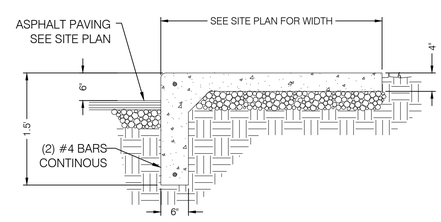
RISER		
HEIGHT	CODE	WEIGHT
1'	UV441R	1,350#
2'	UV442R	2,700#
3'	UV443R	4,050#
4'	UV444R	5,400#
5'	UV445R	6,750#
6'	UV446R	8,100#

VAULT		
HEIGHT	CODE	WEIGHT
3'	CB443	3,225#
4'	CB444	4,575#
5'	CB445	5,925#
6'	CB446	7,275#

NOTES:
1. CATCH BASINS ARE DESIGNED TO MEET ASTM C858 WITH AASHTO HS-20 LOADING.
2. OPENINGS MAY BE SIZED AND LOCATED AS REQUIRED.
3. OPTIONAL GRATING OR COVER MATERIAL MAY BE CAST IN AS REQUIRED.
4. CHECK HARDWARE SECTION FOR OPTIONAL ACCESSORIES.

2'x2' CATCH BASIN (3)

SCALE: NTS



INTEGRAL SIDEWALK & CURB (4)

SCALE: NTS

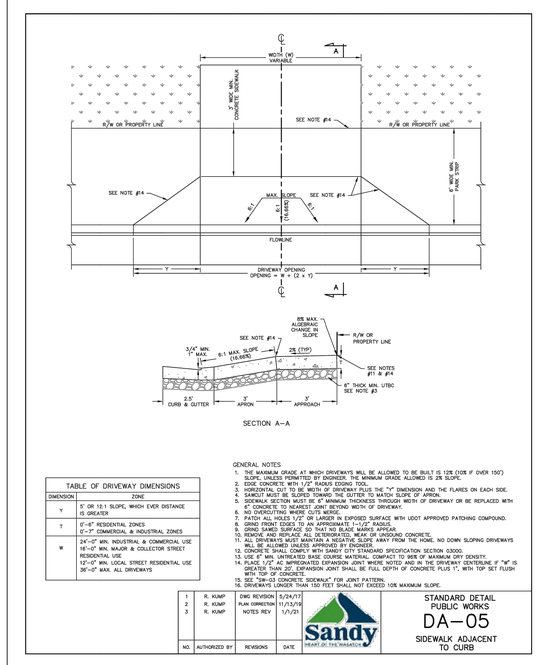


TABLE OF DRIVEWAY DIMENSIONS	
DIMENSION	ZONE
Y	5' OR 12:1 SLOPE, WHICH EVER DISTANCE IS GREATER
T	0'–6" RESIDENTIAL ZONES 0'–7" COMMERCIAL & INDUSTRIAL ZONES
W	24'–0" MIN. INDUSTRIAL & COMMERCIAL USE 18'–0" MIN. MAJOR & COLLECTOR STREET RESIDENTIAL USE 12'–0" MIN. LOCAL STREET RESIDENTIAL USE 36'–0" MAX. ALL DRIVEWAYS

GENERAL NOTES
1. THE MAXIMUM GRADE AT WHICH DRIVEWAYS WILL BE ALLOWED TO BE BUILT IS 10% (10% IF OVER 150') SLOPE, UNLESS PERMITTED BY ENGINEER. THE MINIMUM GRADE ALLOWED IS 2% SLOPE.
2. EDGE CONCRETE WITH 1/2" RADIUS EDGING TOOL.
3. HORIZONTAL CUT TO BE WIDTH OF DRIVEWAY PLUS THE "Y" DIMENSION AND THE FLARES ON EACH SIDE.
4. GARGUT MUST BE SLOPED TOWARD THE GUTTER TO MATCH SLOPE OF APRON.
5. SIDEWALK SECTION MUST BE 6" MINIMUM THICKNESS THROUGH WIDTH OF DRIVEWAY OR BE REPLACED WITH 6" THICKNESS THROUGH THE ENTIRE SECOND WIDTH OF DRIVEWAY.
6. NO OVERCUTTING WHERE CUTS MERGE.
7. PATCH ALL HOLES 1/2" OR LARGER IN EXPOSED SURFACE WITH UDOT APPROVED PATCHING COMPOUND.
8. GRIND FRONT EDGES TO AN APPROXIMATE 1-1/2" RADIUS.
9. GRIND SAWED SURFACE SO THAT NO BLADE MARKS APPEAR.
10. USE 6" MIN. DEPTH OR UNTREATED BASE COURSE UNDER ALL CONCRETE.
11. ALL DRIVEWAYS MUST MAINTAIN A NEGATIVE SLOPE AWAY FROM THE HOME. NO DOWN SLOPING DRIVEWAYS WILL BE ALLOWED UNLESS APPROVED BY ENGINEER.
12. CONCRETE SHALL COMPLY WITH SANDY CITY STANDARD SPECIFICATION SECTION 03000.
13. USE 6" MIN. UNTREATED BASE COURSE MATERIAL, COMPACTED TO 96% OF MAXIMUM DRY DENSITY.
14. USE 1/2" EXPANSION JOINT FILLER MATERIAL BETWEEN ADJACENT NOTE AND IN THE DRIVEWAY CENTERLINE IF "W" IS GREATER THAN 20'. EXPANSION JOINT SHALL BE FULL DEPTH OF CONCRETE PLUS 1", WITH TOP SET FLUSH WITH TOP OF CONCRETE.
15. SEE "SW-03 CONCRETE SIDEWALK" FOR JOINT PATTERN.
16. DRIVEWAYS LONGER THAN 150 FEET SHALL NOT EXCEED 10% MAXIMUM SLOPE.

NO.	AUTHORIZED BY	REVISIONS	DATE
1	R. KUMP	DWG REVISION	5/24/17
2	R. KUMP	PLAN CORRECTION	11/13/19
3	R. KUMP	NOTES REV	1/1/21

Sandy HEART OF THE WASATCH

STANDARD DETAIL
PUBLIC WORKS
DA–05
SIDEWALK ADJACENT TO CURB

DIP DRIVEWAY PER SANDY CITY STANDARD DA-05 (5)

SCALE: NTS

No.	DATE	DESCRIPTION
9	04/20/2023	REVISED PER CITY COMMENTS
10	05/02/2023	REVISED PER ARCHITECT COMMENTS
11	06/05/2023	REVISED PER CITY COMMENTS
12	07/06/2023	REVISED PER CITY COMMENTS
13	09/26/2023	REVISED PER CITY COMMENTS
14	11/26/2023	REVISED PER CITY COMMENTS

SCALE MEASURES 1-INCH ON FULL SIZE SHEETS
ADJUST ACCORDINGLY FOR REDUCED SIZE SHEETS

DRAWN BY FAC
CHECKED BY AGA
FIELD CREW BJB
DATE 08/03/2023
DWG. FILE 2212304_SITE

PROFESSIONAL ENGINEER
11/26/23
No. 12655175
J. HYRUM OSGUTHORPE
STATE OF UTAH

BENCHMARK CIVIL
BENCHMARK ENGINEERING & LAND SURVEYING
9138 SOUTH STATE STREET SUITE #100
SANDY, UTAH 84070 (801) 542-7192
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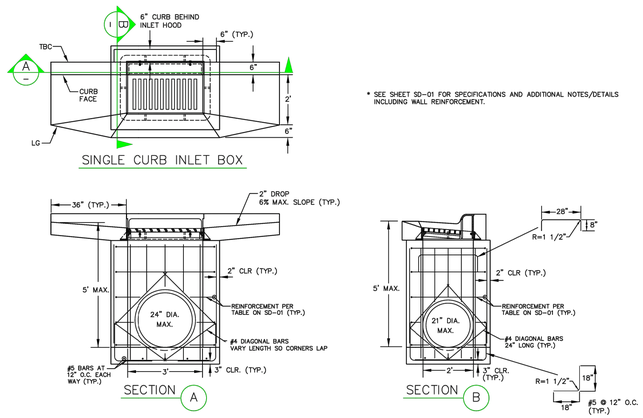
AC HQ
9352 SOUTH 670 WEST
SANDY, UTAH

PROJECT NO. 2212304

DETAIL SHEET

CDT.02
11 OF 13



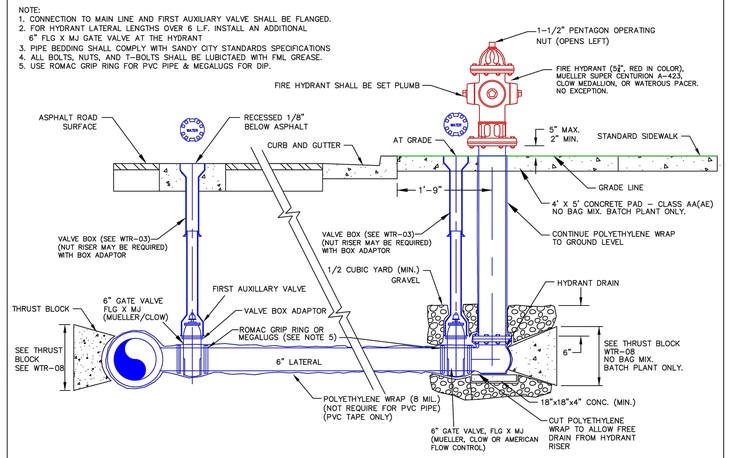
NOT TO SCALE

NO.	AUTHORIZED BY	REVISIONS	DATE
1	TS	CREATED	6/2017
2	TS	REVISED	12/2018

STANDARD DETAIL
PUBLIC UTILITIES
SD–02
SINGLE CURB INLET BOX

SDIB PER SANDY CITY STANDARD SD-02 (1)
SCALE: NTS

NOTE:
1. CONNECTION TO MAIN LINE AND FIRST AUXILIARY VALVE SHALL BE FLANGED.
2. FOR HYDRANT LATERAL LENGTHS OVER 6 L.F. INSTALL AN ADDITIONAL 6" FLG X MJ GATE VALVE AT THE HYDRANT.
3. PIPE BEDDING SHALL COMPLY WITH SANDY CITY STANDARDS SPECIFICATIONS
4. ALL BOLTS, NUTS, AND T-BOLTS SHALL BE LUBICTAED WITH FML GREASE.
5. USE ROMAC GRIP RING FOR PVC PIPE & MEGALUGS FOR DIP.

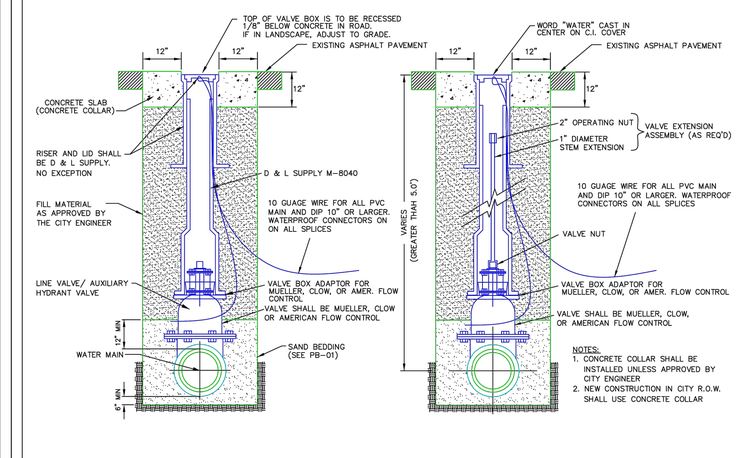


NOT TO SCALE

NO.	AUTHORIZED BY	REVISIONS	DATE
1	CC	CREATED	6/2017
2	CC	REVISED	12/2018

STANDARD DETAIL
PUBLIC UTILITIES
WTR–01
FIRE HYDRANT CONNECTION

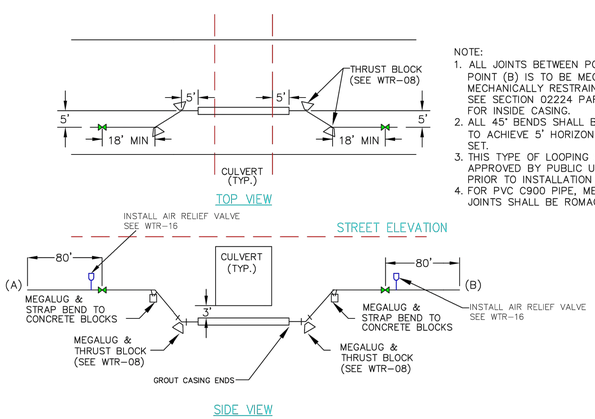
FIRE HYDRANT AND GATE VALVE PER SANDY CITY STANDARDS WTR-01 & WTR-03 (2)
SCALE: NTS



NOT TO SCALE

NO.	AUTHORIZED BY	REVISIONS	DATE
1	CC	CREATED	6/2017
2	CC	REVISED	12/2018

STANDARD DETAIL
PUBLIC UTILITIES
WTR–03
VALVE BOX – CONCRETE COLLAR

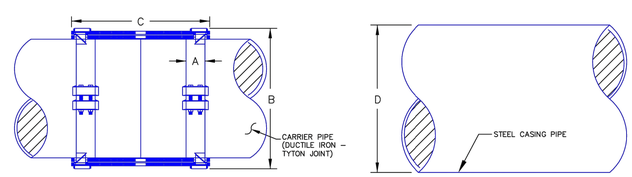


NOTE:
1. ALL JOINTS BETWEEN POINT (A) & POINT (B) IS TO BE MEGALUG MECHANICALLY RESTRAINED JOINTS. SEE SECTION 02224 PART 2 2.04 FOR INSIDE CASING.
2. ALL 45° BENDS SHALL BE ROLLED TO ACHIEVE 5' HORIZONTAL OFF SET.
3. THIS TYPE OF LOOPING SHALL BE APPROVED BY PUBLIC ULTILITIES PRIOR TO INSTALLATION
4. FOR PVC C900 PIPE, MECHANICAL JOINTS SHALL BE ROMAC GRIP RING.

NOT TO SCALE

NO.	AUTHORIZED BY	REVISIONS	DATE
1	CC	CREATED	6/2017

STANDARD DETAIL
PUBLIC UTILITIES
WTR–04
STEEL CASING WATER LOOP



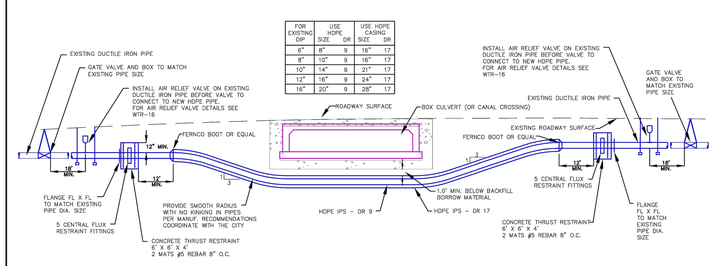
CARRIER PIPE NOMINAL SIZE (in.)	CARRIER PIPE OD (in.)	DIM. A (in.)	DIM. B (in.)	DIM. C (in.)	DIM. D MIN. CASING SIZE (ID) (in.)	REQUIRED CASING PIPE ID (in.)	WALL THICKNESS (in.)
4	4.8	1 1/8	11 3/4	12	12.4	16	3/8
6	6.9	1 1/8	13 3/8	13	13.6	16	3/8
8	9.05	1 1/8	17 1/8	15	17.5	20	3/8
10	11.10	1 3/8	19 3/4	16	21.5	24	3/8
12	13.2	1 3/8	21 7/8	18	23	24	3/8
14	15.3	4	26 3/8	24	27	28	1/2
16	17.4	4	28 3/8	28	30	33	5/8
18	19.5	5	30 1/2	28	31	36	5/8
20	21.6	7	32 1/4	28	33	36	5/8
24	25.8	7	38 1/4	28	39	40	5/8

NOTES:
1. SPECIFIC SITE REQUIREMENTS MAY DICTATE ADJUSTMENTS IN STEEL CASING PIPE SIZE AND WALL THICKNESS.
2. CARRIER PIPE IS DUCTILE IRON CLASS 52 (PVC C900 DR 14 – SEE WRITTEN SPECS), TYTON JOINT UNLESS OTHERWISE NOTED ON THE PROJECT PLANS.
3. CASING PIPE IS A-252 GRADE B STEEL UNLESS OTHERWISE NOTED ON THE PROJECT PLANS.
4. SEE APPROVED PLAN FOR CASING LAYOUT. OTHERWISE SEE STANDARD DETAIL 6B.
5. CARRIER PIPE JOINTS SHALL BE RESTRAINED FOR A MINIMUM OF 80' EITHER SIDE OF CASING
6. WORKING PRESSURE RATING FOR THE RESTRAINED CARRIER PIPE, MIN. 2:1 SAFETY FACTOR IN ALL SIZES.

NOT TO SCALE

NO.	AUTHORIZED BY	REVISIONS	DATE
1	CC	CREATED	6/2017

STANDARD DETAIL
PUBLIC UTILITIES
WTR–05
CASING–CARRIER PIPE



FOR EXISTING DIP	USE HDPE SIZE	DR	USE HDPE CASING SIZE	DR
6"	8"	9	16"	17
8"	10"	9	16"	17
10"	14"	9	21"	17
12"	16"	9	24"	17
16"	20"	9	28"	17

HDPE WATER LINE LOOP TYPICAL DETAILS

NOT TO SCALE

NO.	AUTHORIZED BY	REVISIONS	DATE
1	CC	CREATED	6/2017

STANDARD DETAIL
PUBLIC UTILITIES
WTR–07
HDPE WATER LINE LOOP DETAIL

WATER LINE LOOP AND CASING PER SANDY CITY STANDARD WTR-04, WTR-05, & WTR-07 (3)
SCALE: NTS

No.	DATE	DESCRIPTION
9	04/22/2025	REVISED PER CITY COMMENTS
10	06/03/2025	REVISED PER ARCHITECT COMMENTS
11	06/25/2025	REVISED PER CITY COMMENTS
12	07/29/2025	REVISED PER CITY COMMENTS
13	09/29/2025	REVISED PER CITY COMMENTS
14	11/26/2025	REVISED PER CITY COMMENTS

SCALE MEASURES 1-INCH ON FULL SIZE SHEETS
ADJUST ACCORDINGLY FOR REDUCED SIZE SHEETS

DRAWN BY: FAC
CHECKED BY: AGA
FIELD CREW: BJB
DATE: 08/03/2023
DWG. FIL: 2212304 SITE

PROFESSIONAL ENGINEER
11/26/25
No. 12655175
J. HYRUM OSGUTHORPE
STATE OF UTAH

BENCHMARK CIVIL
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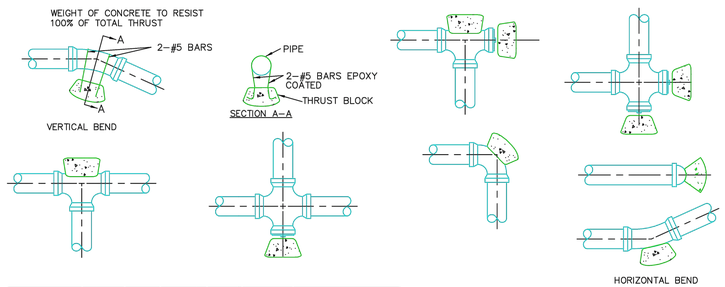
SANDY, UTAH

PROJECT NO. 2212304

DETAIL SHEET

CDT.03
12 OF 13



Horizontal Bend			Soft Clay	Silt	Sandy Silt	Sandy	Sandy Clay	Vertical Bend		
ID (in)	OD (in)	Ab (SF)	Ab (SF)	Ab (SF)	Ab (SF)	Ab (SF)	Ab (SF)	ID (in)	OD (in)	Vol (CY)
3	3.96	5.23	3.48	1.74	1.31	0.87	3	3.96	0.83
4	4.80	7.68	5.12	2.56	1.92	1.28	4	4.80	1.22
6	6.90	15.86	10.58	5.29	3.97	2.64	6	6.90	2.52
8	9.05	27.29	18.19	9.10	6.82	4.55	8	9.05	4.33
10	11.10	41.06	27.37	13.69	10.26	6.84	10	11.10	6.52
12	13.20	58.06	38.71	19.35	14.51	9.68	12	13.20	9.22
14	15.30	78.00	52.00	26.00	19.50	13.00	14	15.30	12.38
16	17.40	100.88	67.26	33.63	25.22	16.81	16	17.40	16.01

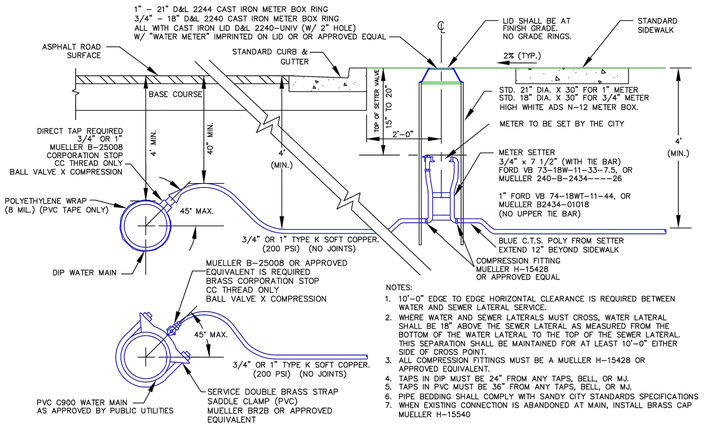
NOTES:
1. BEARING SURFACE (Ab) SHOULD, WHERE POSSIBLE, BE PLACED AGAINST UNDISTURBED SOIL. WHERE NOT POSSIBLE, FILL BETWEEN THE BEARING SURFACE AND UNDISTURBED SOIL SHOULD BE COMPACTED TO 90% STD. PROCTOR DENSITY, MIN.
2. BLOCK WIDTH SHOULD BE BETWEEN ONE AND TWO TIMES THE BLOCK HEIGHT.
3. CONCRETE TO HAVE UNIT WT. OF 165 PCF AND TO COMPLY WITH SANDY STANDARDS AND SPECIFICATIONS

NOT TO SCALE

NO.	AUTHORIZED BY	REVISIONS	DATE
1	CC	CREATED	6/2017

STANDARD DETAIL
PUBLIC UTILITIES
WTR–08
THRUST BLOCK INSTALLATIONS

THRUST BLOCK PER SANDY CITY STANDARD WTR-08 (1)
SCALE: NTS



NOTES:
1. 10'–0" EDGE TO EDGE HORIZONTAL CLEARANCE IS REQUIRED BETWEEN WATER AND SEWER LATERAL SERVICE.
2. WHERE WATER AND SEWER LATERALS MUST CROSS, WATER LATERAL SHALL BE 18" ABOVE THE SEWER LATERAL AS MEASURED FROM THE BOTTOM OF THE WATER LATERAL TO THE TOP OF THE SEWER LATERAL. THIS SEPARATION SHALL BE MAINTAINED FOR AT LEAST 10'–0" EITHER SIDE OF CROSS POINT.
3. ALL COMPRESSION FITTINGS MUST BE A MUELLER H–15428 OR APPROVED EQUIVALENT.
4. TAPS IN DIP MUST BE 24" FROM ANY TAPS, BELL, OR MJ.
5. TAPS IN PVC MUST BE 36" FROM ANY TAPS, BELL, OR MJ.
6. PIPE BEDDING SHALL COMPLY WITH SANDY CITY STANDARDS SPECIFICATIONS
7. WHEN EXISTING CONNECTION IS ABANDONED AT MAIN, INSTALL BRASS CAP MUELLER H–15540

NOT TO SCALE

NO.	AUTHORIZED BY	REVISIONS	DATE
1	CC	CREATED	6/2017
2	CC	REVISED	12/2018

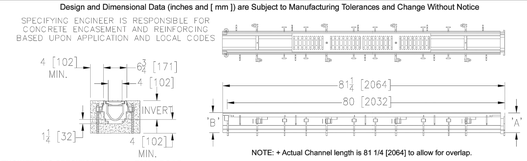
STANDARD DETAIL
PUBLIC UTILITIES
WTR–09
3/4" AND 1" WATER SERVICE

1" WATER SERVICE PER SANDY CITY STANDARD WTR-09 (2)
SCALE: NTS

ZURN **Z886-HDG-LD**
6-3/4 [171] WIDE REVEAL TRENCH DRAIN SYSTEM WITH HEAVY-DUTY GALVANIZED FRAME ASSEMBLY AND LIGHT DUTY GRATES

SPECIFICATION SHEET
TAG _____

Design and Dimensional Data (inches and [mm]) are Subject to Manufacturing Tolerances and Change Without Notice



NOTE: + Actual Channel length is 81 1/4 [2064] to allow for overlap.

ENGINEERING SPECIFICATION: Zurn Z886-HDG-LD
Channels shall be 80 [2032] long, 6-3/4 [171] wide reveal and have a 4 [102] throat. Modular channel sections shall be made of 0% water absorbent High Density Polyethylene (HDPE). Shall have a positive mechanical connection between channel sections that will not separate during the installation and shall mechanically lock into the concrete surround every 10 [254]. Channels shall weigh less than 2.31 lbs [1.05kg] per linear foot, have a smooth, 1-1/2 [38] radiused self cleaning bottom with a Manning's coefficient of 0.009 and 0.75% or neutral 0% built in slope. Channels shall have rebar clips standard to secure trench in its final location. Shall be provided with standard FG grates that lock down to frame. Fabricated Galvanized Steel grate is rated class A per the DIN EN1433 top load classifications. Supplied in 40 [1016] nominal lengths with 3/8 [10] wide slots, and 3/4 [19] bearing depth. Grate has an open area of 12.00 sq. in per ft. [25,400 sq. mm per meter]. The 0.105 [2.66] thick Heavy-Duty Carbon Steel Galvanized Frame Assembly conforms to ASTM specification A36 with 10 - 4 [102] long concrete anchors per 80 [2032]. Grate lockdown bars are to be integral to the frame and and Galvanizing conforms to ASTM specification A123. All welds must be performed by a certified welder per ASTM standard AWS D1.1. Frames Shall be produced in the U.S.A. The System loading is based upon the grate being used.

PREFIX OPTIONS (Check/specify appropriate options)
____ Z Six-foot, Eight-inch High Density Polyethylene (HDPE)*

SUFFIX OPTIONS (Check/specify appropriate options)

Outlet Adapters Add/Each
____ -E1 Closed End Cap
____ -E2 2 [51] No-Hub End Outlet
____ -E3 3 [76] No-Hub End Outlet
____ -E4 4 [102] No Hub End Outlet
____ -E6 6 [152] No-Hub End Outlet
____ -U2 2 [51] No-Hub Bottom Outlet
____ -U3 3 [76] No-Hub Bottom Outlet
____ -U4 4 [102] No-Hub Bottom Outlet
____ -U6 6 [152] No-Hub Bottom Outlet

Frame Options
____ -SW Sidewall Extension - 9 [229] High
____ -SW2 Sidewall Extension - 18 [457] High

Grate Options (Load Classifications are per DIN EN1433)
____ -HPP Heel-Proof Polyethylene Grate - Class A
____ -RFGC Reinforced Galvanized Steel Slotted Grate - Class C
____ -RPGC Reinforced Galvanized Perforated Grate - Class C
____ -RPGRC Reinforced Galvanized Perforated Reverse Punch Anti-Slip Grate - Class C

Miscellaneous Options
____ -VP Vandal-Proof Lockdown
____ -JC Joint Connector
____ -DB Bottom Dome Strainer

Decorative Grate Options (Load Classifications are per DIN EN1433)
____ -BCD Bronze Circular Decorative Grate - Class A
____ -BDD Bronze Diagonal Decorative Grate - Class A
____ -DCD Ductile Iron Circular Decorative Grate - Class C
____ -DDD Ductile Iron Diagonal Decorative Grate - Class A
____ -DOG Ductile Iron Decorative Grate - Class A
____ -DMV Ductile Wave Decorative Grate - Class A
____ -GWG Galvanized Steel Mesh Grate - Class A
____ -HPB Heel-Proof Bronze Slotted Grate - Class A

MADE in the U.S.A. (Load Classifications are per DIN EN 1433)
____ -AWG Aluminum Wire Grate - Class A
____ -FG* Fabricated Galvanized Steel Slotted Grate - Class A
____ -GG Fiberglass Grate - Class A
____ -PG Perforated Galvanized Steel Grate - Class A

Decorative MADE in the U.S.A. (Load Classifications are per DIN EN 1433)
____ -BZ Bronze Decorative Grate - Class A
____ -NBZ Nickel Bronze Decorative Grate - Class A
____ -SWGB-AS Slip Resistant Stainless Steel Wire Grate- Class B
____ -SWG-B Stainless Steel Wire Grate- Class B

* Regularly furnished unless otherwise specified

⚠ **WARNING:** Cancer and Reproductive Harm - www.P65Warnings.ca.gov
⚠ **ADVERTENCIA:** Cáncer y daño reproductivo - www.P65Warnings.ca.gov
⚠ **AVERTISSEMENT:** Cancer et effets néfastes sur la reproduction - www.P65Warnings.ca.gov

Zurn Industries, LLC | Specification Drainage Operation
1801 Pittsburgh Avenue, Erie, PA 16502, Ph. 855.663.5876

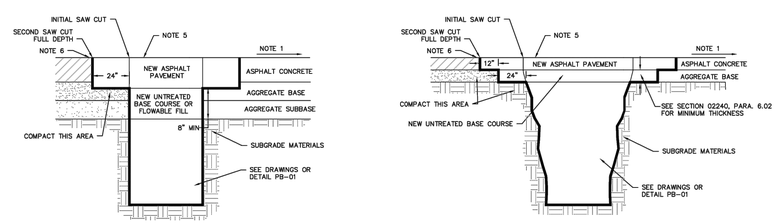
In Canada | Zurn Industries Limited
7900 Goreway Drive, Unit 10, Brampton, Ontario L6T 5W6, Ph. 877.892.5216

www.zurn.com

Rev. B
Date: 03/20/24
C.N. No. 145919
Prod. | Dwg. No. Z886-HDG-LD

Trench No.	'A' Shallow Inv.	'B' Deep Inv.	Flow (cfs)	Flow (gpm)	Flow (lps)
8601	3.50 [89]	4.10 [104]	0.21	93	6
8602	4.10 [104]	4.70 [119]	0.27	122	8
8603	4.70 [119]	5.30 [135]	0.34	152	10
8603N	5.30 [135]	5.30 [135]	-	-	-
8604	5.30 [135]	5.90 [150]	0.41	183	12
8605	5.90 [150]	6.50 [165]	0.48	214	13
8606	6.50 [165]	7.10 [180]	0.55	245	15
8606N	7.10 [180]	7.10 [180]	-	-	-
8607	7.10 [180]	7.70 [196]	0.62	276	17
8608	7.70 [196]	8.30 [211]	0.69	308	19
8609	8.30 [211]	8.90 [226]	0.76	339	21
8610	8.90 [226]	9.50 [241]	0.83	371	23
8611	9.50 [241]	10.10 [257]	0.90	403	25
8612	10.10 [257]	10.70 [272]	0.97	435	27
8612N	10.70 [272]	10.70 [272]	-	-	-
8613	10.70 [272]	11.30 [287]	1.04	467	29
8614	11.30 [287]	11.90 [302]	1.11	498	31
8615	11.90 [302]	12.50 [318]	1.18	530	33

ZURN TRENCH DRAIN Z886-HDG-LD (TRENCH NO. 8609) (3)
SCALE: NTS



(A) SHALLOW EXCAVATION ASPHALT PAVEMENT
(42" OR LESS FROM PAVEMENT SURFACE TO BOTTOM OF EXCAVATION)

(B) DEEP EXCAVATION ASPHALT PAVEMENT
(MORE THAN 42" FROM PAVEMENT SURFACE TO BOTTOM OF EXCAVATION)

GENERAL NOTES

1. ADDITIONAL PAVEMENT REMOVAL: Remove additional pavement to a painted lane stripe, a lip of gutter, a curb, an existing pavement patch, or an edge of the pavement if such a feature is within 2–feet of the second saw–cut. If more than 50% of the permanent surfacing of a traveled lane is impacted by the excavation, the entire lane width shall be sawcut, removed, and replaced. Jagged, saw tooth edges are not allowed.

2. UNTREATED BASE COURSE: Provide material specified in Section 02230. Place and compact per Section 02240 and Section 02575. Maximum lift thickness is 8–inches before compaction.

3. SHORING: Shore in conformance with Section 02214.

4. TACK COAT: Full tack coat coverage on all vertical surfaces.

5. ASPHALT PAVEMENT: Use asphalt concrete specified in Section 02513.
   A. Install in lifts no greater than 3–inches after compaction.
   B. Compact each lift in conformance with Section 02503
   C. Plane off surface distortions that exceed 1/4 inch deviation in 10 feet. Coat planed surfaces with a cationic or anionic emulsion as approved by City Engineer.
   D. Asphalt pavement thickness depth shall equal existing plus 1–inch, 4" minimum, 6" maximum
   E. Use ⅜" gradation per Section 02513.
   F. Finished surface of restored trench not to exceed ¼" +/– of existing.

6. JOINT REPAIR: If a crack occurs at the "T" patch connection to existing pavement or at any street fixture, seal the crack per Section 02511.

7. PATCH REPAIR: Repair the asphalt pavement patch if any of the following conditions within the patch occur.
   A. Cracks at least 1–foot long and 1/4–inch wide occur more often than 1 in 10 square feet.
   B. Pavement surface distortion exceeds 1/4–inch deviation in 10–feet.
   C. Asphalt raveling is greater than 1 square foot per 100 square feet.
   D. If slurry seal within 1 year, re–slurry seal full lane width for each lane effected

8. EQUIPMENT: All asphalt pavement shall be installed with mechanical paving equipment unless otherwise approved by the City Engineer.

9. COMPLY WITH ALL REQUIREMENTS OF SECTION 02575.

10. Plant Mix Seal Coat: For plant mix seal coat comply with UDOT Specification, Section 02786. Mill and replace existing plant mix seal coat 10 feet from edge of second cut in all directions.

NO.	AUTHORIZED BY	REVISIONS	DATE
1	R. KUMP	DWG REVISION	5/24/17

STANDARD DETAIL
PUBLIC WORKS
RC–02
RESTORATION OF ASPHALT CONCRETE IN TRENCHES

RESTORATION OF ASPHALT CONCRETE IN TRENCHES (4)
SCALE: NTS

STORM DRAINAGE CALCULATIONS
SCS CURVE NUMBER METHOD

Area Identification (A)		CN	CN*A
Roof =	7,200	98	705600 S.F.
Pavement =	17,064	98	1672272 S.F.
Landscaping =	5,572	84	468048 S.F.
Sum:	29836 S.F.	Sum:	2845920 S.F.

SANDY HYDROGRAPH (10-YR 3-HR STORM)				Allowable Discharge =	.20cfs/acre
Storm Duration (min)	Intensity (in/hr)	Rainfall (inches)	Rainfall Excess (cu.ft.)	Allowed Discharge (cu.ft)	Volume to Detain (cu.ft)
5	3.55	0.295	144	41	103
15	2.17	0.543	533	123	410
30	1.37	0.686	805	247	559
45	1.10	0.822	1082	370	712
60	0.89	0.886	1218	493	**724**
90	0.66	0.987	1433	740	693
120	0.52	1.049	1569	986	583
180	0.38	1.144	1781	1479	301

Detention Calculations

Pond Volume

Pond 1 Civil 3D = **266 cf**
Pond 2 Civil 3D = **166 cf**

Pipe Volume

12 in. Pipe Length = **437 lf** Volume = **343 cf**
8 in. Pipe Length = **28 lf** Volume = **10 cf**

Is there adequate storage? Storage Provided = **785 cf** Req. Storage = **724 cf** **YES**

Orifice Design:
The storm runoff will be detained at 0.2 cfs/acre

$$Q = C_d A_0 \sqrt{2gh}$$

Total acreage of development: 0.68 acres
Allowable discharge: 0.2 cfs/acre
Max head: 5.59 ft
Design diameter for new orifice: 1.5 inch **(use 2" to prevent clogging)**

DRAINAGE CALCULATIONS (5)
SCALE: NTS

NO.	DATE	DESCRIPTION
9	04/22/2025	REVISED PER CITY COMMENTS
10	05/02/2025	REVISED PER ARCHITECT COMMENTS
11	06/25/2025	REVISED PER CITY COMMENTS
12	07/08/2025	REVISED PER CITY COMMENTS
13	09/26/2025	REVISED PER CITY COMMENTS
14	11/26/2025	REVISED PER CITY COMMENTS

SCALE MEASURES 1-INCH ON FULL SIZE SHEETS
ADJUST ACCORDINGLY FOR REDUCED SIZE SHEETS

DRAWN BY FAC
CHECKED BY AGA
FIELD CREW BJB
DATE 08/03/2023
DWG. FILE 2212304_SITE

PROFESSIONAL ENGINEER
11/26/25
No. 12655175
J. HYRUM OSGUTHORPE
STATE OF UTAH

BENCHMARK ENGINEERING & LAND SURVEYING
9138 SOUTH STATE STREET SUITE #100
SANDY, UTAH 84070 (801) 542-7192
www.benchmarkcivil.com

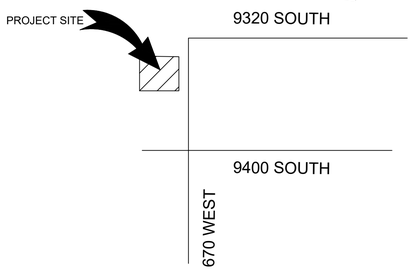
AC HQ
9352 SOUTH 670 WEST
SANDY, UTAH

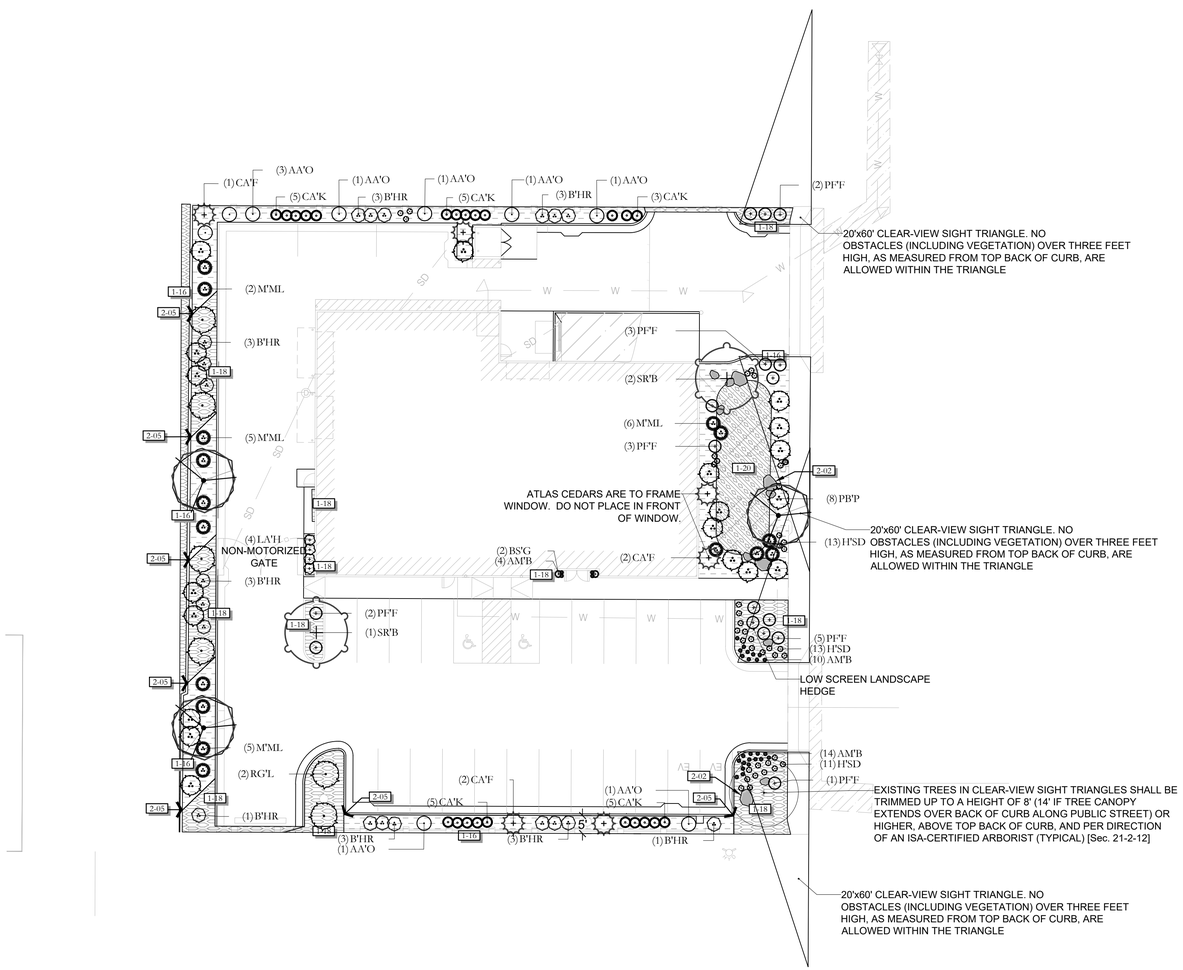
PROJECT NO. 2212304

DETAIL SHEET

CDT.04
13 OF 13

VICINITY MAP





SITE MATERIALS LEGEND

(NOTE: SITE MATERIALS QUANTITIES ARE PROVIDED FOR CONVENIENCE ONLY. IN CASE OF DISCREPANCY, THE DRAWING SHALL TAKE PRECEDENCE.)

1 LANDSCAPE

1-16	1" PERMA BARK ROCK MULCH. SUBMIT SAMPLES FOR LANDSCAPE ARCHITECT AND OWNER APPROVAL. PROVIDE 3" DEPTH OF ROCK MULCH TOP DRESSING. SEE INORGANIC MULCH LANDSCAPE NOTES FOR ADDITIONAL INFORMATION. SHEET LP-101.	2,696 sf
1-18	1" CRUSHED LAKESIDE GRAVEL, SUBMIT SAMPLES FOR LANDSCAPE ARCHITECT AND OWNER APPROVAL. PROVIDE 4" DEPTH OF ROCK MULCH TOP DRESSING. SEE INORGANIC MULCH LANDSCAPE NOTES FOR ADDITIONAL INFORMATION. SHEET LP-101.	1,977 sf
1-20	2-4" SOUTHTOWN COBBLE. SUBMIT SAMPLES FOR LANDSCAPE ARCHITECT AND OWNER APPROVAL. PROVIDE 4" DEPTH OF ROCK MULCH TOP DRESSING. SEE INORGANIC MULCH LANDSCAPE NOTES FOR ADDITIONAL INFORMATION. SHEET LP-101.	702 sf

2 HARDSCAPE

2-01	BOULDERS- DECORATIVE 2'. SUBMIT COLOR SAMPLES FOR ARCHITECT AND OWNER APPROVAL. SEE PLACEMENT INSTRUCTIONS ON DETAIL SHEET LP-501..	7
2-02	BOULDERS- DECORATIVE 4'. SUBMIT COLOR SAMPLES FOR ARCHITECT AND OWNER APPROVAL. SEE PLACEMENT INSTRUCTIONS ON DETAIL.SHEET LP-501.	4
2-03	5" DEEP STEEL EDGING - INSTALL PER MANUFACTURER SPECIFICATION.	63 lf

PLANT LEGEND

(NOTE: PLANT QUANTITIES ARE PROVIDED FOR CONVENIENCE ONLY. IN CASE OF DISCREPANCY, THE DRAWING SHALL TAKE PRECEDENCE.)

CONIFERS

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	CONT	CAL	SIZE
	CA'F	6	Cedrus atlantica glauca `Fastigiata` Columnar Blue Atlas Cedar low to moderate; 30x10; sun to part shade; z6; Utah Lake water tolerant	B & B		6`

DECIDUOUS TREES

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	CONT	CAL	SIZE
	SR'B	2	Syringa reticulata `Bailnce` Snowdance Tree Lilac Td3; 18x20; AV 314; sun; z3	B & B	2"Cal	
	ZS'C	3	Zelkova serrata 'JFS-KW1' TM City Sprite Zelkova Td4; 24x18; AV 490; sun; z5; Utah Lake water tolerant	B & B	2"Cal	

DECIDUOUS SHRUBS

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	CONT
	AA'O	9	Amelanchier alnifolia `Obelisk` TM Standing Ovation Serviceberry Sd2; 15x4; AV50; sun to part shade; z2; Utah Lake water tolerant	5 gal
	B'HR	20	Buddleja davidii 'Tobud1202' Buzz™ Hot Raspberry Butterfly Bush Moderate; 4'x4'; sun; z5; Utah Lake water tolerant	5 gal
	PB'P	19	Prunus besseyi `P011S` 'Pawnee Buttes' Pawnee Buttes Sand Cherry Sd1; 1.5 x 6; AV19.5; sun; z4;	5 gal
	PF'F	16	Potentilla fruticosa 'Fargo' Dakota Sunspot TM Fargo Yellow Shrubby Cinquefoil Sd2; 2-3 x3-4; AV 7; sun; z2; Utah Lake water tolerant	5 gal
	RG'L	6	Rhus aromatica `Gro-Low` Gro-Low Sumac GV1; 2 x 8; AV 28; full to part sun; z4; Utah Lake water tolerant	5 gal

EVERGREEN SHRUBS

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	CONT
	BS'G	2	Buxus sempervirens `Graham Blandy` Graham Blandy English Boxwood moderate; 9x2; Sun to part shade; z5; Utah Lake water tolerant	5 gal
	LA'H	4	Lavandula angustifolia `Hidcote Blue` Hidcote Blue Lavender P2; 1.5x3; AV 3; sun; z4; Utah Lake water tolerant	1 gal

GRASSES

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	CONT
	CA'K	23	Calamagrostis x acutiflora `Karl Foerster` Feather Reed Grass Tw2; 4x3; AV 7; sun; z4; Utah Lake water tolerant	1 gal
	M'ML	16	Miscanthus sinensis `Morning Light` Morning Light Maiden Grass Tw2; 5x4; AV 32; sun to light shade; z5; Utah Lake water tolerant	2 gal

PERENNIALS

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	CONT
	AM'B	28	Armeria maritima 'Bloodstone' Bloodstone Sea Thrift 8-10" x 12-18:; sun to part shade; low water z3	1 gal
	H'SD	41	Hemerocallis x `Stella de Oro` Stella de Oro Daylily P3; 2x2; AV 1; full to part sun; z3; Utah Lake water tolerant	1 gal

ISSUE DATE	PROJECT NUMBER
11/26/2025	UT24048

NO.	REVISION	DATE
1	CITY COMMENTS	4-4-2025
2	CITY COMMENTS	4-15-2025
3		
4		
5		
6		
7		

PLAN INFORMATION

811 BLUE STAKES OF UTAH
UTILITY NOTIFICATION CENTER, INC
1-800-662-4111
www.bluestakes.org

N

0' 10' 20' 40' 80'
GRAPHIC SCALE: 1" = 20'

PROJECT INFORMATION

AC HQ
9352 S. 670 W.
SANDY, UTAH

DEVELOPER / PROPERTY OWNER / CLIENT

ARCHITECTUAL COMPONENTS
ATT: JOSH NAYLOR
801-557-7523
JNAYLOR@ARCH-COMPONENTS.COM

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LANDSCAPE ARCHITECT / PLANNER

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Landscape Architecture Planning & Visualization
3450 N. TRIUMPH BLVD. SUITE 102
LEHI, UTAH 84043 (801) 995-2217
www.pkjdesigngroup.com

LICENSE STAMP

LICENSED LANDSCAPE ARCHITECT
JEREMY ANDWORTH
8/28/21 - 5301
11/26/2025
ELECTRONIC SEAL
STATE OF UTAH

DRAWING INFO	
PM:	JTA
DRAWN:	ALR
CHECKED:	JMA
PLOT DATE:	11/26/2025

LANDSCAPE OVERALL PLAN

CITY PERMIT SET

LP-100

LANDSCAPE PLAN SPECIFICATIONS

PART 1 - GENERAL

1.1 SUMMARY

A. THIS SECTION INCLUDES LANDSCAPE PROCEDURES FOR THE PROJECT INCLUDING ALL LABOR, MATERIALS, AND INSTALLATION NECESSARY, BUT NOT LIMITED TO, THE FOLLOWING:

1. SITE CONDITIONS
2. GUARANTEES
3. MAINTENANCE
4. SOIL AMENDMENTS
5. FINE GRADING
6. LANDSCAPE EDGING
7. FURNISH AND INSTALLING PLANT
8. TURF PLANTING
9. WEED BARRIER

1.2 SITE CONDITIONS

A. EXAMINATION: BEFORE SUBMITTING A BID, EACH CONTRACTOR SHALL CAREFULLY EXAMINE THE CONTRACT DOCUMENTS; SHALL VISIT THE SITE OF THE WORK; SHALL FULLY INFORM THEMSELVES AS TO ALL EXISTING CONDITIONS AND LIMITATIONS; AND SHALL INCLUDE IN THE BID THE COST OF ALL ITEMS REQUIRED BY THE CONTRACT DOCUMENTS ARE AT A VARIANCE WITH THE APPLICABLE LAWS, BUILDING CODES, RULES, REGULATIONS, OR CONTAIN OBVIOUS ERRONEOUS OR UNCOORDINATED INFORMATION, THE CONTRACTOR SHALL PROMPTLY NOTIFY THE PROJECT REPRESENTATIVE AND THE NECESSARY CHANGES SHALL BE ACCOMPLISHED BY ADDENDUM.

B. PROTECTION: CONTRACTOR TO CONDUCT THE WORK IN SUCH A MANNER TO PROTECT ALL EXISTING UNDERGROUND UTILITIES OR STRUCTURES. CONTRACTOR TO REPAIR OR REPLACE ANY DAMAGED UTILITY OR STRUCTURE USING IDENTICAL MATERIALS TO MATCH EXISTING AT NO EXPENSE TO THE OWNER.

C. IRRIGATION SYSTEM: DO NOT BEGIN PLANTING UNTIL THE IRRIGATION SYSTEM IS COMPLETELY INSTALLED, IS ADJUSTED FOR FULL COVERAGE AND IS COMPLETELY OPERATIONAL.

1.3 PERMITS

A. BLUE STAKE/ DIG LINE: WHEN DIGGING IS REQUIRED, "BLUE STAKE" OR "DIG LINE" THE WORK SITE AND IDENTIFY THE APPROXIMATE LOCATION OF ALL KNOWN UNDERGROUND UTILITIES OR STRUCTURES.

1.4 PLANT DELIVERY, QUALITY, AND AVAILABILITY

A. UNAUTHORIZED SUBSTITUTIONS WILL NOT BE ACCEPTED. IF PROOF IS SUBMITTED THAT SPECIFIC PLANTS OR PLANT SIZES ARE UNOBTAINABLE, WRITTEN SUBSTITUTION REQUESTS WILL BE CONSIDERED FOR THE NEAREST EQUIVALENT PLANT OR SIZE. ALL SUBSTITUTION REQUESTS MUST BE MADE IN WRITING AND PREFERABLY BEFORE THE BID DUE DATE.

1.5 FINAL INSPECTION

A. ALL PLANTS WILL BE INSPECTED AT THE TIME OF FINAL INSPECTION PRIOR TO RECEIVING A LANDSCAPE SUBSTANTIAL COMPLETION FOR CONFORMANCE TO SPECIFIED PLANTING PROCEDURES, AND FOR GENERAL APPEARANCE AND VITALITY. ANY PLANT NOT APPROVED BY THE PROJECT REPRESENTATIVE WILL BE REJECTED AND REPLACED IMMEDIATELY.

1.6 LANDSCAPE SUBSTANTIAL COMPLETION

A. A SUBSTANTIAL COMPLETION CERTIFICATE WILL ONLY BE ISSUED BY THE PROJECT REPRESENTATIVE FOR "LANDSCAPE AND IRRIGATION" IN THEIR ENTIRETY. SUBSTANTIAL COMPLETION WILL NOT BE PROPORTIONED TO BE DESIGNATED AREAS OF A PROJECT.

1.7 MAINTENANCE

A. PLANT MATERIAL: THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN ALL PLANTED MATERIALS IN A HEALTHY AND GROWING CONDITION FOR 30 DAYS AFTER RECEIVING A LANDSCAPE SUBSTANTIAL COMPLETION AT WHICH TIME THE GUARANTEE PERIOD COMMENCES. THIS MAINTENANCE IS TO INCLUDE MOWING, WEEDING, CULTIVATING, FERTILIZING, MONITORING WATER SCHEDULES, CONTROLLING INSECTS AND DISEASES, RE-GUYING AND STAKING, AND ALL OTHER OPERATIONS OF CARE NECESSARY FOR THE PROMOTION OF ROOT GROWTH AND PLANT LIFE SO THAT ALL PLANTS ARE IN A CONDITION SATISFACTORY AT THE END OF THE GUARANTEE PERIOD. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR FAILURE TO MONITOR WATERING OPERATIONS AND SHALL REPLACE ANY AND ALL PLANT MATERIAL THAT IS LOST DUE TO IMPROPER APPLICATION OF WATER.

1.8 GUARANTEE

A. GUARANTEE: A GUARANTEE PERIOD OF ONE YEAR SHALL BEGIN FROM END OF MAINTENANCE PERIOD AND FINAL ACCEPTANCE FOR TREES, SHRUBS, AND GROUND COVERS. ALL PLANTS SHALL GROW AND BE HEALTHY FOR THE GUARANTEE PERIOD AND TREES SHALL LIVE AND GROW IN ACCEPTABLE UPRIGHT POSITION. ANY PLANT NOT ALIVE, IN POOR HEALTH, OR IN POOR CONDITION AT THE END OF THE GUARANTEE PERIOD WILL BE REPLACED IMMEDIATELY. ANY PLANT WILL ONLY NEED TO BE REPLACED ONCE DURING THE GUARANTEE PERIOD. CONTRACTOR TO PROVIDE DOCUMENTATION SHOWING WHERE EACH PLANT TO BE REPLACED IS LOCATED. ANY OUTSIDE FACTORS, SUCH AS VANDALISM OR LACK OF MAINTENANCE ON THE PART OF THE OWNER, SHALL NOT BE PART OF THE GUARANTEE

PART II - PRODUCTS

2.1 LANDSCAPE MATERIALS

A. TREE STAKING: ALL TREES SHALL BE STAKED FOR ONE YEAR WARRANTY PERIOD. ALL TREES NOT PLUMB SHALL BE REPLACED. STAKED TREES SHALL USE VINYL TREE TIES AND TREE STAKES TWO (2) INCH BY TWO (2) BY EIGHT (8) FOOT COMMON PINE STAKES USED AS SHOWN ON THE DETAILS.

B. TREE WRAP: TREE WRAP IS NOT TO BE USED.

C. MULCH/ROCK: SEE PLANS. ALL PLANTER BEDS TO RECEIVE A MINIMUM 3" LAYER FOR TREES, SHRUBS, AND PERENNIALS AND 1" FOR GROUNDCOVERS.

D. WEED BARRIER: DEWITT 5 OZ. WEED BARRIER FABRIC. MANUFACTURED BY DEWITT COMPANY, DEWITTCOMPANY.COM OR APPROVED EQUAL.

E. TREE, SHRUB, AND GRASS BACKFILL MIXTURE; BACKFILL MIXTURE TO BE 75% NATIVE SOIL AND 25% TOPSOIL, THOROUGHLY MIXED TOGETHER PRIOR TO PLACEMENT.

F. TOPSOIL: REQUIRED FOR TURF AREAS, PLANTER BEDS AND BACKFILL MIXTURE. ACCEPTABLE TOPSOIL SHALL MEET THE FOLLOWING STANDARDS:

a. PH: 5.5-7.5
b. EC (ELECTRICAL CONDUCTIVITY): < 2.0 MMHOS PER CENTIMETER
c. SAR (SODIUM ABSORPTION RATION): < 3.0
d. % OM (PERCENT ORGANIC MATTER): >1%
e. TEXTURE (PARTICLE SIZE PER USDA SOIL CLASSIFICATION): SAND <70%; CLAY < 30%; SILT < 70%, STONE FRAGMENTS (GRAVEL OR ANY SOIL PARTICLE GREATER THAN TWO (2) MM IN SIZE) < 5% BY VOLUME.

G. TURF SOD: ALL SOD SHALL BE 18 MONTH OLD AS SPECIFIED ON PLANS (OR APPROVED EQUAL) THAT HAS BEEN CUT FRESH THE MORNING OF INSTALLATION. ONLY SOD THAT HAS BEEN GROWN ON A COMMERCIAL SOD FARM SHALL BE USED. ONLY USE SOD FROM A SINGLE SOURCE.

H. LANDSCAPE CURB EDGING: SIX (6) INCHES BY FOUR (4) INCHES EXTRUDED CONCRETE CURB MADE UP OF THE FOLLOWING MATERIALS:

a. WASHED MORTAR SAND FREE OF ORGANIC MATERIAL.
b. PORTLAND CEMENT (SEE CONCRETE SPEC. BELOW FOR TYPE)
c. REINFORCED FIBER – SPECIFICALLY PRODUCED FOR COMPATIBILITY WITH AGGRESSIVE ALKALINE ENVIRONMENT OF PORTLAND CEMENT-BASED COMPOSITES.
d. ONLY POTABLE WATER FOR MIXING.

I. LANDSCAPE METAL EDGING: 5.5" STEEL EDGING WITH 15" DOWELS INTO THE GROUND FOR STABILIZATION.

PART III - EXECUTION

3.1 GRADING

A. TOPSOIL PREPARATION: GRADE PLANTING AREAS ACCORDING TO THE GRADING PLAN. ELIMINATE UNEVEN AREAS AND LOW SPOTS. PROVIDE FOR PROPER GRADING AND DRAINAGE.

B. TOPSOIL PLACEMENT: SLOPE SURFACED AWAY FROM BUILDING AT TWO (2) PERCENT SLOPE WITH NO POCKETS OF STANDING WATER. ESTABLISH FINISH GRADES AT ONE (1) INCHES FOR PLANTERS BELOW GRADE OF ADJACENT PAVED SURFACED. PROVIDE NEAT, SMOOTH, AND UNIFORM FINISH GRADES. REMOVE SURPLUS SUB-SOIL AND TOPSOIL FROM THE SITE.

C. COMPACTION: COMPACTION UNDER HARD SURFACE AREAS (ASPHALT PATHS AND CONCRETE SURFACES) SHALL BE NINETY-FIVE (95) PERCENT. COMPACTION UNDER PLANTING AREAS SHALL BE BETWEEN EIGHTY-FIVE (85) AND NINETY (90) PERCENT.

3.2 TURF GRADING

A. THE SURFACE ON WHICH THE SOD IS TO BE LAID SHALL BE FIRM AND FREE FROM FOOTPRINTS, DEPRESSIONS, OR UNDULATIONS OF ANY KIND. THE SURFACE SHALL BE FREE OF ALL MATERIALS LARGER THAN 1/2" IN DIAMETER.

B. THE FINISH GRADE OF THE TOPSOIL ADJACENT TO ALL SIDEWALKS, MOW-STRIPS, ETC. PRIOR TO THE LAYING OF SOD, SHALL BE SET SUCH THAT THE CROWN OF THE GRASS SHALL BE AT THE SAME LEVEL AS THE ADJACENT CONCRETE OR HARD SURFACE. NO EXCEPTIONS.

3.3 PLANTING OPERATIONS

A. REVIEW THE EXACT LOCATIONS OF ALL TREES AND SHRUBS WITH THE PROJECT REPRESENTATIVE FOR APPROVAL PRIOR TO THE DIGGING OF ANY HOLES. PREPARE ALL HOLES ACCORDING TO THE DETAILS ON THE DRAWINGS.

B. WATER PLANTS IMMEDIATELY UPON ARRIVAL AT THE SITE. MAINTAIN IN MOIST CONDITION UNTIL PLANTED.

C. BEFORE PLANTING, LOCATE ALL UNDERGROUND UTILITIES PRIOR TO DIGGING. DO NOT PLACE PLANTS ON OR NEAR UTILITY LINES.

D. THE TREE PLANTING HOLE SHOULD BE THE SAME DEPTH AS THE ROOT BALL, AND TWO TIMES THE DIAMETER OF THE ROOT BALL.

E. TREES MUST BE PLACED ON UNDISTURBED SOIL AT THE BOTTOM OF THE PLANTING HOLE. BEGINNING AND BACKFILLING OPERATIONS. DO NOT USE PLANTING STOCK IF THE BALL IS CRACKED OR BROKEN BEFORE OR DURING PLANTING OPERATION.

I. APPLY VITAMIN B-1 ROOT STIMULATOR AT THE RATE OF ONE (1) TABLESPOON PER GALLON.

J. UPON COMPLETION OF BACKFILLING OPERATION, THOROUGHLY WATER TREE TO COMPLETELY SETTLE THE SOIL AND FILL ANY VOIDS THAT MAY HAVE OCCURRED. USE A WATERING HOSE, NOT THE AREA IRRIGATION SYSTEM. IF ADDITIONAL PREPARED TOPSOIL MIXTURE NEEDS TO BE ADDED, IT SHOULD BE A COURSER MIX AS REQUIRED TO ESTABLISH FINISH GRADE AS INDICATED ON THE DRAWINGS.

K. THE AMOUNT OF PRUNING SHALL BE LIMITED TO THE MINIMUM NECESSARY TO REMOVE DEAD OR INJURED TWIGS AND BRANCHES. ALL CUTS, SCARS, AND BRUISES SHALL BE PROPERLY TREATED ACCORDING TO THE DIRECTION OF THE PROJECT REPRESENTATIVE. PROPER PRUNING TECHNIQUES SHALL BE USED. DO NOT LEAVE STUBS AND DO NOT CUT THE LEADER BRANCH. IMPROPER PRUNING SHALL BE CAUSE FOR REJECTION OF THE PLANT MATERIAL.

L. PREPARE A WATERING CIRCLE OF 2' DIAMETER AROUND THE TRUNK. FOR CONIFERS, EXTEND THE WATERING WELL TO THE DRIP LINE OF THE TREE CANOPY. PLACE MULCH AROUND THE PLANTED TREES.

4. TURF - SOD LAYING

A. TOP SOIL AMENDMENTS: PRIOR TO LAYING SOD, COMMERCIAL FERTILIZER SHALL BE APPLIED AND INCORPORATED INTO THE UPPER FOAR (4) INCHES OF THE TOPSOIL AT A RATE OF FOUR POUNDS OF NITROGEN PER ONE THOUSAND (1,000) SQUARE FEET. ADJUST FERTILIZATION MIXTURE AND RATE OF APPLICATION AS NEEDED TO MEET RECOMMENDATIONS GIVEN BY TOPSOIL ANALYSIS. INCLUDE OTHER AMENDMENTS AS REQUIRED.

B. FERTILIZATION: THREE WEEKS AFTER SOD PLACEMENT FERTILIZE THE TURF AT A RATE OF ½ POUND OF NITROGEN PER 1000 SQUARE FEET. USE FERTILIZER SPECIFIED ABOVE. ADJUST FERTILIZATION MIXTURE AND RATES TO MEET RECOMMENDATIONS GIVEN BY TOPSOIL ANALYSIS.

C. SOD AVAILABILITY AND CONDITION: SOD IS TO BE DELIVERED TO THE SITE IN GOOD CONDITION. IT IS TO BE INSPECTED UPON ARRIVAL AND INSTALLED WITHIN 24 HOURS. SOD IS TO BE MOIST AND COOL TO ENSURE THAT DECOMPOSITION HAS NOT BEGUN AND IS TO BE FREE OF PESTS, DISEASES, OR BLEMISHES. THE CONTRACTOR SHALL SATISFY HIMSELF AS TO THE EXISTING CONDITIONS PRIOR TO ANY CONSTRUCTION. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR FURNISHING AND LAYING ALL SOD REQUIRED ON THE PLANS. HE SHALL FURNISH NEW SOD AS SPECIFIED ABOVE AND LAY IT SO AS TOO COMPLETELY SATISFY THE INTENT AND MEANING OF THE PLANS AND SPECIFICATION AT NO EXTRA COST TO THE OWNER. IN THE CASE OF ANY DISCREPANCY IN THE AMOUNT OF SOD TO BE REMOVED OR AMOUNT TO BE USED, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPORT SUCH TO THE PROJECT REPRESENTATIVE PRIOR TO COMMENCING THE WORK.

D. SOD LAYING: THE SURFACE UPON WHICH THE NEW SOD TO BE LAID WILL BE PREPARED AS SPECIFIED IN THE DETAIL AND BE LIGHTLY WATERED BEFORE LAYING. AREAS WHERE SOD IS TO BE LAID SHALL BE CUT TRIMMED, OR SHAPED TO RECEIVE FULL WIDTH SOD (MINIMUM TWELVE (12) INCHES). NO PARTIAL STRIP OR PIECES WILL BE ACCEPTED.

E. SOD SHALL BE TAMPED LIGHTLY AS EACH PIECE IS SET TO ENSURE THAT GOOD CONTACT IS MADE BETWEEN EDGES AND ALSO THE GROUND. IF VOIDS OR HOLES ARE DISCOVERED, THE SOD PIECE(S) IS (ARE) TO BE RAISED AND TOPSOIL IS TO BE USED TO FILL IN THE AREAS UNTIL LEVEL. SOD LAID ON ANY SLOPED AREAS SHALL BE ANCHORED WITH WOODEN DOWELS OR OTHER MATERIALS WHICH ARE ACCEPTED BY THE GRASS SOD INDUSTRY.

F. SOD SHALL BE ROLLED WITH A ROLLER THAT IS AT LEAST 50% FULL IMMEDIATELY AFTER INSTALLATION TO ENSURE THE FULL CONTACT WITH SOIL IS MADE.

G. APPLY WATER DIRECTLY AFTER LAYING SOD. RAINFALL IS NOT ACCEPTABLE.

H. WATERING OF THE SOD SHALL BE THE COMPLETE RESPONSIBILITY OF THE CONTRACTOR BY WHATEVER MEANS NECESSARY TO ESTABLISH THE SOD IN AN ACCEPTABLE MANNER TO THE END OF THE MAINTENANCE PERIOD. IF AN IRRIGATION SYSTEM IS IN PLACE ON THE SITE, BUT FOR WHATEVER REASON, WATER IS NOT AVAILABLE IN THE SYSTEM. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO WATER THE SOD BY WHATEVER MEANS, UNTIL THE SOD IS ACCEPTED BY THE PROJECT REPRESENTATIVE.

I. PROTECTION OF THE NEWLY LAID SOD SHALL BE THE COMPLETE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL PROVIDE ACCEPTABLE VISUAL BARRIERS, TO INCLUDE BARRICADES SET APPROPRIATE DISTANCES WITH STRINGS OR TAPES BETWEEN BARRIERS, AS AN INDICATION OF NEW WORK. THE CONTRACTOR IS TO RESTORE ANY DAMAGED AREAS CAUSED BY OTHERS (INCLUDING VEHICULAR TRAFFIC), EROSION, ETC, UNTIL SUCH TIME AS THE LAWN IS ACCEPTED BY THE OWNER.

J. ALL SOD THAT HAS NOT BEEN LAID WITHIN 24 HOURS SHALL BE DEEMED UNACCEPTABLE AND WILL BE REMOVED FROM THE SITE.

3.5 WEED BARRIER

A. FOR THE HEALTH OF THE SOIL AND THE MICROORGANISMS, WEED BARRIER IS NOT RECOMMENDED. IF USE IS REQUIRED OR REQUESTED, DO NOT PLACE IN ANNUAL OR GRASS AREAS.

B. CUT WEED BARRIER BACK TO THE EDGE OF THE PLANT ROOTBALL.

C. OVERLAP ROWS OF FABRIC MIN. 6"

D. STABLE FABRIC EDGES AND OVERLAPS TO GROUND.

END OF SECTION

GENERAL LANDSCAPE NOTES

GRADING AND DRAINAGE REQUIREMENTS

- AS PER CODE, ALL GRADING IS TO SLOPE AWAY FROM ANY STRUCTURE. SURFACE OF THE GROUND WITHIN 10' FEET OF THE FOUNDATION SHOULD DRAIN AWAY FROM THE STRUCTURE WITH A MINIMUM FALL OF 6"
- AS PER CODE, FINISHED GRADE WILL NOT DRAIN ON NEIGHBORING PROPERTIES
- A MINIMUM OF 6" OF FOUNDATION WILL BE LEFT EXPOSED AT ALL CONDITIONS
- LANDSCAPE CONTRACTOR TO MAINTAIN OR IMPROVE FINAL GRADE AND PROPER DRAINAGE ESTABLISHED BY EXCAVATOR, INCLUDING BUT NOT LIMITED TO ANY MAINTENANCE, PRESERVATION, OR EXAGGERATION OF SLOPES, BERMS, AND SWALES.
- LANDSCAPE CONTRACTOR IS RESPONSIBLE TO CORRECT ANY DAMAGED OR IMPROPER WATERFLOW OF ALL SWALES, BERMS, OR GRADE
- DEVICES FOR CHANNELING ROOF RUN-OFF SHOULD BE INSTALLED FOR COLLECTION AND DISCHARGE OF RAINWATER AT A MINIMUM OF 10' FROM THE FOUNDATION, OR BEYOND THE LIMITS OF FOUNDATION WALL BACKFILL; WHICHEVER DISTANCE IS GREATER

GENERAL LANDSCAPE NOTES

- LANDSCAPE CONTRACTOR SHALL HAVE ALL UTILITIES BLUE STAKED PRIOR TO DIGGING. ANY DAMAGE TO UTILITIES SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE WITH NO ADDITIONAL COST TO THE OWNER.
- DURING THE BIDDING AND INSTALLATION PROCESS, THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR VERIFYING QUANTITIES OF ALL MATERIALS. IF DISCREPANCIES EXIST, THE PLAN SHALL DICTATE QUANTITIES TO BE USED.
- ALL PLANT MATERIAL SHALL BE PLANTED ACCORDING TO ANSI STANDARDS WITH CONSIDERATION TO INDIVIDUAL SOIL AND SITE CONDITIONS, AND NURSERY CARE AND INSTALLATION INSTRUCTIONS.
- SELECTED PLANTS WILL BE ACCORDING TO THE PLANT LEGEND. IF SUBSTITUTIONS ARE NECESSARY, PROPOSED LANDSCAPE CHANGES MUST BE SUBMITTED TO THE LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO LAYING SOD.
- SHOULD THE SITE REQUIRE ADDITIONAL TOPSOIL, REFER TO SOIL TEST WHEN MATCHING EXISTING SOIL. IF A MATCHING SOIL IS NOT LOCATABLE, A 6" DEPTH OF SANDY LOAM TOPSOIL (MIXED PRIOR TO SPREADING WITH 1% ORGANIC MATTER) CAN BE INCORPORATED INTO THE EXISTING SOIL USING THE FOLLOWING DIRECTIONS: SCARIFY TOP 6" OF EXISTING SUBSOIL AND INCORPORATE 3" OF NEW COMPOST ENRICHED TOPSOIL. SPREAD REMAINING TOPSOIL TO REACH FINISHED GRADE.
- EDGING, AS INDICATED ON PLAN, IS TO BE INSTALLED BETWEEN ALL LAWN AND PLANTER AREAS. ANY TREES LOCATED IN LAWN MUST HAVE A 4-6' TREE RING OF THE SAME EDGING.

LAWN/GRASS AREA

- SOD
  - ALL LAWN AREAS TO RECEIVE MIN. 6" DEPTH OF QUALITY TOPSOIL. IF TOPSOIL IS PRESENT ON SITE, PROVIDE SOIL TEST TO DETERMINE SOIL QUALITY FOR PROPOSED HYDROSEEDING. FINE LEVEL ALL AREAS PRIOR TO LAYING SOD ALL. LAWN AREAS SHALL BE IRRIGATED WITH 100% COVERAGE BY POP-UP SPRAY HEADS AND GEAR-DRIVEN ROTORS. ALL DECIDUOUS AND CONIFER TREES PLANTED WITHIN SOD AREAS SHALL HAVE A FOUR FOOT(4') DIAMETER TREE RING COVERED WITH CHOCOLATE BROWN BARK MULCH, NO SHREDDED FINES. SUBMIT SAMPLES TO BE APPROVED BY LANDSCAPE ARCHITECT AND OWNER BEFORE INSTALLATION.
- SEED
  - **SOIL:** TEST SOIL FOR ADEQUATE FERTILITY. ANY WEEDS CURRENTLY ON THE SITE SHALL BE REMOVED BY EITHER MECHANICAL MEANS SUCH AS HAND PULLING OR SPRAYING WITH AN HERBICIDE SUCH AS GLYPHOSATE MIXED WITH A SURFACTANT. HERBICIDES SHOULD BE APPLIED BY A CERTIFIED PESTICIDE APPLICATOR . COMPACTED SOIL SHALL BE SCARIFIED TO A DEPTH OF 18 INCHES BEFORE ADDING 6" OF WEED FREE TOPSOIL WITH HIGH ORGANIC MATTER. FINE LEVEL ALL AREAS PRIOR TO HYDROSEEDING AND SET THE GRADE FOR POSITIVE DRAINAGE. TOPSOIL SHOULD BE SOFT AT TIME OF APPLICATION. FERTILIZER IS TO BE ADDED WHEN HYDROSEEDING. REFER TO SOIL TEST RESULTS AND HYDROSEEDING CONTRACTOR FOR APPLICATION RATES.
  - **SEED**: USE SEED MIXES AS SPECIFIED BY LANDSCAPE ARCHITECT OF PURE LIVE SEED (PLS) ON A BASIS/ACRE. THE OPTIMUM TIME TO PANT IS IN NOVEMBER BEFORE THE FIRST SNOW. DO NOT SOW OVER HEAVY SNOWPACK. SEED WILL LAY DORMANT AND BE READY TO GERMINATE ONCE THE GROUND THAWS AND WARMS IN LATE WINTER. IF SEEDING IN LATE FALL IS NOT POSSIBLE, SEED BEFORE APRIL 1. CONTACT SUMMIT SEED. DARRELL@SUMMITSEEDING.COM 435-769-8003.
  - **APPLICATION**: HYDROSEEDING SHALL CONSIST OF SEED, TACKIFIER, WOOD FIBER MULCH AND FERTILIZER IN A WATER BASED SLURRY. TANK MOUNTED TRUCK SHALL HAVE CONTINUOUS AGITATION. THE PUMP ON THE TRUCK WILL FORCE THE SLURRY THROUGH A TOP-MOUNTED DISCHARGE NOZZLE (TOWER). USE 2000 POUNDS WOOD FIBER MULCH AND 50-100 POUNDS OF TACKIFIER PER ACRE.
  - **IRRIGATION**: ALL AREAS MUST BE KEPT MOIST WITHOUT PUDDLES OR RUNOFF USING FREQUENT DAYTIME WATER CYCLES. ADJUST AND MONITOR SPRINKLERS AND CLOCK TO ACHIEVE PROPER IRRIGATION.
- IF PERMANENT IRRIGATION IS NOT PLANNED, TEMPORARY IRRIGATION IS REQUIRED AT THE FOLLOWING SCHEDULE: FOR 8 WEEKS SOIL SHALL REMAIN DAMP DURING ESTABLISHMENT PERIOD WITHOUT PUDDLING ON SOIL SURFACE. APPLY WATER APPROXIMATELY THREE TIMES A DAY FOR 5-7 MINUTES FOR EACH IRRIGATION EVENT DEPENDING ON TEMPERATURE AND TIME OF YEAR. A SPARSE DENSITY IS EXPECTED. CONTINUE TEMPORARY IRRIGATION FOR ONE YEAR EVENTUALLY REDUCING WATER APPLICATION TO ONCE A WEEK, THEN ONCE EVERY TWO WEEKS TO FINALLY ONCE A MONTH. MONITOR PROGRESS OF ESTABLISHMENT AND ADJUST SPRINKLERS ACCORDINGLY. THE GOAL IS TO CREATE A HEALTHY STAND OF GRASSES WITH LITTLE TO NO IRRIGATION.
  - **WEED CONTROL AND MAINTENANCE**: MANDATORY WEED CONTROL IS REQUIRED TO REDUCE COMPETITION AND WEED SEED PRODUCTION. WEEDS MUST BE KEPT UNDER CONTROL BY MECHANICALLY PULLING OR CHEMICALLY SPRAYING AS DIRECTED BY THE APPLICATOR. APPLY A BROADLEAF HERBICIDE BIANNUALLY AND ESTABLISH A CONSISTENT REGIMEN OF MOWING AND FERTILIZING TO PREVENT WEEDS FROM PRODUCING SEED. MOW ONCE IN THE SPRING AND ONCE IN THE FALL BEFORE FERTILIZATION. FERTILIZER OPTION IS SUSTAIN 4-6-4 DEPENDING ON SOIL FERTILITY. DO NOT MOW SHORTER THAN 4 INCHES. BAG ALL CUTTINGS TO REMOVE WEED SEED FROM PROPERTY. KEEP WEEDS CUT DOWN AND DO NOT LET THEM GO TO SEED. WEED SEED PRODUCTION IS THE GAUGE FOR WHEN TO MOW, WHICH GENERALLY OCCURS IN APRIL OR MAY AS WELL AS EARLY FALL DEPENDING ON TEMPERATURE AND MOISTURE. THIS PROCEDURE WILL BE REQUIRED UNTIL A HEALTHY STAND OF GRASSES IS EVIDENT AND COMPETING WELL WITH WEEDS. EXPECT FROM 1 TO 3 YEARS.
  - **PROGANICS BIOTIC SOIL MEDIA**: WHERE CONDITIONS MAY PROHIBIT ADDING TOPSOIL, PROGANICS BIOTIC SOIL MEDIA SHOULD BE APPLIED BY HYDROSEEDER AT 3500LBS/ACRE WITH SEED AND FERTILIZER PRIOR TO THE APPLICATION OF WOOD MULCH(2000LBS/ACRE) COMBINED WITH TACKIFIER (50-100 LBS/ACRE.)
  - **ADDING FORBS**: SHRUBS AND PERENNIALS, BY SEED OR CONTAINER, CAN BE ADDED ONCE WEEDS ARE UNDER CONTROL AND HERBICIDE IS NO LONGER NEEDED. USUALLY 1-2 YEARS AFTER HYDROSEEDING.

MULCH

- ORGANIC
  - O PLANTING AREAS TO BE FREE OF WEEDS AND RECEIVE MIN. 12" DEPTH OF QUALITY TOPSOIL. IF TOPSOIL IS PRESENT ON SITE, PROVIDE SOIL TEST TO DETERMINE SOIL QUALITY FOR PROPOSED PLANTINGS. PROVIDE 3" DEPTH OF ORGANIC MULCH TOP DRESSING. KEEP MULCH AWAY FROM TOP OF ROOT BALL OF ALL PLANT MATERIAL.
  - O IF REQUIRED BY CITY, INSTALL DEWITT 5OZ WEED BARRIER LANDSCAPE FABRIC UNDER ALL MULCH AREAS. KEEP WEED BARRIER 1 FOOT AWAY FROM EDGE OF ROOT BALL OF ALL PLANT MATERIAL. IF WEED BARRIER IS NOT REQUIRED OR INSTALLED, AT OWNER'S APPROVAL, USE TREFLAN 10 AS A PRE-EMERGENT. APPLY ACCORDING TO LABEL DIRECTIONS BY CERTIFIED PESTICIDE APPLICATOR AFTER PLANTING AND AFTER APPLYING MULCH.
  - O IF USING TREFLAN 10 WITHOUT WEED BARRIER, THIS AREA WILL ALSO NEED AN YEARLY MANAGEMENT PROGRAM. SUBMIT PROGRAM TO OWNER.
  - O ANNUAL PLANTING AREAS AS SHOWN ON PLAN TO RECEIVE 4" OF SOIL AID MATERIAL (ORGANIC MULCH). NO MULCH SHALL BE PLACED WITHIN 12" OF TREE TRUNK AND 6" WITHIN BASE OF SHRUBS AND PERENNIALS. DO NOT COVER LOW BRANCHES OF SHRUBS WITH ROCK.
- INORGANIC
  - O ROCK MULCH PLANTING AREAS TO BE FREE OF WEEDS AND RECEIVE MIN. 12" DEPTH OF QUALITY TOPSOIL. IF TOPSOIL IS PRESENT ON SITE, PROVIDE SOIL TEST TO DETERMINE SOIL QUALITY FOR PROPOSED PLANTINGS. WHERE PLANTING IS SPARSE (GREATER THAN 4' DISTANCE BETWEEN PLANTS OR 20' BETWEEN GROUPINGS), ADDITIONAL TOPSOIL IS NOT NECESSARY EXCEPT FOR BACKFILLING PLANTING HOLE. PREPARE A HOLE TWICE THE WIDTH OF THE CONTAINER, WATER IN PLANT, BACKFILL WITH A 4:1 RATIO OF SOIL TO COMPOST. TAMP LIGHTLY AND WATER AGAIN. KEEP ROCK 12" AWAY FROM TRUNK OF TREES AND 6" AWAY FROM BASE OF SHRUBS AND PERENNIALS. DO NOT COVER LOW BRANCHES OF SHRUBS WITH ROCK.
  - O IF REQUIRED BY CITY, INSTALL DEWITT 5OZ WEED BARRIER LANDSCAPE FABRIC UNDER ALL ROCK AREAS. KEEP WEED BARRIER 1 FOOT AWAY FROM EDGE OF ROOT BALL OF ALL PLANT MATERIAL. IF WEED BARRIER IS NOT REQUIRED OR INSTALLED, AT OWNER'S APPROVAL, USE TREFLAN 10 AS A PRE-EMERGENT. APPLY ACCORDING TO LABEL DIRECTIONS BY CERTIFIED PESTICIDE APPLICATOR AFTER PLANTING AND AFTER APPLYING MULCH.
  - O IF USING TREFLAN 10 WITHOUT WEED BARRIER, THIS AREA WILL ALSO NEED AN YEARLY MANAGEMENT PROGRAM. SUBMIT PROGRAM TO OWNER. UPON REQUEST, A PLANT GUIDE IS AVAILABLE WITH OUR RECOMMENDATIONS REGARDING WEED BARRIER, PLANT CARE AND MAINTENANCE.

GENERAL IRRIGATION NOTES

- A NEW UNDERGROUND, AUTOMATIC IRRIGATION SYSTEM IS TO BE INSTALLED BY CONTRACTOR IN ALL LANDSCAPED AREAS. LAWN AREAS TO RECEIVE AT LEAST 100% HEAD TO HEAD COVERAGE AND PLANTER AREAS TO RECEIVE A FULL DRIP SYSTEM TO EACH TREE AND SHRUB. POINT SOURCE DRIP OR IN-LINE DRIP TUBING TO BE SECURED AT CENTER OF ROOT BALL, NOT AGAINST TRUNK. SEE IRRIGATION PLAN.

INSTALLER RESPONSIBILITIES AND LIABILITIES

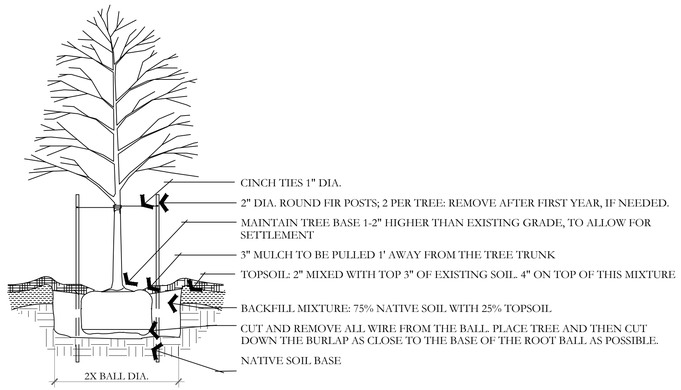
- THESE PLANS ARE FOR BASIC DESIGN LAYOUT AND INFORMATION. LANDSCAPE CONTRACTOR IS REQUIRED TO USE TRADE KNOWLEDGE FOR IMPLEMENTATION. OWNER ASSUMES NO LIABILITIES FOR INADEQUATE ENGINEERING CALCULATIONS, MANUFACTURER PRODUCT DEFECTS, INSTALLATION OF ANY LANDSCAPING AND COMPONENTS, OR TIME EXECUTION.
- LANDSCAPE CONTRACTOR IS RESPONSIBLE AND LIABLE FOR INSTALLATION OF ALL LANDSCAPING AND IRRIGATION SYSTEMS INCLUDING CODE REQUIREMENTS, TIME EXECUTIONS, INSTALLED PRODUCTS AND MATERIALS.

PLANT LEGEND

NOTE: PLANT QUANTITIES ARE PROVIDED FOR CONVENIENCE ONLY. IN CASE OF DISCREPANCY, THE DRAWING SHALL TAKE PRECEDENCE.)

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	CONT	CAL	SIZE
CONIFERS						
	CA'F	6	Cedrus atlantica glauca `Fastigiata` Columnar Blue Atlas Cedar low to moderate; 30x10; sun to part shade; z6; Utah Lake water tolerant	B & B		6`
DECIDUOUS TREES						
	SR'B	2	Syringa reticulata `Bailnce` Snowdance Tree Lilac Td3; 18x20; AV 314; sun; z3	B & B	2"Cal	
	ZS'C	3	Zelkova serrata 'JFS-KW1' TM City Sprite Zelkova Td4; 24x18; AV 490; sun; z5; Utah Lake water tolerant	B & B	2"Cal	

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	CONT
DECIDUOUS SHRUBS				
	AA'O	9	Amelanchier alnifolia `Obelisk` TM Standing Ovation Serviceberry Sd2; 15x4; AV50; sun to part shade; z2; Utah Lake water tolerant	5 gal
	B'HR	20	Buddleja davidii 'Tobud1202' Buzz™ Hot Raspberry Butterfly Bush Moderate; 4'x4'; sun; z5; Utah Lake water tolerant	5 gal
	PB'P	19	Prunus besseyi `P011S` 'Pawnee Buttes' Pawnee Buttes Sand Cherry Sd1; 1.5 x 6; AV19.5; sun; z4; Potentilla fruticosa 'Fargo' Dakota Sunspot TM	5 gal
	PF'F	16	Fargo Yellow Shrubby Cinquefoil Sd2; 2-3 x3-4; AV 7; sun; z2; Utah Lake water tolerant	5



A DECIDUOUS TREE PLANTING

NOT TO SCALE

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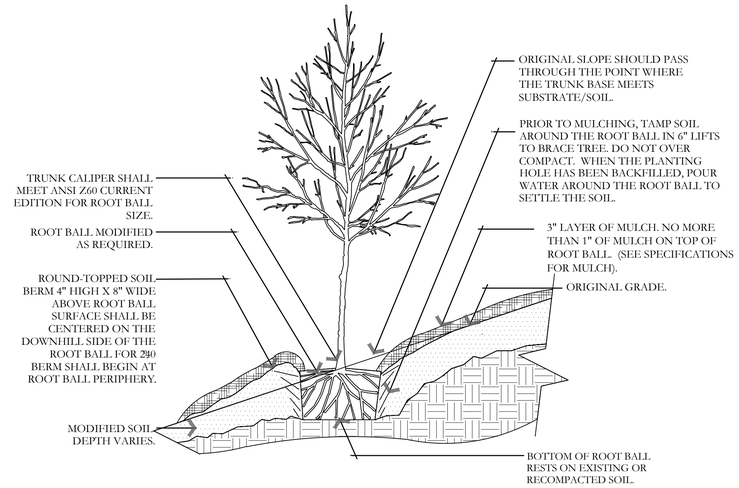

B TREE ON SLOPE 5% (20:1) TO 50% (2:1)

NOT TO SCALE

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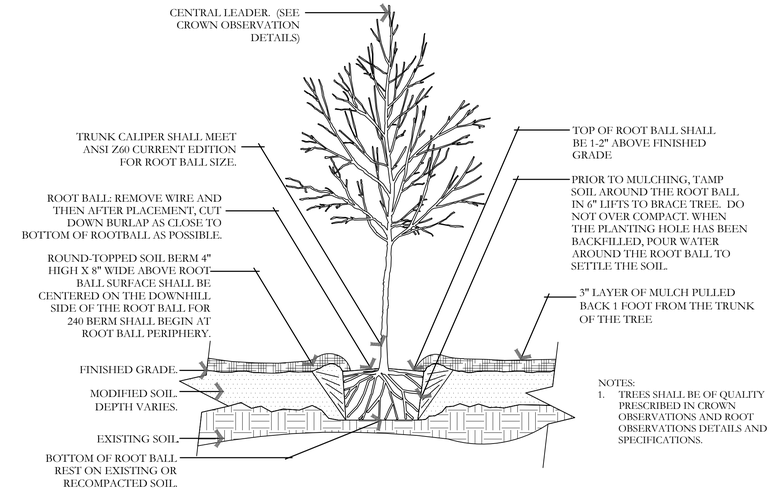
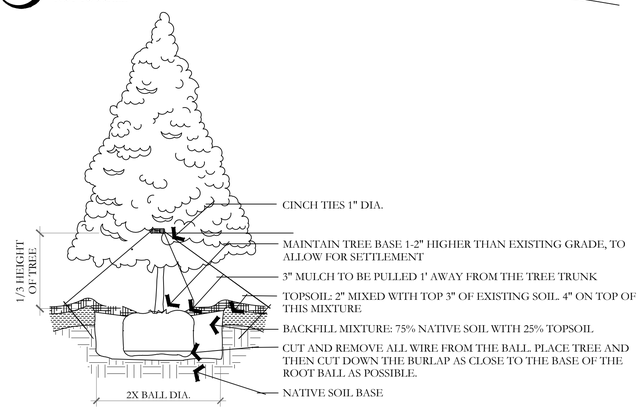


NOTES:
1. TREES SHALL BE OF QUALITY PRESCRIBED IN CROWN OBSERVATIONS AND ROOT OBSERVATIONS DETAILS AND SPECIFICATIONS.

C TREE W/ BERM (EXISTING SOIL MODIFIED)

NOT TO SCALE

PKJ DESIGN GROUP



D EVERGREEN TREE PLANTING

NOT TO SCALE

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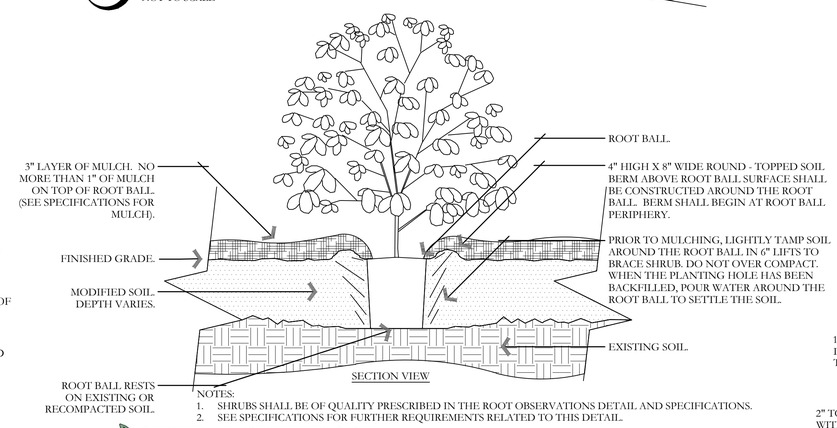
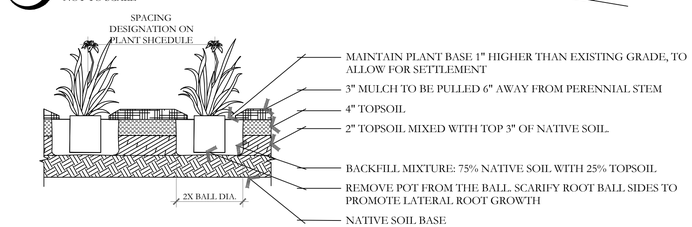


NOTES:
1. SHRUBS SHALL BE OF QUALITY PRESCRIBED IN THE ROOT OBSERVATIONS DETAIL AND SPECIFICATIONS.
2. SEE SPECIFICATIONS FOR FURTHER REQUIREMENTS RELATED TO THIS DETAIL.

E SHRUB - MODIFIED SOIL

NOT TO SCALE

PKJ DESIGN GROUP



F PERENNIAL PLANTING

NOT TO SCALE

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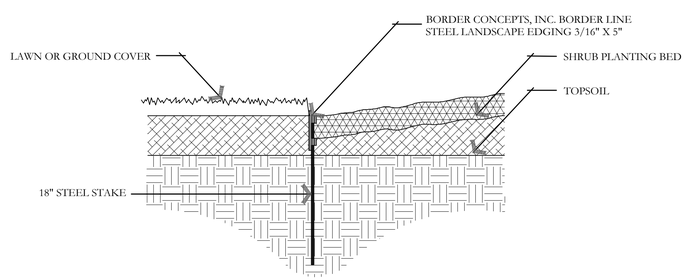

G METAL EDGING DETAIL

NOT TO SCALE

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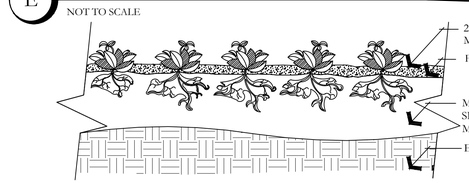
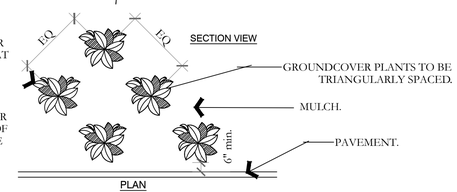


NOTES:
1- SEE PLANTING LEGEND FOR GROUNDCOVER SPECIES, SIZE, AND SPACING DIMENSION. THAT GROW.
2- SMALL ROOTS AROUND, UP, OR DOWN THE ROOT BALL PERIPHERY ARE CONSIDERED A NORMAL CONDITION IN CONTAINER PRODUCTION AND ARE ACCEPTABLE HOWEVER THEY SHOULD BE ELIMINATED AT THE TIME OF PLANTING. ROOTS ON THE PERIPHERY CAN BE REMOVED AT THE TIME OF PLANTING. (SEE ROOT BALL SHAVING CONTAINER DETAIL).
3- SETTLE SOIL AROUND ROOT BALL OF EACH GROUNDCOVER PRIOR TO MULCHING.



H PERENNIAL/GROUNDCOVER PLANTING

NOT TO SCALE

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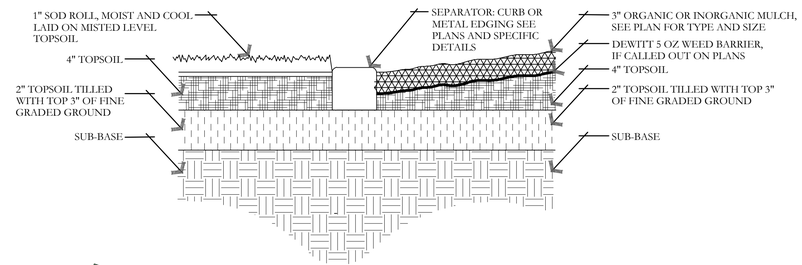

I SOD LAYING/MULCH DETAIL

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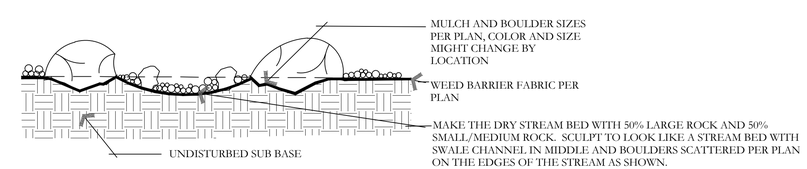

J BOULDER AND DRY STREAM BED DETAIL

NOT TO SCALE

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ISSUE DATE	PROJECT NUMBER	PLAN INFORMATION	PROJECT INFORMATION	DEVELOPER / PROPERTY OWNER / CLIENT	LANDSCAPE ARCHITECT / PLANNER	LICENSE STAMP	DRAWING INFO

11/26/2025

UT24048

NO.	REVISION	DATE
1	CITY COMMENTS	4-4-2025
2	CITY COMMENTS	4-15-2025
3		
4		
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7		

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LICENSED LANDSCAPE ARCHITECT JEREMY AINSWORTH 8128121-5301 11/26/2025 STATE OF UTAH

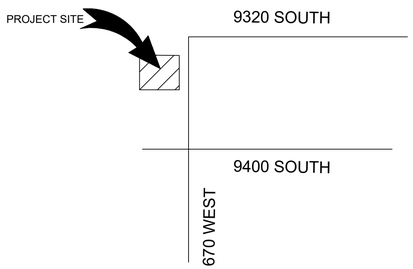
PM: JTA
DRAWN: ALR
CHECKED: JMA
PLOT DATE: 11/26/2025

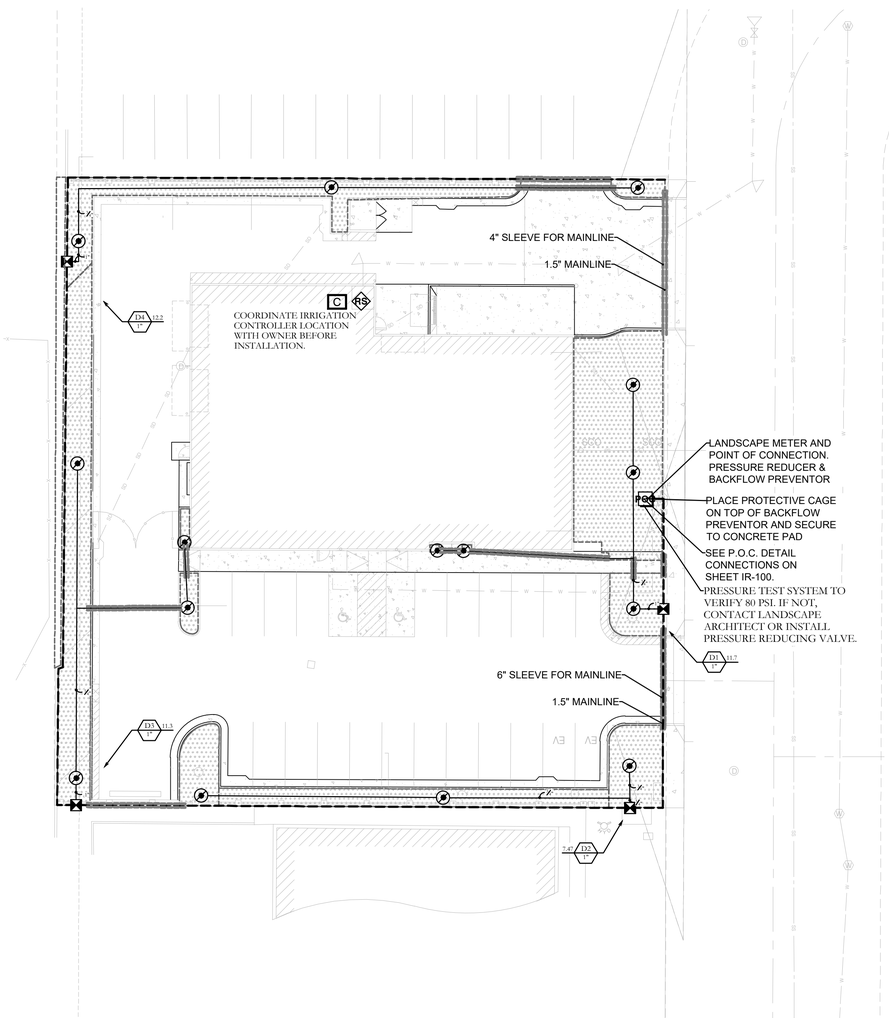
LANDSCAPE DETAILS

CITY PERMIT SET

LP-501

VICINITY MAP





P.O.C. CONFIGURATION

(NOTE: PRESSURE TEST SYSTEM TO VERIFY 80 PSI. IF NOT, CONTACT LANDSCAPE ARCHITECT OR INSTALL PRESSURE REDUCING VALVE.)

- POC — SOURCE DATA
- BF — BACKFLOW PREVENTOR
- SHUTOFF VALVE
- M — MASTER VALVE
- FS — 1" FLOW SENSOR
- QUICK COUPLER

IRRIGATION LEGEND

(NOTE: PLANT QUANTITIES ARE PROVIDED FOR CONVENIENCE ONLY. IN CASE OF DISCREPANCY, THE DRAWING SHALL TAKE PRECEDENCE.) IF YOU NEED HELP WITH A WATER AUDIT CONSULTATION, OR A PLANT MAINTENANCE SCHEDULE, CONTACT PKJ@PKJDESIGNGROUP.COM)

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	Rain Bird XCZ-100-IVMQ (2) 1" Wide Flow IVM Drip Control Kit for Commercial Applications. 1in. Ball Valve with 1in. PESBIVM Smart Valve w/ factory installed IVM-SOL 0.3-20 gpm and 1in. Pressure Regulating 40psi Quick-Check Basket Filter 0.3-20 gpm	4
	Pipe Transition Point above grade Pipe transition point from PVC lateral to drip tubing with riser to above grade installation.	15
	Area to Receive Drip Emitters Rain Bird PC (2) Single Outlet, Pressure Compensating Drip Emitters with Self-Piercing Barb Inlet. Flow rate: 5 GPH=light brown; 7 GPH=violet; 10 GPH=green; 12 GPH=dark brown; 18 GPH=white; 24 GPH=orange. Emitter Notes: PC-05 emitters (1 assigned to each flat plant) PC-05 emitters (1 assigned to each 4"pot plant)	5,089 sf
	PC-05 emitters (2 assigned to each 1 gal plant)	192
	PC-05 emitters (2 assigned to each 2 gal plant)	32
	PC-05 emitters (3 assigned to each 3 gal plant)	
	PC-05 emitters (3 assigned to each 5 gal plant)	216
	PC-05 emitters (3 assigned to each 15 gal plant)	
	PC-05 emitters (3 assigned to each 20 gal. plant)	
	PC-05 emitters (3 assigned to each B & B, 1.25"Cal plant)	
	PC-05 emitters (3 assigned to each B & B, 2"Cal plant)	15
	PC-05 emitters (3 assigned to each B & B, 4-6` plant)	
	PC-05 emitters (3 assigned to each B & B, 5`-6` plant)	
	PC-05 emitters (3 assigned to each B & B, 6` plant)	18
	PC-05 emitters (3 assigned to each B & B, 7`-9` plant)	
	PC-05 emitters (3 assigned to each B & B, 8`-10` plant)	
	PC-05 emitters (4 assigned to each B & B, Multi-trunked plant)	
	PC-05 emitters (4 assigned to each Bulb plant)	
	PC-05 emitters (4 assigned to each Plug plant)	

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	Rain Bird 44-RC 1" 1in. Brass Quick-Coupling Valve, with Corrosion-Resistant Stainless Steel Spring, Thermoplastic Rubber Cover, and 2-Piece Body.	1
	Shut Off Valve	1
M	Rain Bird EFB-CP-PRS-D 1-1/2" 1in., 1-1/4", 1-1/2in., 2in. Brass Master Valve, that is Contamination Proof w/Self-Flushing Filter Screen. Globe Configuration, Reclaimed Water Compatible, and Purple Handle Cover Designates Non-Potable Water Use. With Pressure Regulator.	1
BF	Zurn 475 2-1/2" Reduced Pressure Backflow Preventer.	1
C	Rain Bird ESPLXIVM 60 Station, 2-Wire Controller w/ Smart Valve Technology. (1) ESPLXIVM 60-Station, Indoor/Outdoor, Plastic Wall-Mount Cabinet. System Requirements: Rain Bird LXIVM-XXX Integrated Valve Modules & 2-Wire Devices. Use Paige Electric Cable P7072D & Rain Bird WC20 Dry Splices ONLY. Ground System w/ (X) LXIVMSD Surge Device in Rain Bird Round Valve Boxes. Install Per Manufacturers Recommendations.	1
RS	Rain Bird WR2-RC Wireless Rain Sensor Combo, includes 1 receiver and 1 rain sensor transmitter.	1
FS	Rain Bird FS-200-B 2in. Flow Sensor, Brass Model. Suggested Operating Range 10 GPM to 100 GPM. Size for Flow Not According to Pipe Size. Rain Bird Compatible Controllers: ESP-LXIVM(P) | LXD | LXME2(P) | ME3, or Controllers Accepting Custom K-Factor and Offset. Install in Rain Bird Valve Box.	1
POC	Water Meter 1"	1
	Irrigation Lateral Line: PVC Schedule 40 3/4"	557.0 lf
	Irrigation Lateral Line: PVC Schedule 40 1"	24.8 lf
	Irrigation Mainline: PVC Schedule 40	603.9 lf
	Pipe Sleeve: PVC Class 200 SDR 21 Typical pipe sleeve for irrigation pipe. Pipe sleeve size shall allow for irrigation piping and their related couplings to easily slide through sleeving material. Extend sleeves 18 inches beyond edges of paving or construction.	241.0 lf

Valve Callout
- Valve Number
- Valve Flow
- Valve Size

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LICENSED LANDSCAPE ARCHITECT
JEREMY ANSWORTH
8/28/2024 - 6301
11/26/2025
ELECTRONIC SEAL
STATE OF UTAH

DRAWN: JTA
CHECKED: ACP
PLOT DATE: JMA
11/26/2025

IRRIGATION OVERALL PLAN

CITY PERMIT SET

IR-100

IRRIGATION PLAN SPECIFICATIONS

IRRIGATION SPECIFICATIONS

PART 1 - GENERAL

1.1 SUMMARY

Work to be done includes all labor, materials, equipment and services required to complete the Project irrigation system as indicated on the Construction Drawings, and as specified herein. Includes but is not limited to: Furnishing and installing underground and above ground sprinkler system complete with any accessories necessary for proper function and operation of the system. All plant material on the Project shall be irrigated. Remove and dispose of any existing sprinkler system components which are disturbed during the construction process and are not to be saved. Restoration of any altered or damaged existing landscape to original state and condition.

1.2 SYSTEM DESCRIPTION

A. Design of irrigation components: Locations of irrigation components on Construction Drawings may be approximate. Piping, sleeving and/or other components shown on Construction drawings may be shown schematically for graphic clarity and demonstration of component groupings and separations. All irrigation components shall be placed in landscaped areas, with the exception of pope and wire in sleeving under hardscapes. Actual routing of pipe, wire or other components may be altered due to site conditions not accounted for in the design process.

B. Construction requirements: Actual placement may vary as required to achieve a minimum of 100% coverage without overspray onto hardscape, buildings or other features.

C. Layout of Irrigation Components: During layout and staking, consult with Owner Approved Representative (hereafter referred to as OAR) to verify proper placement of irrigation components, and to provide Contractor recommendations for changes where revisions may be advisable. Small or minor adjustments to system layout are permissible to avoid existing field obstructions such as utility boxes or street light poles. Contractor shall place remote control valves in groups as practical to economize on quantity of manifold isolation valves. Quick coupler valves shall be placed with manifold groups and protected by manifold isolation valves. Quick coupler valves are shown on Construction Documents in approximate locations.

1.3 DEFINITIONS

A. Water Supply: Culinary water piping and components, furnished and installed by others to provide irrigation water to this Project, including but not limited to backflow preventor, saddles, nipples, spools, shut off valves, corporation stop valves, water meters, pressure regulation valves, and piping upstream of (or prior to) the Point of Connection.

B. Point of Connection: Location where the Contractor shall tie into the water supply. May require backflow preventor, saddle, nipples, spools, isolation valves or Stop and Waste valve for landscape irrigation needs and use.

C. Main Line Piping: Pressurized piping downstream of the Point of Connection to provide water to remote control valves and quick couplers. Normally under constant pressure.

D. Lateral Line Piping: Circuit piping downstream of remote control valves to provide water to sprinkler heads, drip systems or bubblers.

1.4 REFERENCES

A. The following standards will apply to the work of this Section:

a. ASTM-American Society for Testing and Materials

b. IA - The Irrigation Association: Main BMP Document, Landscape Irrigation Scheduling and Water Management Document.

1.5 SUBMITTALS

A. At least thirty (30) days prior to ordering of any materials, the Contractor shall provide manufacturer catalog cut sheet and current printed specifications for each element or component of the irrigation system. Submittals shall be in three ring binders or other similar bound form. Provide five copies of submittals to OAR for distribution. Place cover or index sheet indicating order in submittal document. No material shall be ordered, delivered or any work preceded in the field until the required submittals have need reviewed in its entirety and stamped approved. Delivered material shall match the approved samples.

B. Operation and Maintenance Manual:

a. At least thirty (30) days prior to final inspection, the Contractor shall provide Operation and Maintenance manual to OAR, containing:

i. Manufacturer catalog cut sheet and current printed specifications for each element or component of the irrigation system.

ii. Parts list for each operating element of the system

iii. Manufacturer printed literature on operation and maintenance of operating elements of the system.

iv. Section listing instructions for overall system operation and maintenance. Include directions for Spring Start-up and Winterization.

b. Project Record Copy

i. Maintain at project site one copy of all project documents clearly marked "Project Record Copy". Mark any deviation in material installation on Construction drawings. Maintain and update drawing at least weekly. Project Record Copy to be available to OAR on demand.

ii. Completed Project As-Built Drawings

1. Prior to final inspection, prepare and submit to OAR accurate as-built drawings including 2 wire path and junction box locations.
2. Show detail and dimension changes made during installation. Show significant details and dimensions that were not shown in original Contract Documents.
3. Field dimension locations of sleeving, points of connection, main line piping, wiring runs not contained in main line pipe trenches, valves and valve boxes, quick coupler valves.
4. Dimensions are to be taken from permanent constructed surfaces, features, or finished edges located at or above finished grade.
5. Controller Map: upon completion of system, place in each controller a color coded copy of the area that controller services: indicating zone number, type of plant material and location on project that zone services. Laminate map with heat shrink clear plastic.

1.6 QUALITY ASSURANCE

A. Acceptance: Do not install work in this section prior to acceptance by OAR.

B. Regulatory Requirements: All work and materials shall be according to any and all rules, regulations or codes, whether they are State or Local laws and ordinances. Contract documents, drawings or specifications may not be construed or interpreted to permit work or materials not conforming to the above codes.

C. Adequate Water Supply: Water supply to this Project exists, installed by others. Connections to these supply lines shall be by this Contractor. Verify that proper connection is available to supply line and is of adequate size. Verify that secondary connection components may be installed if necessary. Perform static pressure test prior to commencement of work at supplied POC. Notify OAR in writing of problems encountered and pressure reading prior to proceeding.

D. Workmanship and Materials:

a. It is the intent of this specification that all material herein specified and shown on the construction documents shall be of the highest quality available and meeting the requirements specified.

b. All work shall be performed in accordance with the best standards of practice relating to the trade.

E. Contractor Qualifications:

a. Contractor shall provide document or resume including at least the following items:

i. That Contractor has been installing sprinklers on commercial projects for five previous consecutive years.

ii. Contractor is licensed to perform Landscape and Irrigation construction in the State of this Project.

iii. Contractor is bondable for the work to be performed.

iv. References of five projects of similar size and scope completed within the last five years. Three of the projects listed shall be local.

v. Listing of suppliers where materials will be obtained for use on this Project.

vi. Project site Foreman or Supervisor has at least five consecutive years of commercial irrigation installation experience. This person shall be a current Certified Irrigation Contractor in good standing as set forth by the Irrigation Association. This person shall be on Project site at least 75% of each working day.

vii. Evidence that Contractor currently employs workers in sufficient quantities to complete Project within time limits that are established by the Contract.

viii. All General laborers or workers on the Project shall be previously trained and familiar with sprinkler installation and have a minimum of one-year experience. Those workers performing tasks related to PVC pipe shall have certificates designated below.

1.7 DELIVERY-STORAGE-HANDLING

A. During delivery, installation and storage of materials for Project, all materials shall be protected from contamination, damage, vandalism, and prolonged exposure to sunlight. All material stored at Project site shall be neatly organized in a compact arrangement and storage shall not disrupt Project Owner or other trades on Project site. All material to be installed shall be handled by Contractor with care to avoid breakage or damage. Damaged materials attributed to Contractor shall be replaced with new at Contractor's expense.

1.8 SEQUENCING

A. Perform site survey, research utility records, contact utility location services. The Contractor shall familiarize himself with all hazards and utilities prior to work commencement. Install sleeving prior to installation of concrete, paving or other permanent site elements. Irrigation system Point of Connection components, backflow prevention and pressure regulation devices shall be installed and operational prior to all downstream components. All main lines shall be thoroughly flushed of all debris prior to installation of any sprinkler heads.

1.9 WARRANTY

A. Contractor shall provide one year Warranty. Warranty shall cover all materials, workmanship and labor. Warranty shall include filling and or repairing depressions or replacing turf or other plantings due to settlement of irrigation trenches or irrigation system elements. Valve boxes, sprinklers or other components settled from original finish grade shall be restored to proper grade. Irrigation system shall have been adjusted to provide proper, adequate coverage of irrigated areas.

1.10 OWNER'S INSTRUCTION

A. After system is installed, inspected, and approved, instruct Owner's Representatives in complete operation and maintenance procedures. Coordinate instruction with references to previously submitted Operation and Maintenance Manual.

1.11 MAINTENANCE

A. Furnish the following items to Owner's Representative:

a. Two quick coupler keys with hose swivels.

b. One of each type or size of quick coupler valve and remote control valve. Five percent of total quantities used of each sprinkler and sprinkler nozzle.

B. Provide the following services:

a. Winterize entire irrigation system installed under this contract. Winterize by 'blow-out' method using compressed air. Compressor shall be capable of minimum of 175 CFM. This operation shall occur at the end of first growing season after need for plant irrigation but prior to freezing. Compressor shall be capable of evacuating system of all water pressure regulation devices. Compressor shall be regulated to not more than 60 PSI. Start up system the following spring after danger of freezing has passed. Contractor shall train Owner's Representative in proper start-up and winterization procedure.

PART 2 - PRODUCTS

2.1 GENERAL NOTES

A. Contractor shall provide materials to be used on this Project. Contractor shall not remove any material purchased for this Project from the Project Site, nor mix Project materials with other Contractor owned materials. Owner retains right to purchase and provide project material.

2.2 POINT OF CONNECTION

A. The Contractor shall connect onto existing irrigation or water main line as needed for Point(s) of Connection. Contractor shall install new main line as indicated. Connection must meet state guidelines

2.3 CONNECTION ASSEMBLY

A. Culinary water shall be used on this Project. Install backflow preventor and RPZ as needed.

2.4 CONTROL SYSTEM

A. Power supply to the irrigation controller shall be provided for by this Contract. To be installed by owner or electrical contractor.

B. Controller shall be as specified in the drawings. Controller shall be surge protected.

a. Installation of wall-mount controllers: Irrigation contractor shall be responsible for this task. Power configuration for wall-mount controllers shall be 120 VAC unless otherwise noted.

b. Locate Controller(s) in general location shown on Construction drawings. Coordinate power supply and breaker allocation with electrical contractor. Contractor shall be responsible for all power connections to Controllers, whether they are wall mount or pedestal mount. Contractor shall coordinate with electrical or other Project trades as needed to facilitate installation of power to controllers.

C. Wires connecting the remote control valves to the irrigation controller are single conductors, type PE. Wire construction shall incorporate a solid copper conductor and polyethylene (PE) insulation with a minimum thickness of 0.045 inches. The wires shall be UL listed for direct burial in irrigation systems and be rated at a minimum of 30 VAC. Paige Electric Co., LP specification number P7079D.

a. A minimum of 36" of additional wire shall be left at each valve, each splice box and at each controller.

b. Common wire shall be white in color, 12 gauge. Control wire shall be red in color, 14 gauge. Spare wire shall be looped within each valve box of the grouping it is to service.

D. Wire splice connectors shall use 3M brand DBY wire connectors. Wire splicing between controller and valves shall be avoided if at all possible. Any wire splices shall be contained within a valve box. Splices within a valve box that contains no control valves shall be stamped 'WIRE SPLICE' or 'WS' on box lid.

2.5 SLEEVING

A. Contractor shall be responsible to protect existing underground utilities and components. Sleeving minimum size shall be 2". Sleeving 2" through 4" in size shall be SCH40 PVC solvent weld. Sleeving 6" and larger shall be CL 200 PVC gasketed. Sleeve diameter shall be at least two times the diameter of the pipe within the sleeve. Sleeves shall be extended 6" minimum beyond walk or edge of pavement. Wire or cable shall not be installed in the same sleeve as piping, but shall be installed in separate sleeves. Sleeve ends on sleeve sizes 4" and larger shall be capped with integral corresponding sized PVC slip cap, pressure fit, until used, to prevent contamination. Sleeves shall be installed at appropriate depths for main line pipe or lateral pipe.

2.6 MAIN LINE PIPE

A. All main line pipe 4" and larger shall be Class 200 gasketed bell end. All main line pipe 3" in size and smaller shall be Schedule 40 PVC solvent weld bell end.

a. Maximum flows allowed through main line pipe shall be:

3/4"	8 GPM
1"	12 GPM
1-1/2"	30 GPM
2"	53 GPM
2-1/2"	75 GPM
3"	110 GPM
4"	180 GPM

b. Main line pipe shall be buried with 24" cover

2.7 MAIN LINE FITTINGS

A. All main line fittings 3" and larger shall be gasketed ductile iron material. All ductile iron fittings having change of direction shall have proper concrete thrust block installed. All main line fittings smaller than 3" in size shall be Schedule 80 PVC.

2.8 ISOLATION VALVES

A. Isolation valves 3" and larger shall be Waterous brand model 2500 cast iron gate valve, resilient wedge, push on type, with 2" square operating nut. Place sleeve of 6" or larger pipe over top of valve vertically and then extend to grade. Place 10" round valve box over sleeve at grade.

B. Isolation valves 2-1/2" and smaller shall be Apollo brand 70 series brass ball valves, contained in a Carson Standard size valve box. Valves shall be installed with SCH80 PVC TOE Nipples on both sides of the valve. Valve shall be placed so that the handle is vertical toward the top of the valve box in the 'off' position.

2.9 MANIFOLDS

A. Action Manifold fittings shall be used to create unions on both sides of each control valve, allowing the valve to be removed from the box without cutting piping. Valves shall be located in boxes with ample space surrounding them to allow access for maintenance and repair. Where practical, group remote control valves in close proximity, and protect each grouping with a manifold isolation valve as shown in details. Manifold Main Line (or Sub-Main Line) and all manifold components and isolation valves shall be at least as large as the largest diameter lateral served by the respective manifold.

2.10 REMOTE CONTROL VALVES

A. Remote control valves shall be as specified on the drawings. Remote control valves shall be located separately and individually in separate control boxes.

2.11 MANUAL CONTROL VALVES

A. Quick coupler valve shall be attached to the manifold sub-main line using a Lasco G178212 swing joint assembly with snap-lock outlet and brass stabilizer elbow. Quick coupler valve shall be placed within a Carson 10" round valve box. Top of quick coupler valve cover shall allow for complete installation of valve box lid, but also allow for insertion and operation of key. Base of quick coupler valve and top of quick coupler swing joint shall be encased in ¼" gravel. Contractor shall not place quick coupler valves further than 200 feet apart, to allow for spot watering or supplemental irrigation of new plant material. Quick coupler valve at POC shall not be eliminated or relocated.

2.12 LATERAL LINE PIPE

A. All lateral piping shall be Schedule 40 PVC, solvent weld, and bell end. Lateral pipe shall be buried with 12-18" of cover typically. Lateral pipe shall be ¾", 1", 1 ¼", 1 ½" or 2" in size as indicated on Construction Drawings.

2.13 LATERAL LINE FITTINGS

A. All lateral line fittings shall be S/40 PVC

2.14 Spray Sprinklers

A. Spray head sprinklers shall be as specified on the drawings. Nozzles shall be as specified on the drawings.

2.15 RAIN BIRD VALVE BOXES

A. Carson valve boxes shall be used on this project. Sizes are as directed in these Specifications, detail sheets or plan sheets. Valve boxes shall be centered over the control valve or element they cover. Valve box shall be sized large enough to allow ample room for services access, removal or replacement of valve or element. Valve box shall be set to flush to finish grade of topsoil or barked areas. Contractor shall provide extensions or stack additional valve boxes as necessary to bring valve box pit to proper grade.

2.16 IMPORT BACKFILL

A. All main line pipe, lateral line pipe and other irrigation elements shall be bedded and backfilled with clean soil, free of rocks 1" and larger. Contractor shall furnish and install additional backfill material as necessary due to rocky conditions. Trenches and other elements shall be compacted and/or water settled to eliminate settling. Debris from trenching operations un-usable for fill shall be removed from project and disposed of properly by Contractor.

2.17 OTHER PRODUCTS

A. Substitution of equivalent products is subject to the Landscape Architect or OAR's approval and must be designated as accepted in writing.

a. The Contractor shall provide materials to make the system complete and operational.

PART 3 - EXECUTION

3.1 PREPARATION

A. Contractor shall repair or replace work damaged by irrigation system installation. If damaged work is new, repair or replacement shall be performed by the original installer of that work. The existing landscape of this Project shall remain in place. Contractor shall protect and work around existing plant material. Coordination of trench and valve locations shall be laid out for the OAR prior to any excavation occurring. Plant material deemed damaged by the OAR shall be replaced with new plant material at Contractor's expense. Contractor shall not cut existing tree roots larger than 2" to install this Project. Route pipe, wire and irrigation elements around tree canopy drip line to minimize damage to tree roots. Contractor shall have no part of existing system used by other portions of site landscape without water for more than 24 hours at a time.

3.2 TRENCHING AND BACKFILLING

A. Pulling of pipe shall not be permitted on this project. Over excavate trenches both in width and depth. Ensure base of trench is rock or debris free to protect pipe and wire. Grade trench base to ensure flat, even support of piping. Backfill with clean soil or import material. Contractor shall backfill no less than 2" around entire pipe with clean, rock free fill. Main line piping and fittings shall not be backfilled until OAR has inspected and pipe has passed pressure testing. Perform balance of backfill operation to eliminate any settling.

3.3 SLEEVING

A. Sleeve all piping and wiring that pass under paving or hardscape features. Wiring shall be placed in separate sleeving from piping. Sleeves shall be positioned relative to structures or obstructions to allow for pipe or wire within to be removed if necessary.

3.4 GRADES AND DRAINAGE

A. Place irrigation pipe and other elements at uniform grades. Winterization shall be by evacuation with compressed air. Automatic drains shall not be installed on this Project. Manual drains shall only be installed at POC where designated on Construction Drawings.

3.5 PVC PIPE

A. Install pipe to allow for expansion and contraction as recommended by pipe manufacturer.

B. Install main line pipes with 18" of cover, lateral line pipes with 12" of cover.

C. Drawings show diagrammatic or conceptual location of pipe - Contractor shall install piping to minimize change of direction, avoid placement under large trees or large shrubs, avoid placement under hardscape features.

D. Plastic pipe shall be cut squarely. Burrs shall be removed. Spigot ends of pipes 3" and larger shall be beveled.

E. Pipe shall not be glued unless ambient temperature is at least 50 degress F. Pipe shall not be glued in rainy conditions unless properly tented. All solvent weld joints shall be assembled using IPS 711 glue and P70 primer according to manufacturer's specification, no exceptions. All workers performing glue operations shall provide evidence of certification. Glued main line pipe shall cure a minimum of 24 hours prior to being energized. Lateral lines shall cure a minimum of 2 hours prior to being energized and shall not remain under constant pressure unless cured for 24 hours.

F. Appropriate thrust blocking shall be performed on fittings 3" and larger. All threaded joints shall be wrapped with Teflon tape or paste unless directed by product manufacturer or sealing by o-ring.

3.6 CONTROLLERS

A. All grounding for pedestal controllers shall be as directed by controller manufacturer and ASIC guidelines, not to exceed a resistance reading of 5 OHMs.

B. Locate controllers in protected, inconspicuous places, when possible. Coordinate location of pedestal controllers with Landscape Architect to minimize visibility.

C. Coordinate location of wall mount controllers with building or electrical Contractor to facilitate electrical service and future maintenance needs. Wall mount shall be securely fastened to surface. If exterior mounted, wall mount controllers shall have electrical service wire and field control wire in separate, appropriate sized weatherproof electrical conduit, PVC pipe shall not be used.

D. Wiring under hardscape surfaces shall be placed continuously in conduit. Contractor shall be responsible to coordinate sleeving needs for conduit or sweeps elbows from exterior to interior of building.

E. Pedestal controllers shall be placed upon VIT-Strong Box Quick Pad as per manufacturer's recommendations. Controllers shall be oriented such that Owner's Representative maintenance personnel may access easily and perform field system tests efficiently.

F. Place Standard valve box at base of controller or nearby to allow for three to five feet of slack field control wire to be placed at each controller. This Contractor shall provide conduit access if needed for Electrical Contractor. Electrical supply and installation, as well as hook-up to controller shall be by this Contractor.

G. Electrical contractor is in charge of providing 1.5" conduit from controller to outside landscape area. Provide power and room for controller. Provide ethernet to hardwire power into the controller.

3.7 VALVES

A. Isolation valves, remote control valves, and quick coupler valves shall be installed according to manufacturer recommendation and Contract Specifications and Details.

B. Valve boxes shall be set over valves so that all parts of the valve can be reached for service.

C. Valve box and lid shall be set to be flush with finished grade. Only one remote control valve may be installed in a Carson 1419124 box. Place a minimum of 4" of ¾" washed gravel beneath valve box for drainage. Bottom of remote control valve shall be a minimum of 2" above gravel.

3.8 SPRINKLER HEADS

A. No sprinkler shall be located closer than 6" to walls, fences, or buildings.

B. Heads adjacent to walks, curbs, or paths shall be located at grade and 2" away from hardscape.

C. Control valves shall be opened. Then fully flush lateral line pipe and swing joints prior to installation of sprinklers.

D. Spray heads shall be installed and flushed again prior to installation of nozzles.

E. Contractor shall be responsible for adjustment if necessary due to grade changes during landscape construction.

3.9 FIELD QUALITY CONTROL

A. Main line pipes shall not be backfilled or accepted until the system has been tested for 2 hours at 100 psi.

B. Main line pressure test shall include all pipe and components from the point of connection to the upstream side of remote control valves. Test shall include all manifold components under constant pressure. Piping may be tested in sections that can be isolated.

C. Contractor shall provide pressurized water pump to increase or boost pressure where existing static pressure is less than 100 psi.

D. Schedule testing with OAR 48 hours in advance for approval.

E. Leaks or defects shall promptly be repaired or rectified at the Contractors expense and retested until able to pass testing.

F. Grounding resistance at pedestal controller shall also be tested and shall not exceed 5 OHMs.

3.10 ADJUSTMENT

A. Sprinkler heads shall be adjusted to proper height when installed. Changes in grade or adjustment of head height after installation shall be considered a part of the original contract and at Contractor's expense.

B. Adjust all sprinkler heads for arc, radius, proper trim and distribution to cover all landscaped areas that are to be irrigated.

C. Adjust sprinklers so they do not water buildings, structures, or other hardscape features.

D. Adjust run times of station to meet needs of plant material the station services.

3.11 CLEANING

A. Contractor shall be responsible for cleanliness of jobsite. Work areas shall be swept cleanly and picked up daily.

B. Open trenches or hazards shall be protected with yellow caution tape.

C. Contractor is responsible for removal and disposal of offsite trash and debris generated as a result of this Project.

D. OAR shall perform periodic as well as a final cleanliness inspection.

E. Contractor shall leave Project in at least a 'broom clean' condition.

END OF SECTION

IRRIGATION NOTES

1. BEFORE WORK IS TO COMMENCE, BLUE STAKES/DIG LINE IS TO BE CALLED AND NOTIFIED. IF ANY DAMAGE TO UTILITIES HAPPEN DURING CONSTRUCTION, THE CONTRACTOR SHALL REPAIR IT AT THEIR EXPENSE WITH NO ADDITIONAL COST TO THE OWNER.
2. CONTRACTOR SHALL APPLY AND PAY FOR ALL NECESSARY PERMITS IN ACCORDANCE WITH CITY AND/OR COUNTY CODES AND COMPLY WITH SPECIFICATIONS AND DRAWINGS.
3. INVESTIGATE TO MAKE SURE THAT THE IRRIGATION SYSTEM IS, IN FACT, BEING CONNECTED TO A CULINARY SYSTEM. IF IT IS NOT CONNECTED TO CULINARY, CONTACT THE OWNER AND LANDSCAPE ARCHITECT TO COORDINATE A SECONDARY SYSTEM AND REQUIRED COMPONENTS.
4. VERIFY THAT THE POINT OF CONNECTION IS IN THE CORRECT LOCATION BEFORE INSTALLATION. ALL CONNECTIONS ON THIS PROJECT ARE TO BE CULINARY WATER AND SHOULD BE NOTED AS SUCH; THEREFORE, ALL PARTS MUST MEET WATER STANDARDS THAT PERTAIN TO CULINARY WATER.USE A BACKFLOW PREVENTOR AND RPZ AS SPECIFIED.
5. ON OCCASION AND FOR GRAPHIC PURPOSES ONLY, THE IRRIGATION SYSTEM MIGHT BE SHOWN IN HARDSCAPE AREAS. THIS IRRIGATION IS TO BE PLACED IN LANDSCAPED AREAS ON THE PROPERTY SITE.
6. CONTRACTOR SHALL USE ONLY COMMERCIAL GRADE IRRIGATION PRODUCTS. THIS INCLUDES PIPE TO BE SCHEDULE 40 PVC OR BETTER. NO POLY PIPE IS TO BE USED, UNLESS BLACK POLY IS CALLED OUT FOR WIRE SLEEVING. FITTINGS UP TO 1-1/2" MUST BE SCHEDULE 40 OR BETTER. FITTINGS LARGER THAN 1-1/2" SHALL BE SCHEDULE 80 OR BETTER. CONTRACTOR IS RESPONSIBLE FOR ENSURING ACCURATE COUNTS AND QUANTITIES OF ALL IRRIGATION MATERIALS FOR BIDDING AND INSTALLATION.
7. MAIN LINES SHALL BE A MINIMUM OF 24" DEEP AND LATERAL LINES A MINIMUM OF 12" DEEP. NO ROCK GREATER THAN 1/2" DIAMETER SHALL BE ALLOWED IN TRENCHES. TRENCHING BACKFILL MATERIAL SHALL BE COMPACTED TO PROPER FINISHED GRADE.
8. NO IRRIGATION MAIN LINE MAY BE LOCATED WITHIN 5 FEET OF ANY STRUCTURE.
9. TO AVOID PIPE DAMAGE, ADJUST LOCATION OF PIPE TO NOT BE DIRECTLY UNDER PLANT MATERIALS. VALVE BOXES ARE PREFERRED TO BE IN PLANTER BEDS INSTEAD OF THE LAWN. SYSTEM IS TO BE WINTERIZED IN THE LATE FALL.
10. PLAN INDICATES 100% OR BETTER HEAD TO HEAD COVERAGE. SHOULD CONTRACTOR FIND DISCREPANCIES DUE TO NECESSARY FIELD ADJUSTMENTS, CONTACT LANDSCAPE ARCHITECT FOR IRRIGATION CORRECTION.
11. DRIP IRRIGATION TO BE INSTALLED PER DETAILS. CONTRACTOR SHALL MAKE NECESSARY ADJUSTMENTS. TUBING SHOULD REST TOWARD OUTER EDGE OF ROOTBALL AND NOT AGAINST TRUNK OF PLANT.
12. A QUICK COUPLER SHALL BE INSTALLED AT POINT OF CONNECTION TO ALLOW BLOW OUT OF SYSTEM BY AIR COMPRESSOR AT END OF EACH SEASON.
13. INSTALL SLEEVES FOR ALL PIPES AND WIRE CONDUIT THAT ARE PLACED UNDER PAVEMENT AND SIDEWALKS. SLEEVES SHALL BE 2 SIZES LARGER THAN PIPE BEING PLACED INTERNALLY. WIRE CONDUIT SHALL BE INSTALLED IN CLASS 200 PIPE. AT ANY DIRECTIONAL CHANGE THAT OCCURS, A JUNCTION BOX IS TO PLACED.
14. CONDUITS CAN NOT BE SHARED BY WATER AND ELECTRICAL LINES. ALL WIRE TO BE PUT IN PVC CONDUIT. ALL WIRE CONNECTIONS TO BE PLACED IN A VALVE BOX. ALL WIRE CONNECTIONS TO USE WATERPROOF WIRE CONNECTORS WITH AT LEAST 3" OF EXTRA WIRE. PROVIDE PLENTY OF EXTRA WIRE AT EVERY DIRECTIONAL CHANGE. INSULATED 14 GAUGE COPPER TO BE USED FOR ALL CONTROL WIRES AND INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
15. CONTRACTOR TO INSTALL LIGHTNING ARRESTOR AND GROUNDING RODS ON SITE PER MANUFACTURER'S RECOMMENDATIONS, SEE DETAILS.
16. CONTRACTOR TO SEPARATE SYSTEM (CONTROLLER, VALVES, AND DIFFERENT COLORED WIRE) FROM CITY MAINTAINED PROPERTY AND HOA/OWNER MAINTAINED PROPERTY.
17. DUCT TAPE ALL SLEEVES TO PREVENT SOIL OR OTHER DEBRIS ENTERING PIPE. IDENTIFY ALL SLEEVES BY WOOD OR PVC STAKES AND SPRAY PAINT WITH MARKING PAINT. REMOVE STAKES ONCE IRRIGATION SYSTEM IS COMPLETE.
18. TO PREVENT EROSION AND LOW POINT DRAINAGE CONTRACTOR SHALL INSTALL CHECK VALVES
19. LOCATE SPRAY HEADS NO CLOSER THAN 6" FROM WALLS, FENCES OR BUILDINGS AND 2" AWAY FROM WALKS, PATHS OR CURBS.
20. PRESSURE TEST MAINLINE FOR LEAKS PRIOR TO BACKFILLING. CONTACT LANDSCAPE ARCHITECT/OWNER AT THIS TIME FOR COMPLIANCE.
21. CONTRACTOR TO CONSULT WITH OWNER ON EXACT LOCATION OF CONTROLLER. CONTRACTOR TO COORDINATE WITH ELECTRICAL CONTRACTOR AND OWNER FOR THE POWER SUPPLY. INSTALL ALL PER MANUFACTURER'S SPECIFICATIONS. CONTRACTOR SHALL INSTALL A RAIN SENSOR WITH THE CONTROLLER UNLESS OTHERWISE DIRECTED BY OWNER OR LANDSCAPE ARCHITECT.
22. LATERAL LINES SHALL BE NO SMALLER THAN 3/4". LANDSCAPE CONTRACTOR TO ENSURE THE FOLLOWING PIPE SIZES DO NOT EXCEED THE SUGGESTED GPM LISTED BELOW:

I	3/4"	8 GPM
II	1"	12 GPM
III	1-1/2"	30 GPM
IV	2"	53 GPM
V	2-1/2"	75 GPM
VI	3"	110 GPM
VII	4"	180 GPM

WATERING SCHEDULE

90 Day Establishment Period Irrigation Schedule

HiLow Water Use Zones	TYPE	IR HEAD	AMT. H20	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	
Hi Water Use	TURF	MP ROTATOR	.5 INCH	15 MIN.	15 MIN.	15 MIN.	15 MIN.	15 MIN.	15 MIN.	15 MIN.	Participate in a water check to determine
Medium to Low Water Use	SHRUBS	DRIP	2 GAL/HR.		2 HOURS			2 HOURS			precipitation rate of sprinkler system.
Xeric Water Use	SHRUBS	DRIP	2 GAL/HR.		2 HOURS						

Note: Begin irrigation 4:00 am. Use cycle and soak method in clay soils-divide into 3 waterings for each turf irrigation event. Shrubs to be watered so soil is moist 6" below root ball. Do not overwater shrubs, allow to dry between waterings especially in clay soils. Watch for water stress.

Regular Irrigation Schedule: Begin Spring Watering May 15 (Turf irrigation event once every 5-7 days; Shrubs 2-4 times/month)

HiLow Water Use Zones	TYPE	IR HEAD	AMT. H20	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	
Hi Water Use	TURF	MP ROTATOR	.5 INCH		60 MIN.						Participate in a water check to determine
Medium to Low Water Use	SHRUBS	DRIP	2 GAL/HR.			2 HOURS					precipitation rate of sprinkler system.
Xeric Water Use	SHRUBS	DRIP	No Water								

Note: Begin irrigation 4:00 am. Use cycle and soak method in clay soils-divide into 3 waterings for each turf irrigation event.
Do not overwater shrubs, allow to dry between waterings especially in clay soils. Watch for water stress. Days of watering may vary based on local restrictions

Regular Irrigation Schedule: Begin Summer Watering June 15 (Turf irrigation event once every 2-3 days; Shrubs 1 time/week)

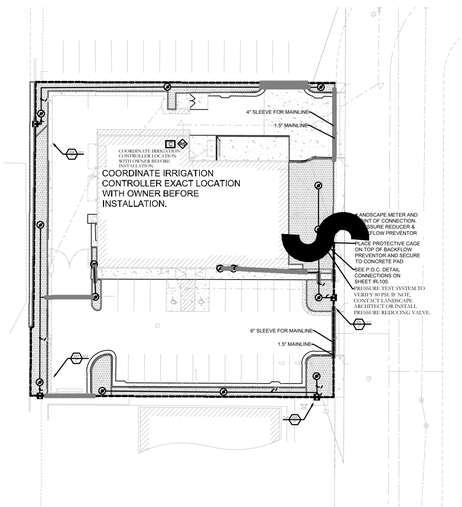
HiLow Water Use Zones	TYPE	IR HEAD	AMT. H20	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	
Hi Water Use	TURF	MP ROTATOR	.5 INCH		60 MIN.		60 MIN.		60 MIN.		Participate in a water check to determine
Medium to Low Water Use	SHRUBS	DRIP	2 GAL/HR.			2 HOURS					precipitation rate of sprinkler system.
Xeric Water Use	SHRUBS	DRIP	2 GAL/HR.			1 HOUR					

Note: Begin irrigation 4:00 am. Use cycle and soak method in clay soils-divide into 3 waterings for each turf irrigation event.
Do not overwater shrubs, allow to dry between waterings especially in clay soils. Watch for water stress. Days of watering may vary based on local restrictions
Reference Utah DNR weekly watering guide: https://conservewater.utah.gov/weekly-lawn-watering-guide/

Regular Irrigation Schedule: Begin Fall Watering September 1-End Fall Watering October 15 (Turf irrigation event once every 5-7 days; Shrubs 2-4 time/month)

HiLow Water Use Zones	TYPE	IR HEAD	AMT. H20	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	
Hi Water Use	TURF	MP ROTATOR	.5 INCH		60 MIN.						Participate in a water check to determine
Medium to Low Water Use	SHRUBS	DRIP	2 GAL/HR.			2 HOURS					precipitation rate of sprinkler system.
Xeric Water Use	SHRUBS	DRIP	No Water								

Note: Begin irrigation 4:00 am. Use cycle and soak method in clay soils-divide into 3 waterings for each turf irrigation event.
Do not overwater shrubs, allow to dry between waterings especially in clay soils. Watch for water stress. Days of watering may vary based on local restrictions



1.5" MAINLINE ROUTING ,CONTROLLER AND 1" P.O.C. LOCATION OVERVIEW

ISSUE DATE	PROJECT NUMBER	PLAN INFORMATION	PROJECT INFORMATION	DEVELOPER / PROPERTY OWNER / CLIENT	LANDSCAPE ARCHITECT / PLANNER	LICENSE STAMP	DRAWING INFO

11/26/2025

UT24048

NO.	REVISION	DATE
1	CITY COMMENTS	4-4-2025
2	CITY COMMENTS	4-15-2025
3		
4		
5		
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7		

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N

0' 20' 40' 80' 160'
GRAPHIC SCALE: 1" = 40'

AC HQ
9352 S. 670 W.
SANDY, UTAH

ARCHITECTUAL COMPONENTS
ATT: JOSH NAYLOR
801-557-7523
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LEHI, UTAH 84043 (801) 995-2217
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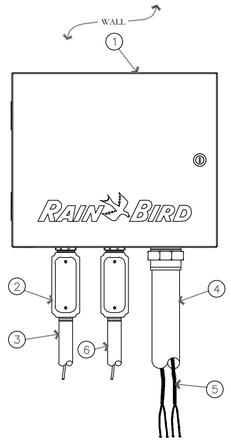
LICENSED LANDSCAPE ARCHITECT
JEREMY ANSWORTH
8123717-5301
11/26/2025
ELECTRONIC SEAL
STATE OF UTAH

PM: JTA
DRAWN: ACP
CHECKED: JMA
PLOT DATE: 11/26/2025

IRRIGATION COVER

CITY PERMIT SET

IR-101



1. TWO-WIRE CONTROLLER: RAIN BIRD ESP-LXIVM/PRO IN LXMM METAL CABINET WITH OUTSIDE WALL MOUNT. INSTALL CONTROLLER AND CABINET ON WALL PER MANUFACTURER'S RECOMMENDATIONS.
2. JUNCTION BOX
3. 1-INCH CONDUIT AND FITTINGS FOR POWER SUPPLY WIRE
4. 2-INCH CONDUIT AND FITTINGS FOR TWO-WIRE CABLE
5. MAXICABLE TWO-WIRE PATH TO FIELD DEVICES, USE A DIFFERENT CABLE JACKET COLOR FOR EACH PATH.
6. 1-INCH CONDUIT AND FITTINGS FOR GROUND WIRE. ONLY FOR OUTDOOR INSTALLATIONS.

NOTES:
1. ESP-LXIVM CONTROLLER IS AVAILABLE IN TWO MODELS. THE LXIVM WITH 60 STATIONS AND THE LMIVM-PRO WITH 240 STATIONS. REFER TO THE CHART BELOW FOR DIFFERENCES BETWEEN THE TWO MODELS.
2. USE STEEL CONDUIT FOR ABOVE GRADE AND SCH 4O PVC CONDUIT FOR BELOW GRADE CONDITIONS.
3. PROVIDE PROPER GROUNDING COMPONENTS TO ACHIEVE GROUND RESISTANCE OF 10 OHMS OR LESS. IF CONTROLLER IS MOUNTED INDOORS, USE POWER SUPPLY GROUND.

KEY SPECIFICATIONS

FEATURE ▶ / MODEL ▼	MAX PROGRAMS	STATIONS	MAX SIMUL.STATIONS	MASTER VALVES	FLOW SENSORS	WEATHER SENSORS
LX-IVM	10	60	8	5	5	4
LX-IVM PRO	40	240	16	10	10	8

A ESP-LXIVM/PRO TWO-WIRE CONTROLLER IN METAL CABINET

NOT TO SCALE

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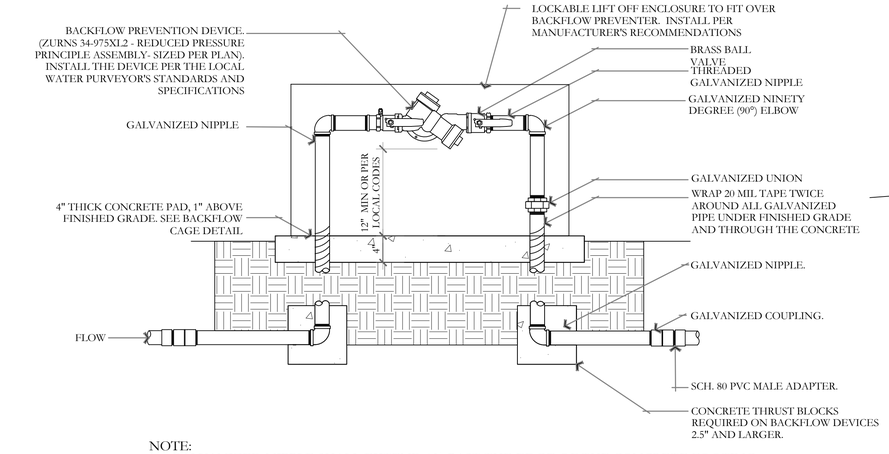
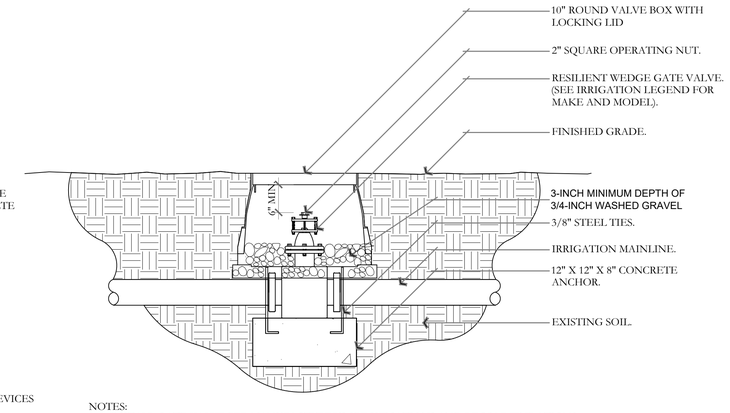


NOTE:
1. GALVANIZED NIPPLE SHALL EXTEND 12" PAST THE EDGE OF THE CONCRETE FOOTING.
2. SCH. 80 PVC MALE ADAPTER SHALL BE USED IN CONNECTION FROM GALVANIZE TO THE MAINLINE.
3. BACKFLOW PREVENTION DEVICE SHALL BE LOCATED AS CLOSE AS POSSIBLE TO THE LANDSCAPE METER.
4. BACKFLOW PREVENTION DEVICE SHALL BE LOCATED IN PLANTING AREA UNLESS APPROVED BY OWNER'S REPRESENTATIVE.
5. SEE DETAIL FOR BACKFLOW CAGE INSTALLATION.
6. ALL ASSEMBLY PARTS (THREADED NIPPLES, FITTINGS, ETC.) SHALL BE GALVANIZED OR BRASS PER LOCAL CODES AND REQUIREMENTS.
7. ALL BACKFLOW PREVENTION DEVICES SHALL HAVE FREEZE BLANKET INCLUDED UPON INSTALLATION.
8. ALL GALVANIZED CONNECTIONS SHALL TO BE MADE USING PIPE THREAD SEALANT. ALL SCH. 80 PVC TO GALVANIZED CONNECTIONS TO BE MADE USING TEFLON TAPE.

B BACKFLOW PREVENTION DETAIL

NOT TO SCALE

PKJ DESIGN GROUP

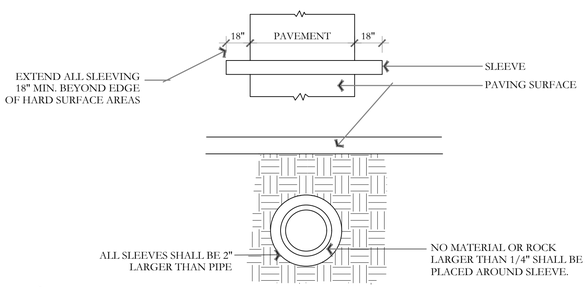


NOTES:
1. INSTALL GATE VALVE PER MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
2. VALVE BOX SHALL BE WRAPPED WITH MINIMUM 3 MIL. THICK PLASTIC AND SECURE IT TO VALVE BOX USING DUCT TAPE OR ELECTRICAL TAPE.
3. VALVE BOX SHALL BE LOCATED IN PLANTING AREA.

C GATE VALVE AND ANCHOR DETAIL

NOT TO SCALE

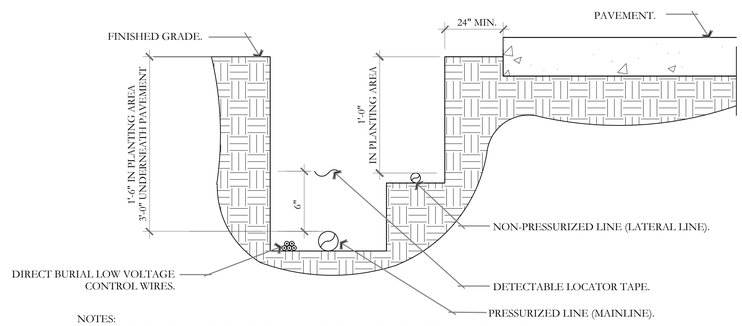
PKJ DESIGN GROUP



D TYPICAL SLEEVING DETAIL

NOT TO SCALE

PKJ DESIGN GROUP



NOTES:
1. SEE IRRIGATION LEGEND FOR MAINLINE AND LATERAL LINE PIPE SIZE AND TYPE.
2. DIRECT BURIAL CONTROL WIRES SHALL BE INSTALLED IN SCH. 40 PVC ELECTRICAL CONDUIT IF REQUIRED.
3. 2-WIRE IRRIGATION WIRE SHALL BE INSTALLED IN SCH. 40 PVC ELECTRICAL CONDUIT.
4. DETECTABLE LOCATOR TAPE SHALL BE LOCATED SIX INCHES (6") ABOVE THE ENTIRE MAINLINE RUN.

E IRRIGATION TRENCHING DETAIL

NOT TO SCALE

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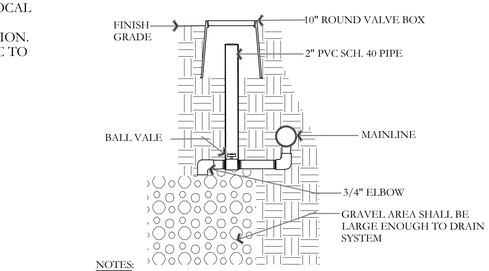
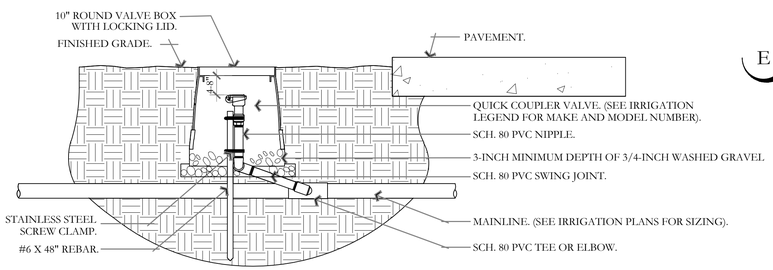


NOTES:
1. ALL FITTINGS TO BE SCH. 80 PVC
2. PROVIDE OWNER WITH KEY

F MANUAL DRAIN DETAIL

NOT TO SCALE

PKJ DESIGN GROUP

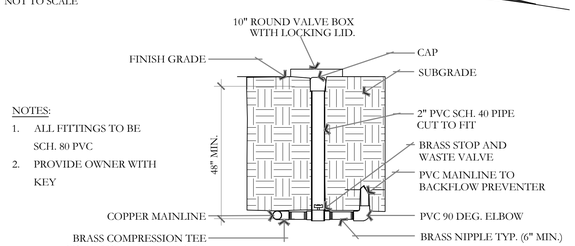


NOTES:
1. ALL THREADED CONNECTIONS SHALL BE INSTALLED USING TEFLON TAPE.
2. VALVE BOX SHALL BE WRAPPED WITH A MINIMUM 3 MIL THICK PLASTIC AND SECURED TO THE VALVE BOX USING DUCT TAPE OR ELECTRICAL TAPE.
3. ALL QUICK COUPLERS SHALL BE INSTALLED A MINIMUM OF 18" OFF OF THE MAINLINE.
4. VALVE BOXES SHALL BE LOCATED IN PLANTING AREAS.

G QUICK COUPLER DETAIL

NOT TO SCALE

PKJ DESIGN GROUP



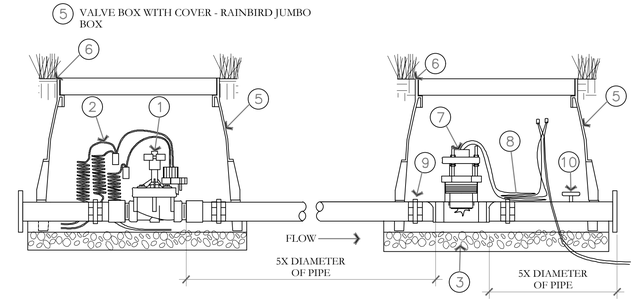
NOTES:
1. ALL FITTINGS TO BE SCH. 80 PVC
2. PROVIDE OWNER WITH KEY

H STOP AND WASTE VALVE ASSEMBLY DETAIL

NOT TO SCALE

PKJ DESIGN GROUP

1. NORMALLY CLOSED MASTER VALVE(S)
2. 36-INCH LENGTH OF COILED WIRE TO SATELLITE CONTROLLER SPARE STATION
3. 3-INCH MINIMUM DEPTH OF 3/4-INCH WASHED GRAVEL
5. VALVE BOX WITH COVER - RAINBIRD JUMBO BOX
6. FINISH GRADE
7. RAIN BIRD FS SERIES FLOW SENSOR(S). SEE COVER SHEET FOR SIZE
8. 36-INCH LENGTH OF COILED MAXI-CABLE TO FLOW SENSING
9. PVC PIPE UNION
10. BRASS BALL VALVE



I MASTER VALVE AND FLOW SENSOR DETAIL

NOT TO SCALE

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www.pkjdesigngroup.com

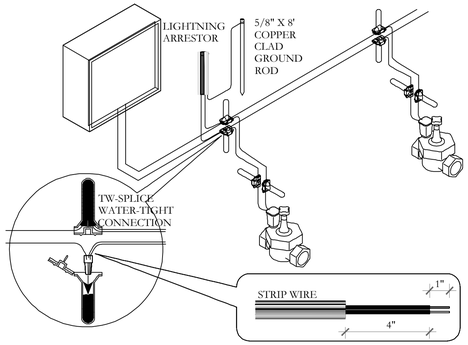
LICENSED LANDSCAPE ARCHITECT
JOSHUA AINSWORTH
8128121-5301
11/26/2025
ELECTRONIC SEAL
STATE OF UTAH

CHECKED: JMA
DRAWN: ACP
PLOT DATE: 11/26/2025

IRRIGATION DETAILS

CITY PERMIT SET

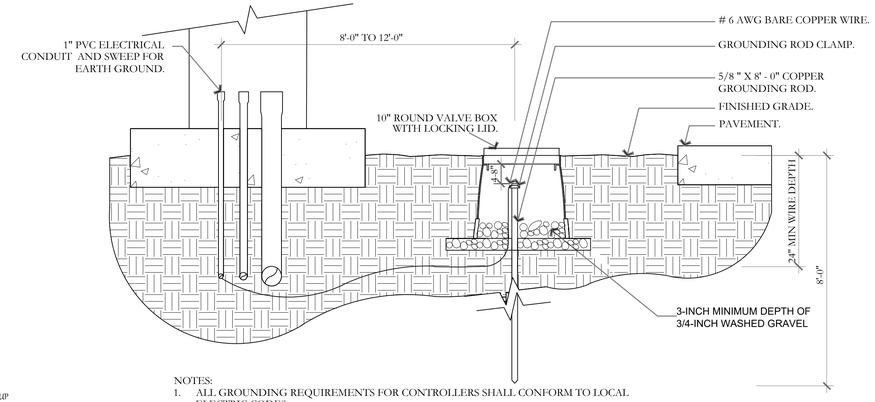
IR-501



J 2-WIRE CONNECTION DETAIL

PKJ DESIGN GROUP

NOT TO SCALE



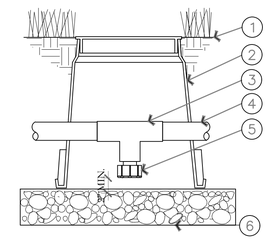
NOTES:

1. ALL GROUNDING REQUIREMENTS FOR CONTROLLERS SHALL CONFORM TO LOCAL ELECTRIC CODES.
2. GROUNDING ROD SHALL NOT BE LOCATED IN THE SAME TRENCH AS THE IRRIGATION MAINLINES OR LATERAL LINES.
3. VALVE BOX SHALL BE WRAPPED WITH A MINIMUM 3 MIL THICK PLASTIC AND SECURED TO THE VALVE BOX USING DUCT TAPE OR ELECTRICAL TAPE.
4. INSTALL GROUNDING ROD PER THE CONTROLLER MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.

K GROUNDING ROD DETAIL

PKJ DESIGN GROUP

NOT TO SCALE

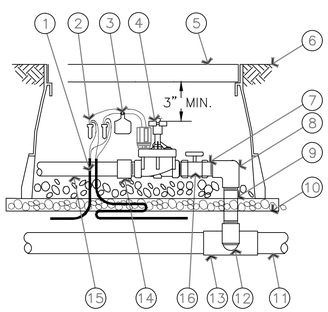


1. FINISH GRADE/TOP OF MULCH
2. VALVE BOX WITH COVER: RAIN BIRD VB-6RND
3. PVC SCH 40 TEE
4. PVC LATERAL PIPE
5. FILTERED DRAIN VALVE: RAIN BIRD 16A-FDV-075
6. 6-INCH MINIMUM DEPTH OF 3/4" WASHED GRAVEL

L MANUAL LINE DRAIN VALVE DETAIL

PKJ DESIGN GROUP

NOT TO SCALE

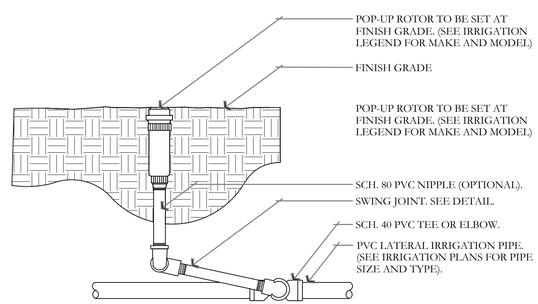


1. 36-INCH LENGTH OF 2-WIRE CABLE
2. WATERPROOF CONNECTION RAIN BIRD WC20 (TWO REQUIRED)
3. ID TAG: RAIN BIRD VID SERIES
4. REMOTE CONTROL VALVE: RAIN BIRD PEB/PESB/PESB-R WITH IVM-SOL
5. VALVE BOX WITH COVER: RAIN BIRD VB-STD
6. FINISH GRADE/TOP OF MULCH
7. PVC SCH 80 NIPPLE (CLOSE)
8. PVC SCH 40 ELL `
9. PVC SCH 80 NIPPLE (LENGTH AS REQUIRED)
10. 3-INCH MINIMUM DEPTH OF 3/4-INCH WASHED GRAVEL
11. PVC MAINLINE PIPE SCH 80 NIPPLE (2-INCH LENGTH, HIDDEN) AND SCH 40 ELL
12. PVC SCH 40 TEE OR ELL
13. PVC SCH 40 MALE ADAPTER
14. PVC LATERAL PIPE
15. 3-INCH MINIMUM DEPTH OF 3/4-INCH WASHED GRAVEL
16. BRASS BALL VALVE

M ELECTRIC REMOTE-CONTROL VALVE PEB OR PESB SERIES WITH IVM-SOL

PKJ DESIGN GROUP

NOT TO SCALE



NOTES:

1. ALL THREADED CONNECTION POINTS BETWEEN SCH. 40 PVC AND SCH. 80 PVC FITTING SHALL BE INSTALLED USING TEFLON TAPE.
2. CONTRACTOR SHALL COMPACT SOIL AROUND ROTOR AND RISER PRIOR TO PLANTING, PLUGGING, SEEDING, OR LAYING OF SOD.

N ROTOR HEAD DETAIL

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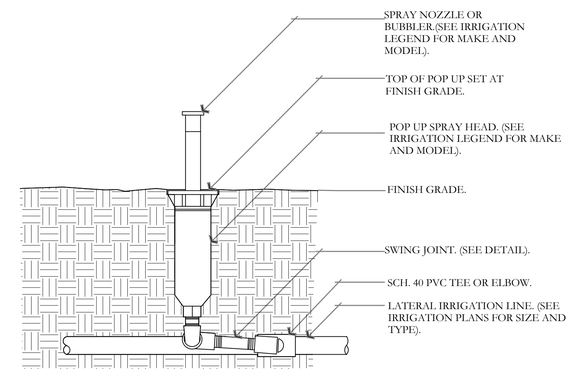
NOT TO SCALE



NOTE:

1. 4" POP UPS SHALL BE USED IN TURF AREAS.
2. CONTRACTOR SHALL SETTLE SOIL AROUND THE POP UP AFTER INSTALLATION.
3. ALL POP UP SPRAY HEADS SHALL HAVE CHECK VALVES.
4. ALL SCH. 40 PVC TO SCH. 80 PVC CONNECTIONS SHALL BE MADE USING TEFLON TAPE.

O POP UP-SPRAY HEAD DETAIL

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ISSUE DATE	PROJECT NUMBER	PLAN INFORMATION	PROJECT INFORMATION	DEVELOPER / PROPERTY OWNER / CLIENT	LANDSCAPE ARCHITECT / PLANNER	LICENSE STAMP	DRAWING INFO
11/26/2025	UT24048						PM: JTA

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LEHI, UTAH 84043 (801) 995-2217
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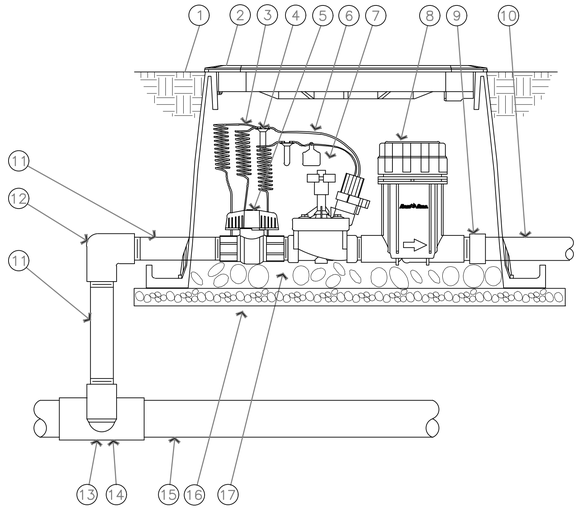
LICENSED LANDSCAPE ARCHITECT JEREMY ANDRUSKOTH 8/28/21 - 6301 11/26/2025 ELECTRONIC SEAL STATE OF UTAH

DRAWING INFO	
PM:	JTA
DRAWN:	ACP
CHECKED:	JMA
PLOT DATE:	11/26/2025

IRRIGATION DETAILS

CITY PERMIT SET

IR-502



1. FINISH GRADE/TOP OF MULCH
2. VALVE BOX WITH COVER: RAIN BIRD VB-STD
3. 30-INCH LINEAR LENGTH OF WIRE, COILED
4. WATERPROOF CONNECTION: RAIN BIRD DB SERIES
5. 1-INCH BALL VALVE (INCLUDED IN XCZ-PRB-100-COM KIT)
6. ID TAG
7. REMOTE CONTROL VALVE: RAIN BIRD PESB (INCLUCED IN XCZ-PRB-100-COM KIT)
8. PRESSURE REGULATING AND FLOW INDICATING BASKET FILTER: RAIN BIRD XCZ-100-FLOW
9. PVC SCH 40 FEMALE ADAPTOR
10. LATERAL PIPE
11. PVC SCH 80 NIPPLE (LENGTH AS REQUIRED)
12. PVC SCH 40 ELL
13. PVC SCH 80 NIPPLE (2-INCH LENGTH, HIDDEN) AND PVC SCH 40 ELL
14. PVC SCH 40 TEE OR ELL
15. MAINLINE PIPE
16. 3-INCH MINIMUM DEPTH OF 3/4-INCH WASHED GRAVEL
17. PVC SCH 80 NIPPLE, CLOSE (INCLUDED IN XCZ-PRB-100-COM KIT)

P DRIP CONTROL ZONE KIT DETAIL

NOT TO SCALE

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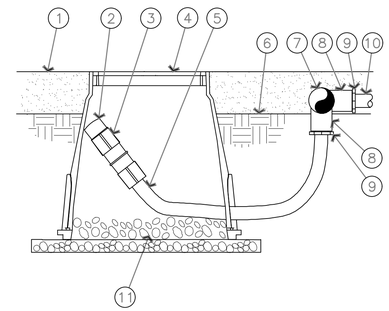


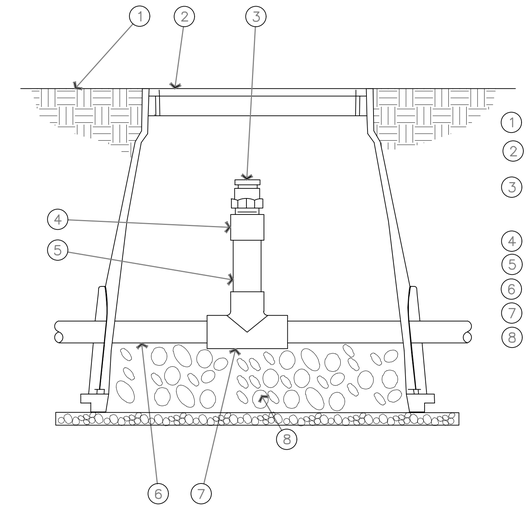
1. MULCH
2. FLUSH CAP FOR EASY FIT COMPRESSION FITTINGS: POTABLE:RAIN BIRD MDCFCAP
3. EASY FIT COUPLING: RAIN BIRD MDCFCOUP
4. SUBTERRANEAN EMITTER BOX: RAIN BIRD SEB 7XB
5. ½" POLYETHYLENE TUBING: RAIN BIRD XF BLANK TUBING
6. FINISH GRADE
7. PVC EXHAUST HEADER
8. PVC SCH 40 TEE OR EL
9. BARB X MALE FITTING: RAIN BIRD XFF-MA FITTING (TYPICAL)
10. ON-SURFACE DRIPLINE: RAIN BIRD XF SERIES DRIPLINE POTABLE: XFCV DRIPLINE
11. 3-INCH MINIMUM DEPTH OF 3/4 " WASHED GRAVEL

NOTE:
1. ALLOW A MINIMUM OF 6-INCHES OF DRIPLINE TUBING IN VALVE BOX IN ORDER TO DIRECT FLUSHED WATER OUTSIDE VALVE BOX.

Q ON-SURFACE DRIPLINE FLUSH POINT DETAIL

NOT TO SCALE

PKJ DESIGN GROUP

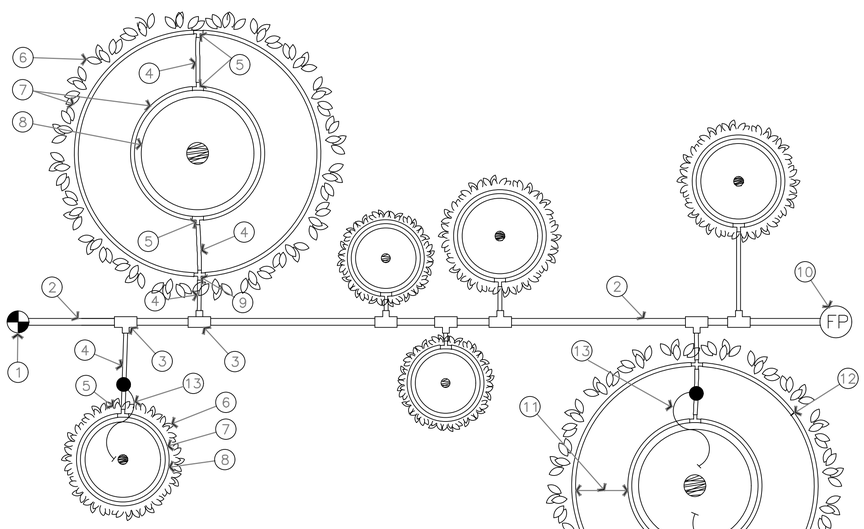


1. FINISH GRADE
2. SUBTERRANEAN EMITTER BOX: RAIN BIRD SEB 7XB
3. ½" AIR RELIEF VALVE: RAIN BIRD ARV050 TO BE INSTALLED AT HIGH POINTS IN DRIP ZONE
4. PVC SCH 40 FEMALE ADAPTER
5. PVC SCH 80 RISER
6. PVC HEADER PIPE
7. PVC SCH 40 TEE
8. 3" MINIMUM DEPTH OF 3/4" WASHED GRAVEL

R AIR RELIEF VALVE DETAIL

NOT TO SCALE

PKJ DESIGN GROUP



1. RAIN BIRD CONTROL ZONE KIT (SIZED TO ACCOMIDATE LATERAL FLOW DEMAND)
2. PVC DRIP LATERAL PIPE
3. PVC SCH 40 TEE OR EL (TYPICAL)
4. ½" POLYETHYLENE TUBING: RAIN BIRD XF SERIES- S FOR COPPER SHEILD (TYPICAL)
5. BARB X BARB INSERT TEE: RAIN BIRD XFF-TEE (TYPICAL)
6. PROJECTED CANOPY LINE OF TREE OR SHRUB (TYPICAL)
7. ON-SURFACE DRIPLINE: RAIN BIRD XF SERIES DRIPLINE POTABLE: XFCV SERIES PLACE AS SHOWN (LENGTH AS REQUIRED, TYPICAL)
8. ROOT BALL (TYPICAL)
9. BARB X BARB INSERT CROSS: RAIN BIRD XFD-CROSS (TYPICAL)
10. DRIPLINE FLUSH POINT (SEE RAIN BIRD DETAIL: "XFCV DRIPLINE FLUSH POINT WITH BALL VALVE")
11. SPACING PER SPECIFICATION
12. TIE DOWN STAKE: RAIN BIRD TDS-050 WITH BEND (QUANTITY AS REQUIRED, SEE NOTES 2-3 BELOW)
13. POINT SOURCE EMITTERS FOR ESTABLISHMENT PERIOD. REMOVE AFTER ESTABLISHMENT PERIOD.

NOTES:
1. INSTALL MULTIPLE RINGS AS REQUIRED TO PROVIDE IRRIGATION COVERAGE FROM ROOT BALL TO PROJECTED TREE CANOPY. REFER TO RAIN BIRD DESIGN GUIDELINES AND SPECIFICATIONS FOR RECOMMENDED SPACING BETWEEN RINGS.
2. PLACE TIE DOWN STAKES EVERY THREE FEET IN SAND, FOUR FEET IN LOAM, AND FIVE FEET IN CLAY.
3. AT FITTINGS WHERE THERE IS A CHANGE OF DIRECTION SUCH AS TEES OR ELBOWS, USE TIE-DOWN STAKES ON EACH LEG OF THE CHANGE OF DIRECTION.

S ON-SURFACE DRIPLINE TREE/SHRUB DETAIL

NOT TO SCALE

PKJ DESIGN GROUP

ISSUE DATE	PROJECT NUMBER
11/26/2025	UT24048

NO.	REVISION	DATE
1	CITY COMMENTS	4-4-2025
2	CITY COMMENTS	4-15-2025
3		
4		
5		
6		
7		

PLAN INFORMATION

811 BLUE STAKES OF UTAH
UTILITY NOTIFICATION CENTER, INC
1-800-662-4111
www.bluestakes.org

PROJECT INFORMATION

AC HQ
9352 S. 670 W.
SANDY, UTAH

DEVELOPER / PROPERTY OWNER / CLIENT

ARCHITECTUAL COMPONENTS
ATT: JOSH NAYLOR
801-557-7523
JNAYLOR@ARCH-COMPONENTS.COM

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LANDSCAPE ARCHITECT / PLANNER

PKJ DESIGN GROUP
Landscape Architecture Planning & Visualization
3450 N. TRIUMPH BLVD. SUITE 102
LEHI, UTAH 84043 (801) 995-2217
www.pkjdesigngroup.com

LICENSE STAMP

LICENSED LANDSCAPE ARCHITECT
JEREMY AINSWORTH
8/28/17 - 5301
11/26/2025
LICENSE
STATE OF UTAH

DRAWING INFO

PM: JTA
DRAWN: ACP
CHECKED: JMA
PLOT DATE: 11/26/2025

IRRIGATION DETAILS

CITY PERMIT SET

IR-503

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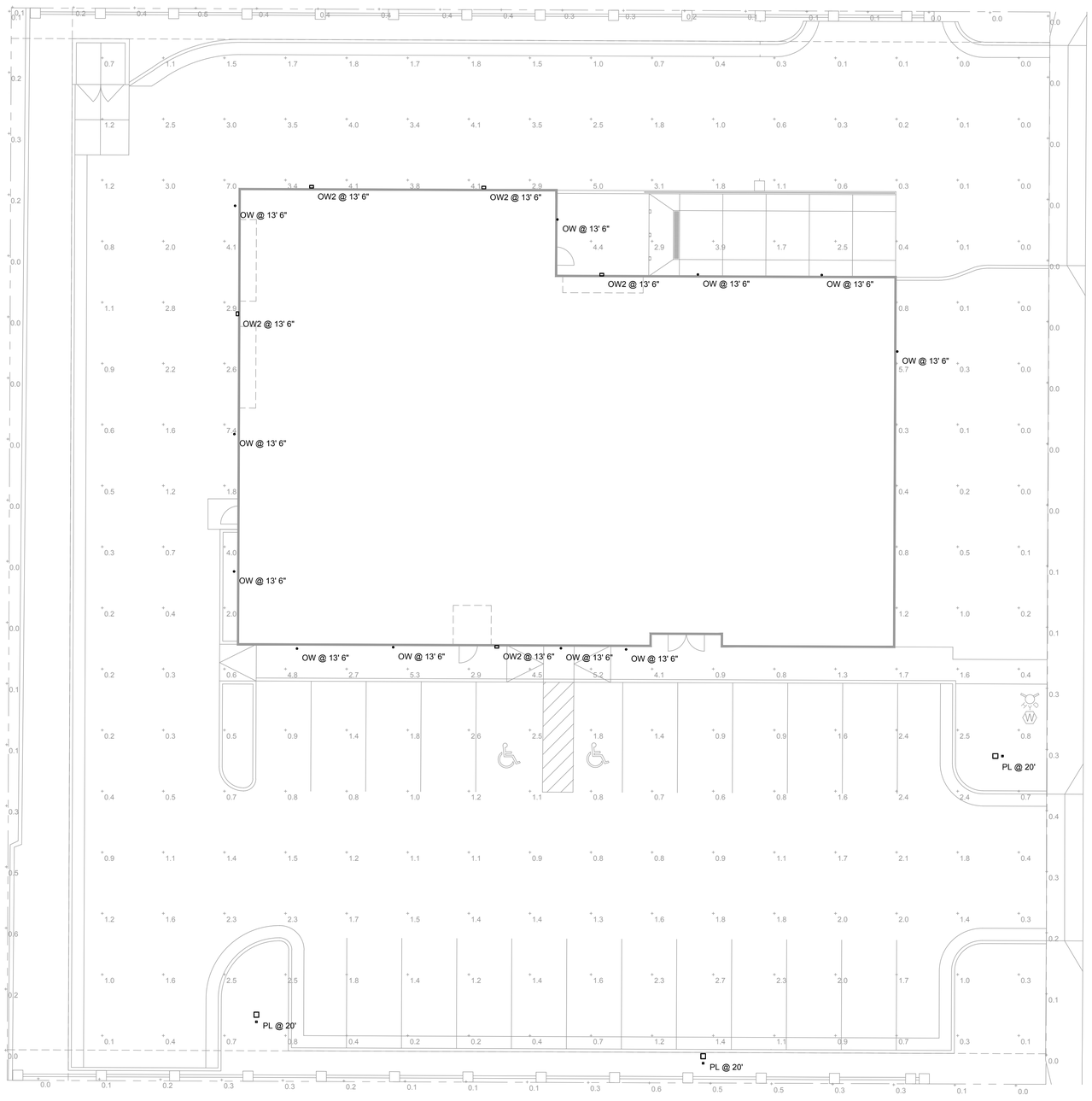

1 ESP01 ELECTRICAL SITE PHOTOMETRIC - FOR REFERENCE ONLY

SCALE: 1" = 10'-0"

N

Schedule									
Symbol	Label	QTY	Manufacturer	Catalog	Description	Number Lamps	Lamp Output	LLF	Input Power
	OW	11	VISUAL COMFORT GROUP	700OWCHA930XXXX	WALL MOUNTED LUMINAIRE	1	1286	1	11.9
	OW2	5	Lithonia Lighting	WDGE2 LED P4 30K 80CRI T2M	WDGE2 LED WITH P4 - PERFORMANCE PACKAGE, 3000K, 80CRI, TYPE 2 MEDIUM OPTIC	1	4063	1	46.6589
	PL	3	Lithonia Lighting	RSX1 LED P1 30K R4 HS	RSX LED Area Luminaire Size 1 P1 Lumen Package 3000K CCT Type R4 Distribution with HS shield	1	4300	1	51.34

Statistics						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Site	+	1.5 fc	7.4 fc	0.0 fc	N/A	N/A
Property Boundary	+	0.2 fc	0.6 fc	0.0 fc	N/A	N/A

CHARA 12 OUTDOOR WALL

VISUAL COMFORT & CO.

Fixture type: OW

PRODUCT FEATURES

- From the brand formerly known as Tech Lighting
- Powerful, long lasting (L70, 60,000 hours) dimmable LED tested against the highest quality standards to ensure it delivers consistent LED performance and color over time.
- Die-cast aluminum structure, powder coat finish, and stainless steel hardware for robust durability in harsh elements, appropriate for commercial use.
- Wet listed, IP65 [International Protection rating indicating resistance to dust and water, suitable and safe for commercial use].
- Universal 120-277 volt driver with integral transient surge protection at 2.5kV per American National Standard (ANSI) and IEEE standards.
- The LED Driver is housed within the junction box. (L. 3.3" | W. 1.6" | H. 1")

LAMPING

Matte Black

Matte Black | Matte Black Side View

ORDERING INFORMATION

700OWCHA	CRI	COLOR TEMP	LENGTH (A)	FINISH	FUNCTION	VOLTAGE
	9 90 CRI	30 3000K	12 12"	B BLACK	UD UPLIGHT & DOWNLIGHT	UNV UNV 120-277V

700OWCHA
JOB NAME
NOTES

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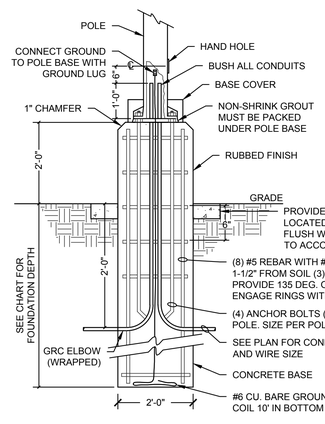
7400 Linder Avenue, Skokie, IL 60077
T 847.410.4400 | F 847.410.4500 | techlighting.com



POLE FOUNDATION DEPTH	
POLE HEIGHT	FLUSH TO 6" ABOVE GRADE
10'	3'
15'	3'-6"
20'	4'
25'	4'-6"
30'	5'
35'	5'-6"
40'	6'

* ALL FOUNDATIONS ARE 24" IN DIAMETER UNO.

2 ESP01 LIGHT POLE BASE DETAIL - RAISED

NO SCALE

WDGE2 LED

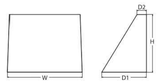
Architectural Wall Sconce
Visual Comfort Optic

Catalog Number
Notes
Type OW2

Specifications presented in bold apply to non-standard options.

Specifications

Depth (D1): 7"
Depth (D2): 1.5"
Height: 9"
Width: 11.5"
Weight: (without options) 13.5 lbs



Introduction

The WDGE LED family is designed to meet specifier's every wall-mounted lighting need in a widely accepted shape that blends with any architecture. The clean rectilinear design comes in four sizes with lumen packages ranging from 1,200 to 25,000 lumens, providing a true site-wide solution. Embedded with nLight® AIR wireless controls, the WDGE family provides additional energy savings and code compliance.

WDGE2 delivers up to 6,000 lumens with a soft, non-pixelated light source, creating a visually comfortable environment. When combined with multiple integrated emergency battery backup options, including an 18W cold temperature option, the WDGE2 becomes the ideal wall-mounted lighting solution for pedestrian scale applications in any environment.

design select: Items marked by a shaded background qualify for the Design Select program and ship in 15 days or less. To learn more about Design Select, visit www.acuitybrands.com/designselect. *See ordering tree for details

WDGE LED Family Overview

Luminaire	Optics	Standard EM, 0°C	Cold EM, -20°C	Sensor	Approximate Lumens (4000K, 80CRI) P10	P9	P8	P7	P6	P5	P4
WDGE1 LED	Visual Comfort	4W		—	750	1,200	2,000	—	—	—	—
WDGE2 LED	Visual Comfort	10W	18W	Standalone / nLight	—	1,200	2,000	3,000	4,500	6,000	—
WDGE3 LED	Precision Refractive	10W	18W	Standalone / nLight	700	1,200	2,000	3,200	4,200	—	—
WDGE4 LED	Precision Refractive	13W	18W	Standalone / nLight	6,000	7,500	8,500	10,000	12,000	—	—
WDGE4 LED	Precision Refractive			*Standalone / nLight	—	12,000	16,000	18,000	20,000	22,000	25,000

Ordering Information

EXAMPLE: WDGE2 LED P3 40K 80CRI VF MVOLT SRM DDBXD

Series	Package	Color Temperature	CRI	Distribution	Voltage	Mounting
WDGE2 LED	P1 P1W; P2 P2W; P3 P3W; P4 P4W; P5 P5W. Even with small window (5W) is required to accommodate sensors. See page 2 for more details.	27K 2700K; 30K 3000K; 35K 3500K; 40K 4000K; 50K 5000K	80CRI; 90CRI	VF Visual comfort forward throw; VW Visual comfort wide	MVOLT; 347*; 480*	**Shipped included:** SRM Surface mounting bracket; ICW Indirect Ceiling/Valley Washer bracket (dry-stamp location only)* **Shipped separately:** AWS 3-Mech Arches (wall square)*; PBBW Surface-mounted back box (top, left, right conduit entry). Use when there is no junction box available.*

Options

E4WH	Emergency battery backup, Certified in CA Title 20 MAEDBS (4W, 0°C min)	**Standalone Sensors/Controls** (only available with P13W, P23W & P33W): PIR Bi-level (100/35%) motion sensor for 8-15' mounting heights. Intended for use on switched circuits with external dusk to dawn switching	DDBXD Dark bronze; DDL BD Black; DNAXD Natural Aluminum; DWHXD White; DDBTXD Textured Dark bronze; DBLXD Textured black; DNATXD Textured natural aluminum; DWHGXD Textured white; DSSTXD Textured sandstone
E10WH	Emergency battery backup, Certified in CA Title 20 MAEDBS (10W, 0°C min)	PIRH Bi-level (100/35%) motion sensor for 15-30' mounting heights. Intended for use on switched circuits with external dusk to dawn switching	
E20WC	Emergency battery backup, Certified in CA Title 20 MAEDBS (20W, -20°C min)	PIR1FC3V Bi-level (100/35%) motion sensor for 8-15' mounting heights with photocell pre-programmed for dusk to dawn operation	
PE	Photocell, Button Type*	PIRH1FC3V Bi-level (100/35%) motion sensor for 15-30' mounting heights with photocell pre-programmed for dusk to dawn operation	
DS	Dual switching (comes with 2 drivers and 2 light engines, see page 3 for details)	**Networked Sensors/Controls** (only available with P13W, P23W & P33W):	
DMG	0-10V dimming wires pulled outside fixture (for use with an external control, ordered separately)*	NLTAIR2 PIR Embedded wireless controls by nLight with Passive Infrared (Dc) sensor and on/off photocell for 8-15' mounting heights.	
BCE	Bottom conduit entry for back box (PBBW). Total of 4 entry points.	NLTAIR2 PIRH Embedded wireless controls by nLight with Passive Infrared (Dc) sensor and on/off photocell for 15-30' mounting heights.	
DSLE	Dual switching (1 Driver, 2 Light Engines)	NLTAIR2 PIR1FC3V Embedded wireless controls by nLight with UL924 listed emergency operation, Passive Infrared (Dc) sensor and on/off photocell for 8-15' mounting heights*	
CCE	Coastal Construction*	NLTAIR2 PIRH1FC3V Embedded wireless controls by nLight with UL924 listed emergency operation, Passive Infrared (Dc) sensor and on/off photocell for 15-30' mounting heights*	
		See page 4 for out of box functionality.	

Shipped Installed
*Standalone and Networked Sensors/Controls (Factory default settings, see table page 4)
PE Photocell, Button Type 10,11
PER7 Green outer twist-lock receptacle only (no controls) 10,11,12
SF Single fuse (120, 277, 347) 1
DF Double fuse (208, 240, 480) 1
SPD20KV 20kV Surge pack (10kV standard)
FAO Field adjustable output 13
DMG 0-10V dimming wires pulled out back of housing for external control (control ordered separately) 1

Shipped Installed
NLTAIR2 PIR nLight AIR generation 2, with Networked, Bi-Level motion/ambient sensor 8,15,16,17,18
BAA Buy American Act and/or Build America Buy America Qualified
CCE Coastal Construction 1

*Note: NLTAIR2 PIRHN with nLight Air can be used as a standalone or networked solution. Sensor coverage pattern is affected when luminaire is tilted.

Shipped Separately (requires some field assembly)
BSO External glare shield 7
EGFV External glare full visor (360° around light aperture) 7
BS Bird spikes 14

Finish
DDBXD Dark bronze; DBLXD Black; DNAXD Natural Aluminum; DWHXD White; DDBTXD Textured Dark bronze; DBLBXD Textured black; DNATXD Textured natural aluminum; DWHGXD Textured white; DSSTXD Textured sandstone

LITHONIA LIGHTING. COMMERCIAL OUTDOOR

One Lithonia Way • Conyers, Georgia 30012 • Phone: 1-800-705-SERV (7378) • www.lithonia.com

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RSX1 LED

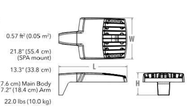
Area Luminaire

Catalog Number
Notes
Type PL

Specifications presented in bold apply to non-standard options.

Specifications

EPA (ft²/ft²): 0.57 ft² (0.05 m²)
Length: 21.8" (55.4 cm) (SPA mount)
Width: 13.3" (33.8 cm)
Height: 3.0" (7.6 cm) Main Body; 7.2" (18.4 cm) Arm
Weight: (SPA mount): 22.0 lbs (10.0 kg)



Introduction

The new RSX LED Area family delivers maximum value by providing significant energy savings, long life and outstanding photometric performance at an affordable price. The RSX1 delivers 7,000 to 17,000 lumens allowing it to replace 70W to 400W HID luminaires.

The RSX features an integral universal mounting mechanism that allows the luminaire to be mounted on most existing drill hole patterns. This "no-drill" solution provides significant labor savings. An easy-access door on the bottom of mounting arm allows for wiring without opening the electrical compartment. A mast arm adaptor, adjustable integral slipfitter and other mounting configurations are available.

design select: Items marked by a shaded background qualify for the Design Select program and ship in 15 days or less. To learn more about Design Select, visit www.acuitybrands.com/designselect. **See ordering tree for details

Design Select options indicated by this color background.

Ordering Information

EXAMPLE: RSX1 LED P4 40K R3 MVOLT SPA DDBXD

RSX1 LED

Series	Performance Package	Color Temperature	Distribution	Voltage	Mounting
RSX1 LED	P1 P1; P2 P2; P3 P3; P4 P4	30K 3000K; 40K 4000K; 50K 5000K	R2 Type 2 Wide; R3 Type 3 Wide; R5 Type 5 Short; R4 Type 4 Short; R45 Type 4 Short; R6 Type 6 Wide; R55 Type 5 Short*; AFR Automotive Front Row; AFRRHA Automotive Front Row Right Hand*; AFRLHA Automotive Front Row Left Hand*	MVOLT (120V-277V)*; HVOLT (347V-480V)*; 1VOLT (277V-480V)* (use specific voltage for options as noted) 120 120V*; 208 208V*; 240 240V*; 277 277V*; 347 347V*; 480 480V*	SPA Square pole-mounting (3.0" min. SQ pole for 1 at 90°, 3.5" min. SQ pole for 2, 3, 4 at 90°); RPA Round pole-mounting (2.7" min. dia. RND pole for 2, 3, 4 at 90°, 3.0" min. dia. RND pole for 1 at 90°, 2 at 180°, 3 at 120°); MA Mast arm adapter (fits 2-3.5" OD horizontal tenon); IS Adjustable slipfitter (fits 2-3.0" OD tenon); WBA Wall bracket; WBAX Wall bracket with surface conduit box; AASP Adjustable tilt arm square pole-mounting; AARP Adjustable tilt arm round pole-mounting; AAWB Adjustable tilt arm with wall bracket; AAWBX Adjustable tilt arm wall bracket with surface conduit box

Options

Shipped Installed: HS House side shield*	**Shipped Installed** *Standalone and Networked Sensors/Controls (Factory default settings, see table page 9) NLTAIR2 PIRHN nLight AIR generation 2, with Networked, Bi-Level motion/ambient sensor 8,15,16,17,18		**Finish** DDBXD Dark bronze; DBLXD Black; DNAXD Natural Aluminum; DWHXD White; DDBTXD Textured Dark bronze; DBLBXD Textured black; DNATXD Textured natural aluminum; DWHGXD Textured white; DSSTXD Textured sandstone
PE Photocell, Button Type 10	BAA Buy American Act and/or Build America Buy America Qualified		
PER7 Green outer twist-lock receptacle only (no controls) 10,11	CCE Coastal Construction 1		
SF Single fuse (120, 277, 347) 1	**Shipped Separately (requires some field assembly)**		
DF Double fuse (208, 240, 480) 1	BSO External glare shield 7		
SPD20KV 20kV Surge pack (10kV standard)	EGFV External glare full visor (360° around light aperture) 7		
FAO Field adjustable output 13	BS Bird spikes 14		
DMG 0-10V dimming wires pulled out back of housing for external control (control ordered separately) 1			

LITHONIA LIGHTING. COMMERCIAL OUTDOOR

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ROCKY MOUNTAIN CONSULTING ENGINEERS, INC.
2332 West 12600 South, Suite F | Riverton, UT 84065
(801) 566-0503 www.rmceut.com Project #24211

MARK	ISSUE DESCRIPTION	ISS. DATE	#	REV. DESCRIPTION	REV. DATE

ARCHITECTURAL COMPONENTS HQ
9352 SOUTH 670 WEST
SANDY, UTAH 84070

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Architecture/Interiors
3115 EAST LION LANE, #200
HOLLADAY, UTAH 84121
o. 801.438.9500
f. 801.438.9501
BEECHERWALKER.COM

PROJECT NUMBER 516.2301
DWN BY HA / BK
CHKD BY SH
REVIEW SET (TBD)

ELECTRICAL SITE PHOTOMETRIC

DRAWING NUMBER
ESP01

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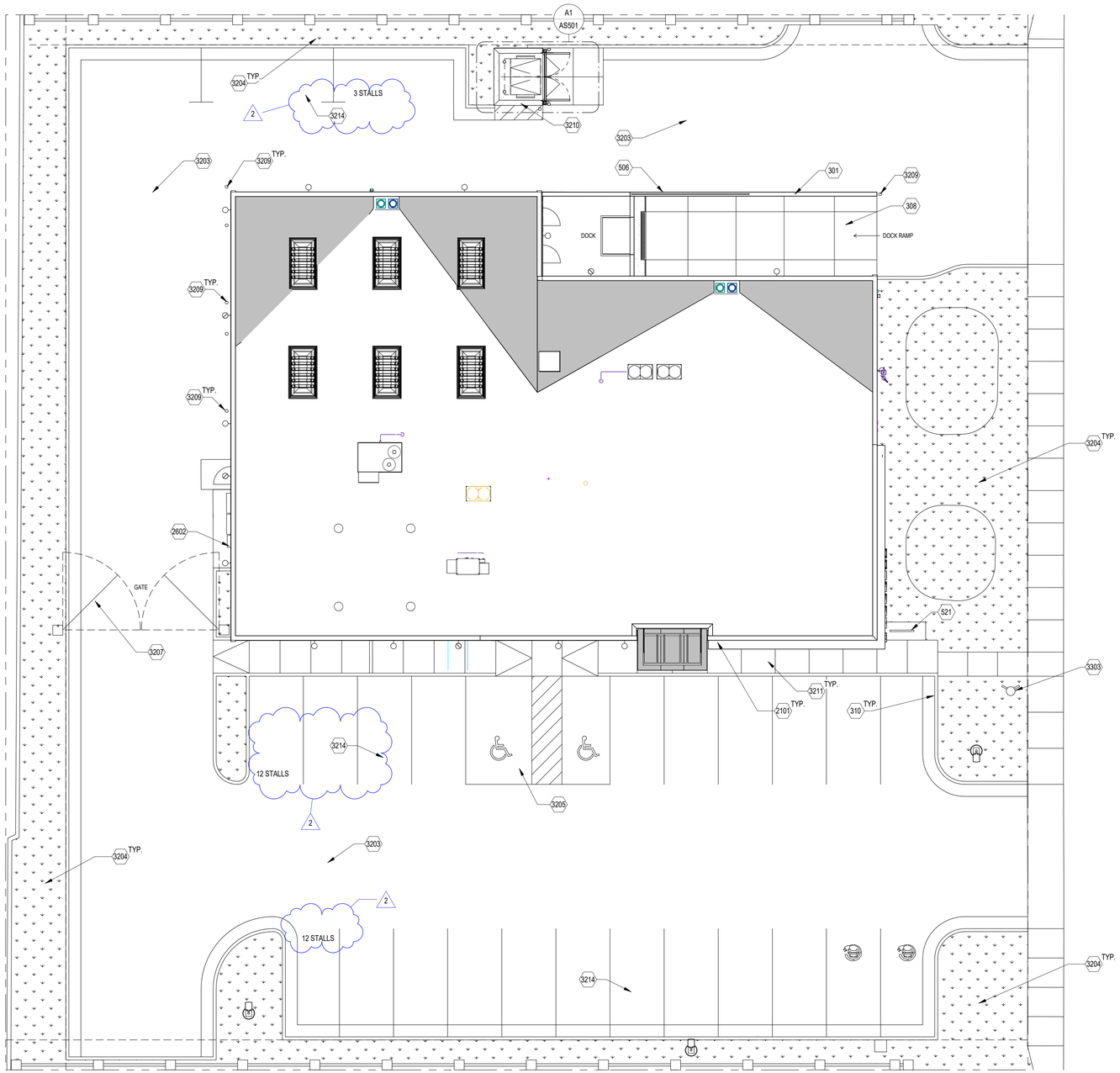

A2 AS101 ARCHITECTURAL SITE PLAN
1" = 10'-0"

KEYNOTE LEGEND

301	CONCRETE FOUNDATION WALL. SEE STRUCTURAL DRAWINGS.
308	POURED-IN-PLACE CONCRETE RAMP.
310	CONCRETE CURB/GUTTER. SEE CIVIL DRAWINGS.
506	PAINTED EXTERIOR METAL GUARDRAIL. SEE DETAILS
521	BIKE RACK. SEE DETAIL C4/AS501
2101	FDC LOCATION
2602	ELECTRICAL EQUIPMENT, SEE ELECTRICAL
3203	ASPHALT PAVING. SEE CIVIL DRAWINGS
3204	LANDSCAPED AREA. SEE LANDSCAPE DRAWINGS
3205	ADA PARKING
3207	WROUGHT IRON GATE. SEE AS501, DESIGN BY SUPPLIER, COORDINATE WITH OWNER.
3209	PIPE BOLLARD, TYPICAL. SEE DETAILS ON AS501. PAINTED SAFETY YELLOW
3210	TRASH DUMPSTER ENCLOSURE SEE AS501
3211	CONCRETE SIDEWALK, SEE CIVIL DRAWINGS
3214	PARKING STALLS
3303	FIRE HYDRANT, SEE CIVIL

MARK	ISSUE DESCRIPTION	ISS. DATE
1	PLAN REVIEW SET	6.25.2025

#	REV. DESCRIPTION	REV. DATE
1	ASI#1	09.11.25
2	ASI#2	11.19.2025

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SANDY, UTAH 84070

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f. 801.438.9501

PROJECT NUMBER
516.2301

DWN BY	CHKD BY
SM	RG

PLAN REVIEW SET

ARCHITECTURAL SITE PLAN

DRAWING NUMBER
AS101

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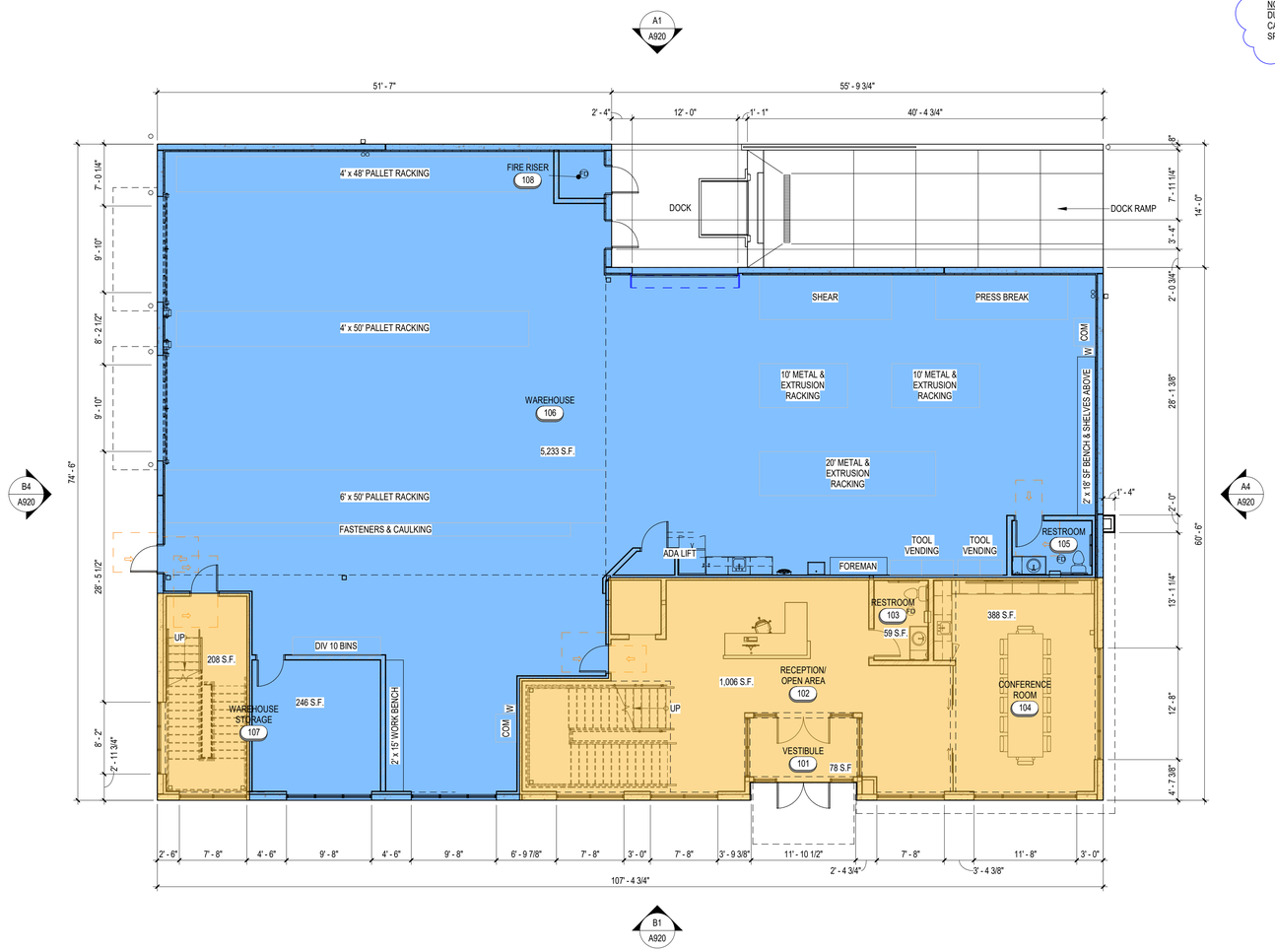
BUILDING INFORMATION:

TYPE OF CONSTRUCTION:	TYPE II B
OCCUPANCY CLASSIFICATION:	OFFICE (B) AND WAREHOUSE (S-2)
FIRE SPRINKLERS:	YES, THROUGHOUT (NFPA-13)
NUMBER OF STORIES:	2 STORIES ABOVE GRADE
MAIN FLOOR AREA	
OFFICE	
LOBBY AND STAIRS	1,006 S.F.
VESTIBULE	78 S.F.
CONFERENCE ROOM	388 S.F.
RESTROOM	59 S.F.
STAIRS	208 S.F.
TOTAL	1,739 S.F.
WAREHOUSE	
WAREHOUSE AND FABRICATION	5,233 S.F.
STORAGE ROOM	246 S.F.
TOTAL	5,479 S.F.
SECOND FLOOR AREA	
OFFICE	
OFFICES AND OPEN AREA	4,130 S.F.
STORAGE	154 S.F.
TOTAL	4,284 S.F.
PARKING CALCULATIONS	
MAIN FLOOR OFFICE AREA	1,739 S.F.
SECOND FLOOR OFFICE AREA	4,284 S.F.
TOTAL	6,023 S.F. / 1000 S.F. * 4 STALLS = 24.09 STALLS
MAIN LEVEL WAREHOUSE	5,479 S.F. / 1000 S.F. * 1 STALL = 5.48 STALLS
TOTAL STALLS	24.09 + 5.48 = 29.57 STALLS (30 STALLS REQUIRED)
10% REDUCTION ALLOWED	30 STALLS * .9 = 27 STALLS (27 STALLS REQUIRED)
	27 STALLS PROVIDED PER CIVIL DRAWING CSP.01)

NOTE:
DUE TO THE FACT THAT THE NUMBER OF PARKING SPACES REQUIRED IS LESS THAN THE CALCULATED REQUIRED NUMBER OF PARKING SPACES, A REDUCTION OF THE REQUIRED PARKING SPACES HAS BEEN REQUESTED.



A3 / A901 CONCEPTUAL MAIN LEVEL FLOOR PLAN
1/8" = 1'-0"

MARK	ISSUE DESCRIPTION	ISS. DATE
1	PLAN REVIEW SET	6.25.2025

#	REV. DESCRIPTION	REV. DATE
2	ASI#2	11.19.2025

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BEECHERWALKER.COM

PROJECT NUMBER
516.2301

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PLAN REVIEW SET

CONCEPTUAL MAIN LEVEL FLOOR PLAN

DRAWING NUMBER
A901

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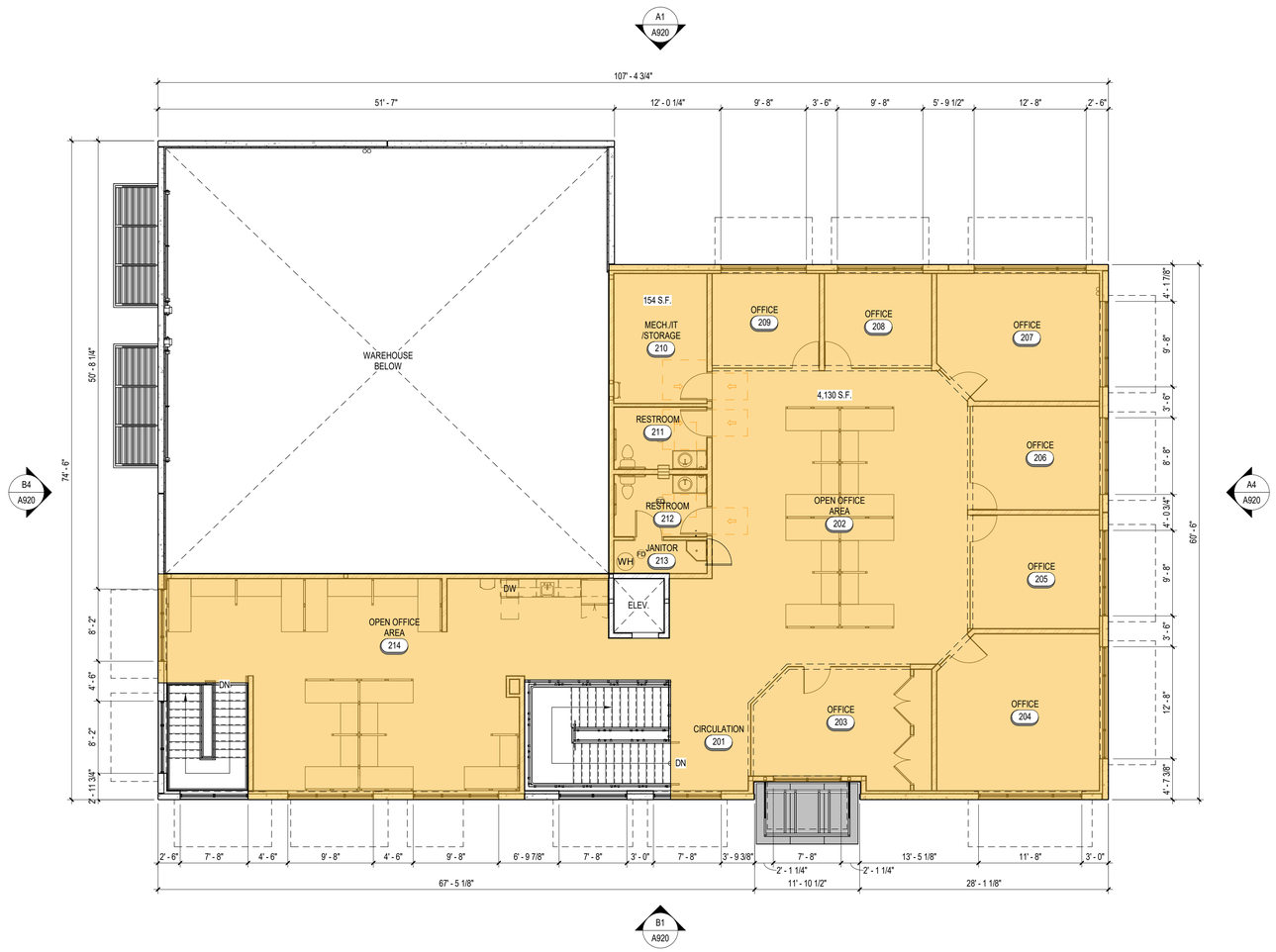

A3 / A902 CONCEPTUAL UPPER LEVEL FLOOR PLAN
1/8" = 1'-0"

MARK	ISSUE DESCRIPTION	ISS. DATE
1	PLAN REVIEW SET	6.25.2025

#	REV. DESCRIPTION	REV. DATE

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PLAN REVIEW SET

CONCEPTUAL UPPER LEVEL FLOOR PLAN

DRAWING NUMBER
A902

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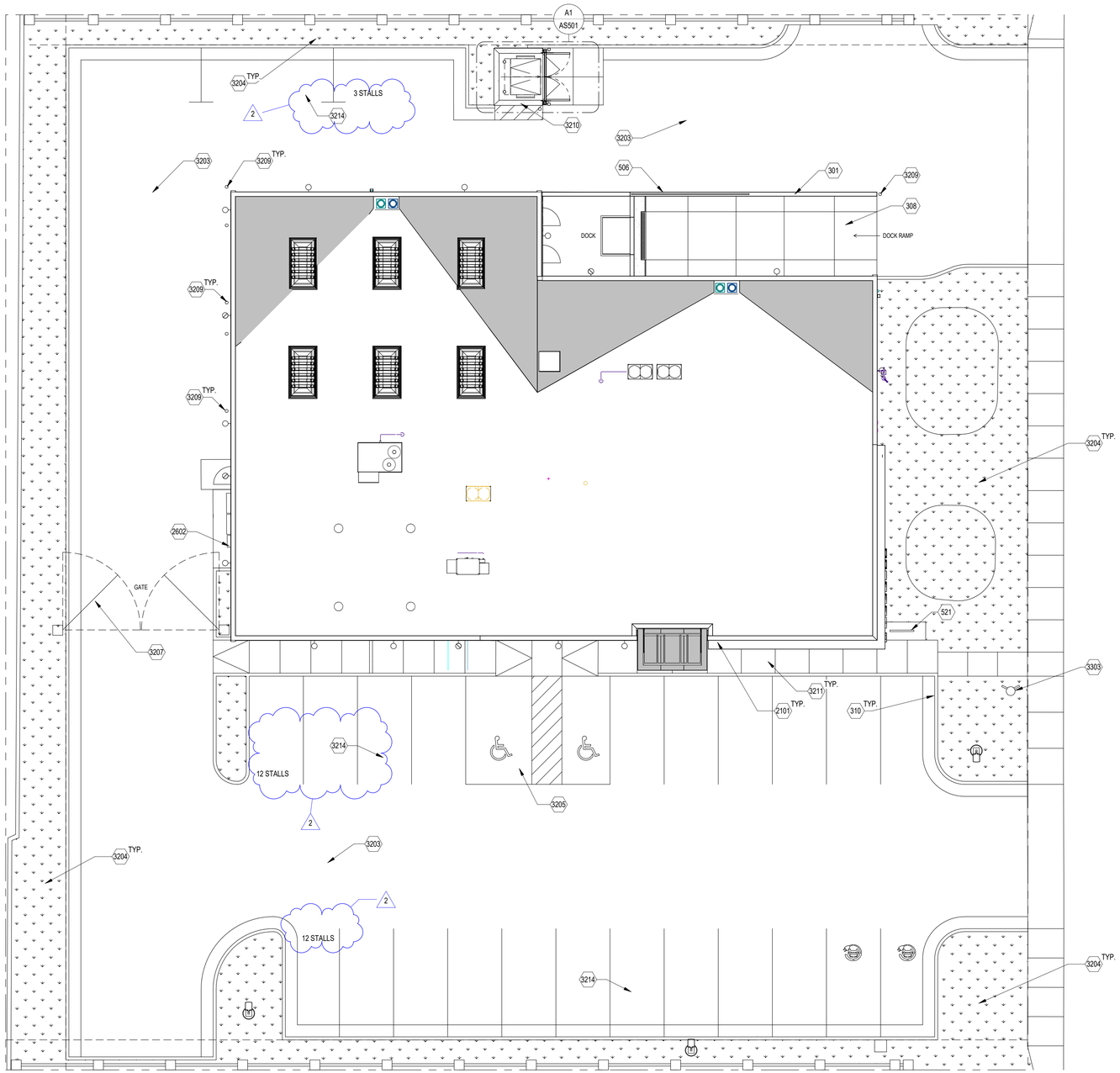

A2 AS101 ARCHITECTURAL SITE PLAN
1" = 10'-0"

KEYNOTE LEGEND

301	CONCRETE FOUNDATION WALL. SEE STRUCTURAL DRAWINGS.
308	POURED-IN-PLACE CONCRETE RAMP.
310	CONCRETE CURB/GUTTER. SEE CIVIL DRAWINGS.
506	PAINTED EXTERIOR METAL GUARDRAIL. SEE DETAILS
521	BIKE RACK. SEE DETAIL C4/AS501
2101	FDC LOCATION
2602	ELECTRICAL EQUIPMENT, SEE ELECTRICAL
3203	ASPHALT PAVING. SEE CIVIL DRAWINGS
3204	LANDSCAPED AREA. SEE LANDSCAPE DRAWINGS
3205	ADA PARKING
3207	WROUGHT IRON GATE. SEE AS501, DESIGN BY SUPPLIER, COORDINATE WITH OWNER.
3209	PIPE BOLLARD, TYPICAL. SEE DETAILS ON AS501. PAINTED SAFETY YELLOW
3210	TRASH DUMPSTER ENCLOSURE SEE AS501
3211	CONCRETE SIDEWALK, SEE CIVIL DRAWINGS
3214	PARKING STALLS
3303	FIRE HYDRANT, SEE CIVIL

MARK	ISSUE DESCRIPTION	ISS. DATE
1	PLAN REVIEW SET	6.25.2025

#	REV. DESCRIPTION	REV. DATE
1	ASI#1	09.11.25
2	ASI#2	11.19.2025

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ARCHITECTURAL SITE PLAN

DRAWING NUMBER
AS101

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EXTERIOR MATERIAL PERCENTAGE PER FACADE

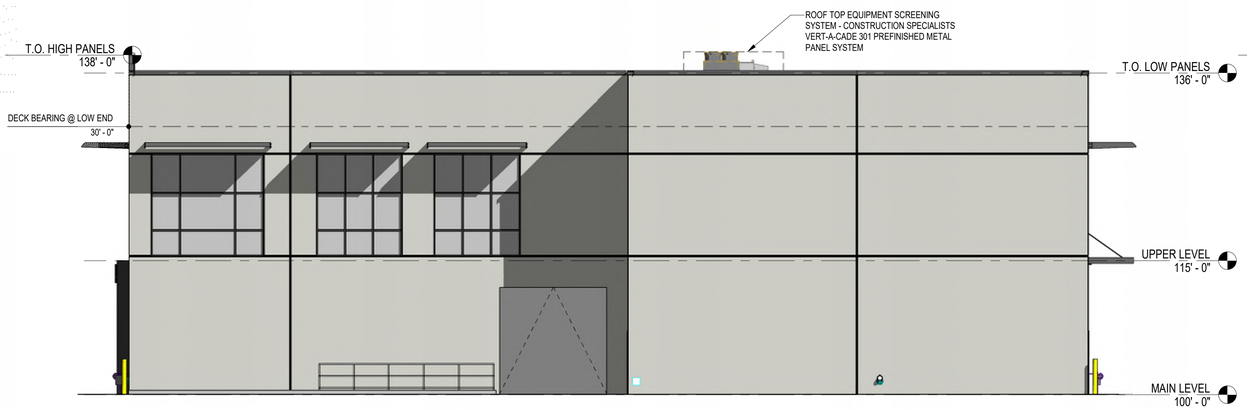
EAST FACADE:	
NATURAL CONCRETE:	45.4%
COLORED CONCRETE:	24.6%
ACCENT/TRIM:	5.9%
STOREFRONT WINDOWS:	23.1%
OH AND HM DOORS:	1.0%
TOTAL:	100%
SOUTH FACADE:	
NATURAL CONCRETE:	39.0%
COLORED CONCRETE:	14.6%
ACCENT/TRIM:	9.0%
STOREFRONT WINDOWS:	37.4%
OH AND HM DOORS:	0.0%
TOTAL:	100%
WEST FACADE:	
NATURAL CONCRETE:	74.3%
COLORED CONCRETE:	0.1%
ACCENT/TRIM:	2.0%
STOREFRONT WINDOWS:	10.6%
OH AND HM DOORS:	13.0%
TOTAL:	100%
NORTH FACADE:	
NATURAL CONCRETE:	85.3%
COLORED CONCRETE:	0.1%
ACCENT/TRIM:	2.0%
STOREFRONT WINDOWS:	9.7%
OH AND HM DOORS:	2.9%
TOTAL:	100%

EXTERIOR MATERIALS LEGEND

CT-1	NATURAL CONCRETE TILT PANEL
CT-2	INTEGRAL COLORED CONCRETE TILT PANEL W/ VERTICAL REVEALS - BASIS OF DESIGN: SPEC FORMLINERS INC. WAIMEA FLUTE #1716; CHARCOAL COLOR TO BE SUBMITTED TO OWNER FOR APPROVAL.
MP-1	PREFINISHED METAL WALL PANELS - BLACK (INCLUDES AT ENTRY AND SOFFIT ELEMENT ON SOUTH AND EAST ELEVATIONS)
AC-1	ACCENT/TRIM - LIGHT GRAY (INCLUDES EXTERIOR LIGHT FIXTURES; SCONCES)
AC-2	ACCENT/TRIM - DARK GRAY (INCLUDES STOREFRONT FRAMES, PREFINISHED PARAPET CAP, PREFINISHED OH DOOR AWNINGS, AND PREFINISHED AWNINGS ABOVE UPPER LEVEL STOREFRONT WINDOWS)
PT-1	PAINT - MATCH AC-1 (INCLUDES HOLLOW METAL DOOR FRAMES, HOLLOW METAL DOOR PANELS, AND DOCK RAMP GUARDRAIL)
OH-1	OVERHEAD DOORS - MATCH AC-1
GL-1	CLEAR GLAZING (INCLUDES INSULATED GLAZING IN STOREFRONT WINDOWS/DOORS AND TEMPERED GLAZING AT MAIN ENTRY AWNING)

B1 A920 CONCEPTUAL SOUTH EXTERIOR ELEVATION
1/8" = 1'-0"

B4 A920 CONCEPTUAL WEST EXTERIOR ELEVATION
1/8" = 1'-0"



A1 A920 CONCEPTUAL NORTH EXTERIOR ELEVATION
1/8" = 1'-0"

A4 A920 CONCEPTUAL EAST EXTERIOR ELEVATION
1/8" = 1'-0"

MARK	ISSUE DESCRIPTION	ISS. DATE
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CONCEPTUAL EXTERIOR ELEVATIONS

DRAWING NUMBER
A920