

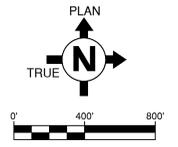
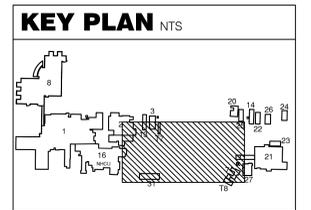
GENERAL NOTES THIS SHEET

1. THE CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING LINE AND GRADE, IN CONFORMANCE WITH THE INFORMATION SHOWN ON THE PLANS FOR ALL FACILITIES TO BE CONSTRUCTED. THIS INCLUDES RESTORING TO THEIR ORIGINAL LINE AND GRADE ALL SITE IMPROVEMENTS THAT ARE REMOVED AND REPLACED AS PART OF THIS PROJECT. THE COR MAY, FROM TIME TO TIME, CHECK THE LINE AND GRADE OF COMPLETED SECTIONS OF THE WORK OR SECTION OF THE WORK IN PROGRESS. THIS, HOWEVER, IN NO WAY RELIEVES THE CONTRACTOR OF HIS RESPONSIBILITY IN ESTABLISHING THE LINE AND GRADE OF THE WORK IN CONFORMANCE WITH THE PLANS.
2. EXISTING INFORMATION SHOWN ON THE DRAWINGS HAS BEEN TAKEN FROM OWNER FURNISHED DRAWINGS AND LIMITED FIELD OBSERVATIONS. AES GROUP, INC. IS NOT RESPONSIBLE FOR THE ACCURACY OF ANY OWNER-PROVIDED INFORMATION OR THE ADEQUACY, SAFETY, AND CONFORMANCE TO CURRENT PREVAILING CODES OF ANY WORK SHOWN AS EXISTING ON THESE DRAWINGS.
3. EXISTING UTILITIES SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE TO THE ENGINEER. PRIOR TO EXCAVATING, THE CONTRACTOR SHALL FIELD LOCATE (INCLUDING DEPTHS) BY POT-HOLING ALL EXISTING UTILITIES WHICH MAY CONFLICT WITH THE PROPOSED CONSTRUCTION. FIBER OPTIC AND BURIED PHONE LINES SHALL BE EXPOSED BY POT-HOLING.
4. CONTRACTOR IS RESPONSIBLE TO LOCATE ALL UTILITY LINES PRIOR TO ANY EXCAVATION, PROTECT FROM DAMAGE, AND CERTIFY THE REPAIR OF ANY DAMAGED ITEMS.
5. THE CONTRACTOR SHALL PROVIDE THE OWNER AND ENGINEER WITH A FIELD SHEET INDICATING THE LOCATION AND DEPTH OF ALL UTILITIES VERIFIED BY POT-HOLING WITHIN 2 BUSINESS DAYS OF COMPLETING THE POT-HOLING AND PRIOR TO COMMENCING WORK IN THE VICINITY OF UTILITIES VERIFIED BY POT-HOLING.
6. WHEN THE CONTRACTOR DISCOVERS ANY CONFLICT BETWEEN THE DESIGN LOCATION OF WORK UNDER THIS CONTRACT AND AN EXISTING UTILITY HE SHALL NOTIFY THE COR IMMEDIATELY.
7. IF THE CONTRACTOR ENCOUNTERS ANY UNDOCUMENTED LINES, THE CONTRACTOR SHALL IMMEDIATELY STOP WORK IN THE AREA OF THE LINE AND NOTIFY THE COR SO THAT ANY CONFLICTS CAN BE MITIGATED.
8. ADJACENT LANDSCAPE AND STRUCTURES SHALL BE PROTECTED FROM DAMAGE BY THE CONTRACTOR. CONTRACTOR SHALL CORRECT OR RESTORE SUCH DAMAGE AT CONTRACTOR'S EXPENSE.
9. TREE ROOTS ENCOUNTERED IN ANY EXCAVATION SHALL BE SAWOFF AT THE SIDES OF THE EXCAVATION.
10. CONTRACTOR SHALL MINIMIZE CONSTRUCTION RELATED MUD AND DEBRIS ON SURFACES ADJACENT TO THE PROJECT SITE SUCH AS LANDSCAPE, STREETS, DRIVES, AND SIDEWALKS. (BY BEST MANAGEMENT PRACTICES)
11. EQUIPMENT AND MATERIALS NOT INCORPORATED IN PROJECT SCOPE SHALL NOT BE STORED OR STOCKED ON SITE. (UNLESS WRITTEN PERMISSION IS RECEIVED FROM VA)
12. TRENCHES AND OPEN EXCAVATIONS SHALL BE APPROPRIATELY MARKED AND PROTECTED BY THE CONTRACTOR. NO TRENCHES OR EXCAVATIONS SHALL REMAIN UNPROTECTED OVERNIGHT. CONTRACTOR SHALL PROVIDE PROTECTION SUFFICIENT TO MAINTAIN PUBLIC SAFETY, IN ACCORDANCE WITH THE VA AND OSHA REGULATIONS. (FENCES, BARRICADES, LIGHTS)
13. UTILITY TRENCHES SHALL BE SHORED IN ACCORDANCE WITH ARIZONA INDUSTRIAL COMMISSION REGULATIONS FOR EXCAVATION AND SHORING AND OSHA 29 CFR PART 1926.
14. CONTRACTOR IS RESPONSIBLE FOR CONTROL OF EROSION OF ALL AREAS OF CONSTRUCTION THROUGH THE USE OF SILT FENCE, STRAW BALE BARRIERS, GRAVEL SOCKS, ETC. (BMP)
15. THE CONTRACTOR SHALL ADHERE TO THE NOISE ORDINANCE OF THE VA.
16. THE CONTRACTOR SHALL ADHERE TO THE VA'S REQUIREMENTS FOR CONSTRUCTION PARKING AND SHALL REQUIRE THAT THEIR EMPLOYEES AND ALL SUB-TRADE EMPLOYEES PARK ONLY IN DESIGNATED AREAS. THE COR WILL ADVISE THE CONTRACTOR OF THESE REQUIREMENTS.
17. THE CONTRACTOR SHALL ADHERE TO THE VA'S CONSTRUCTION RULES OF CONDUCT IF SUCH EXISTS. A COPY OF WHICH IS AVAILABLE FROM THE COR.
18. CONTRACTOR IS REQUIRED TO GRADE AND REPAIR ALL STREET CUTS DAILY UNTIL REPAIRS ARE PAVED. ALL STREET CROSSINGS MUST BE REPAIRED WITHIN 10 DAYS OF LINE CERTIFICATION TESTING. WITH SPEC APPROVED GRAVEL BASE COURSE AND A MINIMUM OF 3" THICK COMPACT HOT MIX ASPHALT.
19. CONTRACTOR CAN EXPECT TO DO 50% OF THE PROJECT WORK AFTER PEAK HOSPITAL BUSINESS HOURS 7:00AM TO 5:30PM M-F

KEYNOTES THIS SHEET

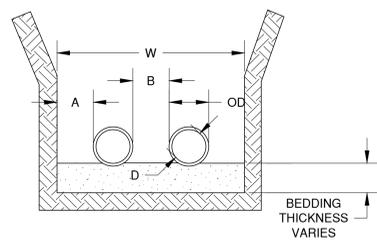
1. POINT OF CONNECTION.
2. FINAL LOCATION OF VAULT TBD. SEE FUTURE DENTAL BUILDING PROJECT FOR REFERENCE. PROJECT NUMBER 644-229. VA SHALL APPROVE FINAL LOCATION.
3. BASE BID WILL CONSIST OF ACCESS TO VALVES VIA VAULTS. DEDUCTIVE BID ALTERNATE WILL BE VALVE ACCESS VIA UNDERGROUND ISOLATION VALVES AND T-HANDLES IN SAME LOCATION.
4. MAIN LINE SHUTOFF VALVES AT THIS LOCATION INCLUDED IN BASE BID. DEDUCTIVE ALTERNATE AS NO MAIN LINE VALVES, ONLY BRANCH SHUTOFF VALVES.

- CWR CHILLED WATER RETURN
- CWS CHILLED WATER SUPPLY
- ⊗ VALVE
- ⌋ PIPE CAP



CONSTRUCTION DOCUMENTS

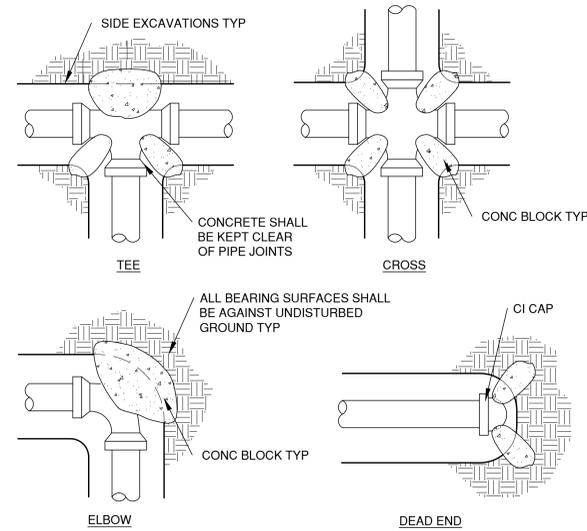
Revisions: _____ Date _____ _____ Date _____ _____ Date _____ _____ Date _____ _____ Date _____	CONSULTANT: Westlake Reed Leskosky One East Camelback Road Suite 690 Phoenix, Arizona 85012 www.WRLdesign.com	ARCHITECT/ENGINEERS: 11011 SOUTH PIKES PEAK DRIVE #202 PARKER, COLORADO 80138 PH: 303.843.3921 WWW.AES-GROUP.COM	Drawing Title SITE PLAN ALTERNATIVE 2 Approved: Project Director BRAD SANDOVAL - COR VA PROGRAM MANAGER PHONE: 602-277-5551 x7349	Project Title UPGRADE CHILLED WATER SYSTEM Location PHOENIX, ARIZONA Date NOVEMBER 2014 Checked RD Drawn CDL	Project Number 644-14-005 Building Number SITE Drawing Number C102 Dwg. 3 of 6	Office of Construction and Facilities Management
	CONSULTANT:		ARCHITECT/ENGINEERS:		Project Title: UPGRADE CHILLED WATER SYSTEM Location: PHOENIX, ARIZONA Date: NOVEMBER 2014 Checked: RD Drawn: CDL Drawing Number: C102 Dwg. 3 of 6	



PIPE DIA (D)	MAX "A"	MIN "B"
12"	8"	8"

- NOTES:**
1. PROVIDE BEDDING IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
 2. BEDDING MATERIAL FOR SOIL SHALL BE 3 IN. LOOSE THICKNESS STRUCTURE BACKFILL CLASS 2.
 3. BEDDING MATERIAL FOR ROCK SHALL BE 12 IN. LOOSE THICKNESS STRUCTURE BACKFILL CLASS 1.
 4. EXPAND FOR THE REQUIRED NUMBER OF PIPES.
 5. MAXIMUM TRENCH WIDTH "W" TAKEN AT TOP OF PIPE. W EQUALS 2A + N(P/PIPE OD) + (N-1)B WHERE N IS THE NUMBER OF PIPES.

1 TYPICAL PIPE TRENCH
SCALE: NTS

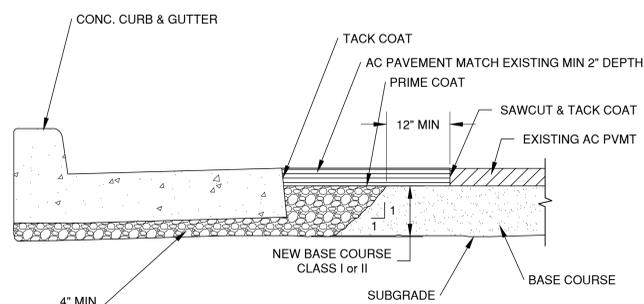


PIPE SIZE	BEARING AREAS EACH DIRECTION OF THRUST IN SQUARE FEET			
	TEES & DEADENDS	90° ELBOWS	45° ELBOW CROSSES IN DIRECTION OF FLOW	22-1/2° ELBOWS
6"	4.0	5.5	3.0	2.0
8"	7.0	9.5	5.0	3.0
10"	9.5	13.5	7.0	4.0
12"	13.5	19.0	10.0	5.0
14"	18.0	23.5	14.0	7.0
16"	23.0	33.0	18.0	9.0

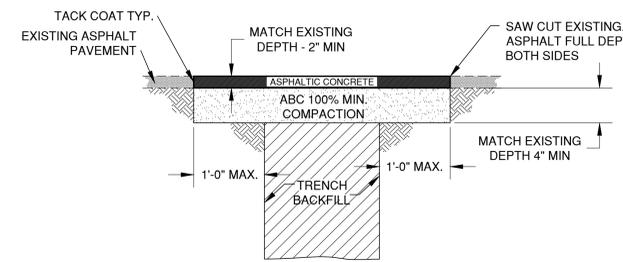
2 TYPICAL THRUST BLOCK INSTALLATION
SCALE: NTS

ABBREVIATIONS

- ACC ASPHALTIC CEMENT CONCRETE
- ABC ASPHALTIC BASE COURSE
- PCC PORTLAND CEMENT CONCRETE



3 AC PAVEMENT AT PCC CURB & GUTTER
SCALE: N.T.S.



- NOTES:**
1. BITUMINOUS SURFACE TREATMENT (CHIP SEAL) REQUIRED ONLY FOR LONGITUDINAL TRENCHES WITH WIDTHS GREATER THAN 6'

4 TYPE 1 UTILITY TRENCH PATCH
SCALE: NTS

GENERAL TRENCH REPAIR NOTES

1. MATERIAL AND COMPACTION REQUIREMENTS FOR PIPE BEDDING SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS FOR THE APPLICABLE UTILITY PIPE.
2. TRENCH BACKFILL SHALL COMMENCE 1 FOOT ABOVE THE TOP OF PIPE AND SHALL BE PER SECTION 31 20 11 EARTHMOVING.
3. BACKFILL COMPACTION REQUIREMENTS SHALL BE PER SECTION 31 20 11 EARTHMOVING.
4. ABC SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 31 20 11 EARTHMOVING.
5. PORTLAND CEMENT CONCRETE SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 32 05 23 CEMENT AND CONCRETE FOR EXTERIOR IMPROVEMENTS.
6. ASPHALTIC TACK MATERIAL SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 32 12 16 ASPHALTIC PAVING.
7. ASPHALTIC CONCRETE SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 32 12 16 ASPHALTIC PAVING FOR THE TYPE SPECIFIED.
8. BITUMINOUS SURFACE TREATMENT (CHIP SEAL) SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 32 12 16 ASPHALTIC PAVING FOR THE TYPE SPECIFIED.

CONSTRUCTION DOCUMENTS

	CONSULTANT: 	CONSULTANT: Westlake Reed Leskosky One East Camelback Road Suite 690 Phoenix, Arizona 85012 www.WRLdesign.com	ARCHITECT/ENGINEERS: <small>11011 SOUTH PIKES PEAK DRIVE #202 PARKER, COLORADO 80138 PH: 303.844.3923 WWW.AES-GROUP.COM</small>	Drawing Title CONSTRUCTION DETAILS	Project Title UPGRADE CHILLED WATER SYSTEM	Project Number 644-14-005
				Approved: Project Director BRAD SANDOVAL - COR VA PROGRAM MANAGER PHONE: 602-277-5551 x7349	Location PHOENIX, ARIZONA	Building Number SITE
				Date NOVEMBER 2014	Checked RD	Drawn RD
						Drawing Number C501 Dwg. 5 of 6

Office of
Construction
and Facilities
Management

Department of
Veterans Affairs

three inches = one foot
 one and one half inches = one foot
 one inch = one foot
 three quarters inch = one foot
 one half inch = one foot
 one quarter inch = one foot
 three eighths inch = one foot
 one eighth inch = one foot
 one sixteenth inch = one foot

