CITY OF SPARKS

2022 CDBG ROADWAY IMPROVEMENT PROJECT
14TH STREET, D STREET & E STREET

PWP # WA-2022-317
BID # 21/22-015
TMWA PROJECT # 10-0001.091
APRIL 2022

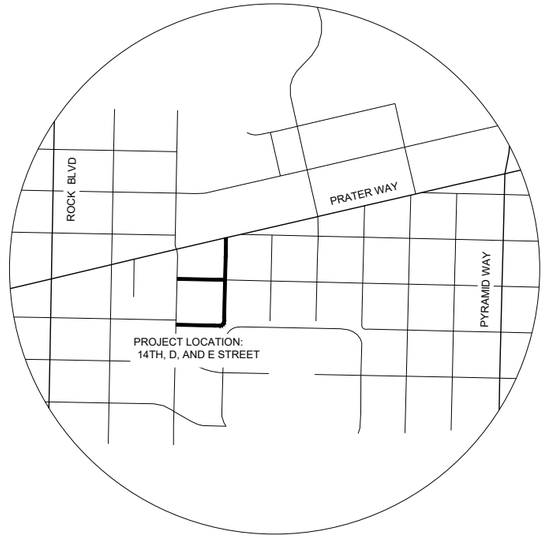
SPARKS CITY COUNCIL

MAYOR _____ ED LAWSON
WARD 1 _____ DONALD ABBOTT
WARD 2 _____ DIAN VANDERWELL
WARD 3 _____ PAUL ANDERSON
WARD 4 _____ CHARLENE BYBEE
WARD 5 _____ KRISTOPHER DAHIR

APPROVED BY:

4/26/2022
JON R. ERICSON, P.E., P.T.O.E. DATE

LOCATION MAP



VICINITY MAP

N

N.T.S

ENGINEER

LUMOS & ASSOCIATES
9222 PROTOTYPE DRIVE
RENO, NEVADA 89521
TEL: 775.827.6111

SHEET INDEX

TRUCKEE MEADOWS WATER AUTHORITY
1355 CAPITAL BLVD. / PO BOX 30013
RENO, NEVADA 89520-3013
PH 775-834-8000 / FX 775-834-8003

TRUCKEE MEADOWS WATER AUTHORITY

MARK FOREE
GENERAL MANAGER

TRUCKEE MEADOWS WATER AUTHORITY
NOT REPRODUCIBLE
PROPERTY OF
TRUCKEE MEADOWS WATER AUTHORITY
RETURN UPON COMPLETION OF PROJECT
(Per Homeland Security Act)

PROJECT REPRESENTATIVE

STEVE VOLK, P.E.
Office Phone: 775-834-8024
Cell Phone: 775-848-3083

PROJECT INSPECTOR

NEAL MCINTYRE
Cell Phone: 775-771-5323

2 working days Call before you Dig.
1-800-642-2444
AVOID CUTTING UNDERGROUND UTILITIES

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INFO@LUMOSINC.COM

PROFESSIONAL ENGINEER
ALEX J. GREENBLAT
Exp. 06/30/23
CIVIL
No. 024022
STATE OF NEVADA
04/26/22

CITY OF SPARKS
2022 CDBG ROADWAY IMPROVEMENT
14TH STREET, D STREET & E STREET
TITLE SHEET
WASHOE COUNTY NEVADA
SPARKS

REV	DATE	DESCRIPTION	BY
	APRIL 26, 2022	ISSUED FOR BIDDING	

BAR IS 1 INCH ON ORIGINAL DRAWING
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DESIGNED BY: JWR/MMP
CHECKED BY: AJG
JOB NO.: 10415.000

LEGEND

EXISTING		PROPOSED
4174	CONTOUR LINE	4174
+ 4163.1	GROUND ELEVATION	+ 4163.1
	TREE	
	ROCK	
	EDGE OF PAVEMENT	
	AC PAVING TO BE REMOVED	
	CURB & GUTTER	
	CONCRETE	
	UTILITY POLE	
	LIGHT	
	GUY WIRE	
ET	ELECTRIC TRANSFORMER	ET
EV	ELECTRIC VAULT	EV
EP	ELECTRIC PANEL	EP
EC	ELECTRIC CABINET	EC
EB	ELECTRIC BOX	EB
EM	ELECTRIC METER	EM
EG	ELECTRIC GENERATOR	EG
E	ELECTRIC MANHOLE	E
AC	AIR CONDITIONER	AC
	ELECTRIC OUTLET	
	BOLLARD	
	STORM DRAIN MANHOLE / DROP INLET	
	CATCH BASIN	
WV	WATER VALVE	WV
ICV	IRRIGATION CONTROL VALVE WATER	ICV
WM	METER	WM
WS	WATER SPIGOT / HOSE BIB WATER	WS
W	MANHOLE	W
WV	WATER VAULT	WV
	FIRE HYDRANT	
GV	GAS VALVE	GV
GM	GAS METER	GM
T	TELEPHONE MANHOLE	T
TB	TELEPHONE BOX	TB
TV	TELEPHONE VAULT	TV
S	SEWER MANHOLE	S
SSCO	SEWER CLEANOUT	SSCO
	SURVEY MONUMENT	
	CONTROL POINT	
	BARRICADE	
	SIGN	
	RETAINING WALL	
	FENCE	X
	GRADE BREAK	
	FLOW LINE	
	SOIL TEST PIT	
	DETAIL CALLOUT	X / CXX
	COMM LINE	TELE
	GAS LINE	GAS
	ELECTRIC LINE	ELEC
	SEWER LINE	SS
	WATER LINE	WL
AIR	AIR LINE	AIR
	STORM DRAIN	SD
REC WL	RECLAIMED WATER LINE	REC WL

FOUND SECTION CORNER AS NOTED

FOUND 5/8" REBAR AND CAP "PLS 14413" - UNLESS OTHERWISE NOTED SET 5/8" REBAR AND CAP "PLS 17616" - UNLESS OTHERWISE NOTED

ABBREVIATIONS

AC	ASPHALT CONCRETE
ACP	ASBESTOS CEMENT PIPE
AGG	AGGREGATE
BC	BEGIN CURVE (HORIZONTAL)
BOW	BOTTOM OF WALL
BF, BOF	BOTTOM OF FOOTING
BV	BUTTERFLY VALVE
BVC	BEGIN VERTICAL CURVE
BW	BACK OF WALK
CB	CATCH BASIN
cfs	CUBIC FEET PER SECOND
CF	CUBIC FEET
C&G	CURB AND GUTTER
℄	CENTER LINE
CL	CLASS / CENTER LINE
CMP	CORRUGATED METAL PIPE
COMP	COMPACTION
CONC	CONCRETE
CONTR	CONTRACTOR
CP	CONCRETE PAD
CTV	CABLE TELEVISION
DI	DROP INLET
DIA	DIAMETER
DWY	DRIVEWAY
E	EAST
EA	EACH
EC	END CURVE (HORIZONTAL)
ELL	ELBOW
ELEC	ELECTRICAL
ELEV	ELEVATION
EVC	END VERTICAL CURVE
EX, (E)	EXISTING
EXT	EXTERIOR
FCA	FLANGE COUPLING ADAPTER
FE	FINISH ELEVATION
FES	FLARED END SECTION
FF	FINISH FLOOR
FFC	FRONT FACE OF CURB
FG	FINISH GRADE
FH	FIRE HYDRANT
FL	FLOW LINE
FLG	FLANGE
fps	FEET PER SECOND
FTG	FOOTING
G	GAS
GALV	GALVANIZED
GB	GRADE BREAK
GDW	GRAVEL DRIVEWAY
GD	GROUND
GV	GATE VALVE
H	HANDICAPPED
HGL	HYDRAULIC GRADE LINE
HORIZ	HORIZONTAL
HP	HIGH POINT
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
INT	INTERSECTION
IRR	IRRIGATION
LAT	LATERAL
LF	LINEAR FEET
LP	LOW POINT
LT	LEFT
MAX	MAXIMUM
MDD	MAXIMUM DRY DENSITY
MH	MANHOLE
MIN	MINIMUM
MJ	MECHANICAL JOINT
MMD	MAXIMUM MARSHALL DENSITY
MUTCD	MANUAL FOR TRAFFIC CONTROL DEVICES
N	NORTH
NAP	NOT A PART
NIP	NOT IN PROJECT
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OH	OVERHEAD
(P)	PROPOSED
PCC	PORTLAND CEMENT CONCRETE
PG	PAD GRADE
PI	POINT OF INTERSECTION
PIVC	POINT OF INTERSECTION VERTICAL CURVE
PL	PROPERTY LINE
POCC	POINT OF COMPOUND CURVATURE
POT	POINT OF TANGENCY
PP	POWER POLE
PRC	POINT OF REVERSE CURVE
PRVC	POINT OF REVERSE VERTICAL CURVE
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
Q 5	5 YEAR PEAK FLOW
Q 100	100 YEAR PEAK FLOW
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
REF	REFERENCE
RET	CURB RETURN
RP	RADIUS POINT
RT	RIGHT
R/W, ROW	RIGHT-OF-WAY
S=	SLOPE
S	SOUTH
SD	STORM DRAIN
SDMH	STORM DRAIN MANHOLE
SL	STREET LIGHT
SS	SANITARY SEWER
SSCO	SANITARY SEWER CLEAN OUT
SSMH	SANITARY SEWER MANHOLE
SSPWC	STANDARD SPEC. FOR PUBLIC WORKS CONSTRUCTION
STA	STATION
SW	SIDEWALK
TELE	TELEPHONE
TBO	TEMPORARY BLOW OFF VALVE
TC	TOP OF CURB, TOP OF CONC
TG	TO GRADE
TOB	TOP OF BERM
TF, TOF	TOP OF FOOTING
TOW	TOP OF WALL
TS	TRAFFIC SIGNAL
TSCB	TRAFFIC CONTROL SIGNAL BOX
TR	TOP OF RAIL
TRANS	TRANSITION
TYP	TYPICAL
UG/P	UNDER GROUND POWER
UNO	UNLESS NOTED OTHERWISE
V_5	VELOCITY AT 5 YEAR PEAK
VC	VERTICAL CURVE
VEL	VELOCITY
VERT	VERTICAL
VG	VALLEY GUTTER
W	WEST
W/G	WATER AND GAS
WL	WATER LINE
WM	WATER METER
WS	WATER SURFACE
WV	WATER VALVE
WWF	WELDED WIRE FABRIC
YR	YEAR

811

Know what's below.
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NOTES:

GENERAL

1. ALL WORK SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 2012 EDITION REVISION 8, 10-19-2018.
2. THE CONTRACTOR SHALL REFER TO THE STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION, AS ADOPTED BY THE CITY OF SPARKS, FOR ALL DETAILING NOT SHOWN ON THESE PLANS.
3. CONSTRUCTION SHALL COMPLY WITH THESE PLANS AND SPECIFICATIONS AND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
4. THE CITY OF SPARKS SHALL BE RESPONSIBLE FOR ARRANGING A PRE-CONSTRUCTION JOB SITE CONFERENCE WITH GOVERNING AGENCIES, ALL UTILITY COMPANIES, OWNER'S REPRESENTATIVES, AND THE PROJECT ENGINEER PRIOR TO COMMENCING WORK. THIS MEETING SHALL BE HELD AT LEAST FORTY-EIGHT (48) HOURS, OR TWO (2) BUSINESS DAYS, PRIOR TO THE START OF CONSTRUCTION AND SHALL COMMUNICATE SCHEDULES, CONTRACTORS MEAN AND METHODS, MATERIALS TO BE USED, AND OTHER RELEVANT MATTERS ASSOCIATED WITH THE CONSTRUCTION OF THE PROJECT.
5. ALL WORK EITHER DIRECTLY OR INDIRECTLY RELATED TO THE PROJECT SHALL BE COORDINATED WITH THE APPROPRIATE UTILITY SYSTEM MANAGER.
6. THE CONTRACTOR SHALL MAINTAIN AN ONSITE RECORD COPY OF ALL DRAWINGS, SPECIFICATIONS, ADDENDA, CHANGE ORDERS, WORK CHANGE DIRECTIVES, FIELD ORDERS, FIELD CHANGES, AND WRITTEN INTERPRETATIONS AND CLARIFICATIONS. RECORDS SHALL BE IN GOOD ORDER AND ANNOTATED TO SHOW CHANGES MADE DURING CONSTRUCTION.
7. CONTRACTOR SHALL REFER TO THE PROJECT SPECIFICATIONS REGARDING MATERIAL AND EQUIPMENT SUBMITTAL REQUIREMENTS.
8. THE CONTRACTOR SHALL CALL UNDERGROUND SERVICE ALERT AT 1-800-642-2444 TO PROVIDE FIELD LOCATIONS OF UNDERGROUND UTILITIES PRIOR TO THE START OF CONSTRUCTION.
9. THE LOCATION OF EXISTING UTILITIES SHOWN ON THESE PLANS ARE BASED ON THE BEST INFORMATION AVAILABLE TO THE ENGINEER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY PROPOSED POINTS OF CONNECTION AND IN AREAS OF POSSIBLE CONFLICT WITH NEW UTILITY INSTALLATION PRIOR TO BEGINNING CONSTRUCTION. SHOULD THE CONTRACTOR FIND ANY DISCREPANCIES BETWEEN THE CONDITIONS EXISTING IN THE FIELD AND THE INFORMATION SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER BEFORE PROCEEDING WITH CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROTECT AND MAINTAIN ALL EXISTING UTILITIES WHETHER OR NOT SHOWN ON THE PLAN.
10. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROCURE ALL NECESSARY PERMITS, LICENSES, INSURANCE POLICIES, ETC. AS MAY BE NECESSARY TO COMPLY WITH LOCAL, COUNTY, STATE, AND FEDERAL LAWS ASSOCIATED WITH THE PERFORMANCE OF THE WORK; UNLESS OTHERWISE OBTAINED BY THE OWNER.
11. CONTRACTOR SHALL REFER TO THE PROJECT SPECIFICATIONS REGARDING PROJECT TRAFFIC CONTROL REQUIREMENTS. ALL TRAFFIC CONTROL PLANS SHALL BE PREPARED BY ATTSA CERTIFIED PERSONNEL.
12. THE CONTRACTOR AGREES TO ASSUME SOLE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, AND FURTHER AGREES THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS IN ACCORDANCE WITH THE PROVISIONS OUTLINED BY THE PROJECT CONTROL AND THE STANDARD SPECIFICATIONS.
13. THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE PROVISIONS OF OSHA AND NRS CHAPTER 618.
14. THE CONTRACTOR SHALL PURSUE THE WORK IN A CONTINUOUS AND DILIGENT MANNER, CONFORMING TO ALL THE PERTINENT SAFETY REGULATIONS TO ENSURE A TIMELY COMPLETION OF THE PROJECT.
15. THE CONTRACTOR SHALL MAINTAIN A CLEAN PROJECT SITE, REMOVING CONSTRUCTION DEBRIS AT THE END OF EACH ACTIVITY DAY. THE CONTRACTOR SHALL MAINTAIN DEBRIS FREE CONSTRUCTION ROUTES, ADJACENT STREETS AND STORM DRAIN SYSTEMS.
16. TEMPORARY CONSTRUCTION FENCING SHALL BE PROVIDED AND MAINTAINED BY THE CONTRACTOR THROUGHOUT THE DURATION OF THE PROJECT IN AREAS AS DELINEATED ON THE PLANS OR AS DIRECTED BY THE PROJECT ENGINEER. THE TEMPORARY FENCING SHALL PREVENT CHILDREN AND PETS FROM ENTERING THE CONSTRUCTION AREA, CREATE A VISUAL BARRIER OF THE CONSTRUCTION ACTIVITIES FROM THE ADJACENT RESIDENCE AND YARDS, AND PROTECT VEGETATION FROM CONSTRUCTION EQUIPMENT.
17. THE CONTRACTOR SHALL USE ONLY AUTHORIZED SITES FOR STORAGE OF EQUIPMENT AND MATERIALS AND OBTAIN PROPER APPROVALS FROM THE LAND OWNER AND LOCAL GOVERNING AUTHORITY TO DO SO. CONTRACTOR SHALL BE RESPONSIBLE FOR THE SECURITY OF ALL EQUIPMENT AND MATERIALS.
18. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING SURVEY MONUMENTS AND OTHER SURVEY MARKERS DURING CONSTRUCTION. IN THE EVENT A MONUMENT IS DISTURBED, THE CONTRACTOR SHALL HAVE THE MONUMENT REPLACED, AT HIS OWN EXPENSE, BY A LICENSED SURVEYOR IN THE STATE OF NEVADA.
19. CONTRACTOR SHALL REFER TO THE PROJECT SPECIFICATIONS REGARDING CONSTRUCTION HOURS.
20. ALL FIELD CHANGES MUST BE PRE-APPROVED BY THE CITY OF SPARKS.
21. SHOULD IT APPEAR THAT THE WORK TO BE DONE, OR ANY MATTER RELATIVE THERETO, IS NOT SUFFICIENTLY DETAILED OR EXPLAINED ON THESE PLANS, THE CONTRACTOR SHALL CONTACT THE PROJECT ENGINEER FOR SUCH FURTHER EXPLANATIONS AS MAY BE NECESSARY.
22. THE OWNER IS RESPONSIBLE FOR FURNISHING QUALIFIED SITE INSPECTIONS AS REQUIRED TO COMPLY WITH LOCAL ORDINANCES.
23. A GEOTECHNICAL INVESTIGATION WAS PERFORMED ON THIS PROJECT. ALL RECOMMENDATIONS INCLUDED IN THE REPORT ARE HEREBY MADE A PART OF THE CONSTRUCTION DOCUMENTS UNLESS MODIFIED WITHIN THESE PLANS. INSPECTION AND TESTING DURING CONSTRUCTION SHALL BE REQUIRED IN ACCORDANCE WITH THE RECOMMENDATIONS CONTAINED WITHIN THE REPORT.
    TITLE: 2021 CDBG PROJECT PHASE 1
    DATE: JUNE 10, 2021
    FIRM : LUMOS AND ASSOCIATES, INC.

UNDERGROUND UTILITIES

24. THE CONTRACTOR SHALL FIELD VERIFY UTILITY LOCATIONS NEAR OR WITHIN THE CONSTRUCTION LIMITS WITH THE RESPECTIVE UTILITY COMPANIES PRIOR TO BEGINNING CONSTRUCTION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ARRANGE FOR THE NECESSARY RELOCATION OF ANY UTILITY. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES INVOLVED AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO BEGINNING WORK.
25. NO OTHER UTILITIES MAY BE PLACED IN A WATER OR SEWER TRENCH.
26. ALL VALVE BOXES, MANHOLE STRUCTURES, AND CLEAN OUTS SHALL BE MARKED AND ACCESSIBLE AT ALL TIMES.
27. CONTRACTOR SHALL SUPPORT TRENCH SIDEWALLS IN ACCORDANCE WITH ALL APPLICABLE LAWS AND GOVERNING SAFETY REGULATIONS. SHEETING OR SHORING SHALL CONFORM TO LOCAL REGULATIONS AND OSHA STANDARDS.
28. ENDS OF UNFINISHED PIPE SHALL BE SEALED AT THE END OF EACH DAY.
29. PIPE SHALL BE LAID IN THE UPHILL DIRECTION, WITH BELL ENDS UPHILL.

GRADING, EXCAVATION & SURFACE IMPROVEMENTS

30. THE CONTRACTOR IS RESPONSIBLE FOR PERFORMING THEIR OWN QUANTITY TAKE-OFF AND SHALL BUDGET THE PROJECT ACCORDINGLY. ALL EXCESS GRADING MATERIALS SHALL BE DISPOSED OF OFFSITE.
31. ALL EARTHWORK ACTIVITIES SHALL BE IN ACCORDANCE WITH THE PROJECT'S GEOTECHNICAL REPORT.
32. THE SOILS ENGINEER SHALL APPROVE ALL EARTHWORK AND GRADING TO CONFIRM COMPACTION REQUIREMENTS ARE MET.
33. CONTRACTOR SHALL PROTECT EXISTING PAVING, CONCRETE, LANDSCAPING, FENCING, MAILBOXES, SIGNS AND ANY OTHER IMPROVEMENTS NOT SPECIFICALLY CALLED OUT FOR REPLACEMENT. CONTRACTOR SHALL REPAIR/REPLACE ANYTHING DAMAGED BY FORCES UNDER THEIR EMPLOY OR CONTRACT.
34. ALL ASPHALT CONCRETE SURFACES SHALL BE SAWCUT TWO FEET MINIMUM INSIDE THE EDGE OF PAVEMENT TO A NEAT, STRAIGHT LINE AND REMOVED. THE EXPOSED PAVEMENT TIE-IN EDGES SHALL BE METICULOUSLY CLEANED OF ALL LOOSE MATERIAL AND THEN TREATED WITH BITUMINOUS EMULSION PRIOR TO PAVING. THE EXPOSED BASE MATERIALS SHALL BE GRADED AND RECOMPACTED PRIOR TO PAVING.

ENVIRONMENTAL

35. ALL CONSTRUCTION SHALL BE PERFORMED IN COMPLIANCE WITH THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES). CONTRACTOR IS RESPONSIBLE FOR ACQUIRING AND MAINTAINING A SWPPP.
36. INSTALLATION AND MAINTENANCE OF EROSION CONTROL MEASURES ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PREVENTION OF EROSION AND SILTATION FROM ENTERING THE STORM DRAIN SYSTEM, NATURAL DRAINAGE COURSES, AND/OR INTRUDING UPON ADJACENT ROADWAYS AND PROPERTIES. EROSION CONTROL MEASURES SHOWN ON THESE PLANS ARE INTENDED AS A GUIDE. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED AS DETERMINED IN THE FIELD. THIS RESPONSIBILITY SHALL APPLY THROUGHOUT THE COURSE OF CONSTRUCTION AND UNTIL ALL DISTURBED AREAS HAVE BECOME STABILIZED AND SHALL NOT BE LIMITED TO WET WEATHER PERIODS. THE CONTRACTOR IS RESPONSIBLE FOR SWPPP UPDATES.
37. THE CONTRACTOR SHALL MAINTAIN AN ON-GOING DUST CONTROL PROGRAM INCLUDING WATERING OF OPEN AREAS, TO CONFORM WITH THE LATEST FEDERAL, STATE, AND COUNTY AIR POLLUTION REGULATIONS. CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND UPDATING DUST CONTROL PERMITS FOR THE PROJECT.
38. PROTECTIVE MEASURES AND TEMPORARY DRAINAGE PROVISIONS SHALL BE USED TO PROTECT ADJOINING PROPERTIES DURING CONSTRUCTION OF IMPROVEMENTS.
39. AFTER A RAINSTORM, ALL SILT AND DEBRIS SHALL BE REMOVED FROM CHECK BERMS AND DESILTING FACILITIES. GRADED SLOPE SURFACE PROTECTION MEASURES DAMAGED DURING THE RAINSTORM SHALL ALSO BE REPAIRED.
40. IF GROUNDWATER IS ENCOUNTERED, THE CONTRACTOR SHALL STOP WORK IMMEDIATELY, PREPARE A DEWATERING PLAN, AND OBTAIN APPROVAL FROM THE PROJECT ENGINEER BEFORE PROCEEDING WITH WORK. DEWATERING ACTIVITIES MAY REQUIRE THE CONTRACTOR TO OBTAIN A DISCHARGE/PUMPING PERMIT FROM THE STATE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN SUCH PERMITS.
41. ALL STREETS SHALL BE MAINTAINED FREE OF DUST AND MUD CAUSED BY GRADING OPERATIONS.

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ALEX J. GREENBLAT
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CIVIL
No. 024022
STATE OF NEVADA

04/26/22

CITY OF SPARKS

2022 CDBG ROADWAY IMPROVEMENT
14TH STREET, D STREET & E STREET
NOTES, ABBREVIATIONS, AND LEGEND

WASHOE COUNTY
SPARKS
NEVADA

REV	DATE	DESCRIPTION	BY
		ISSUED FOR BIDDING	

APRIL 26, 2022

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CHECKED BY:	AJG
JOB NO.:	10415.000

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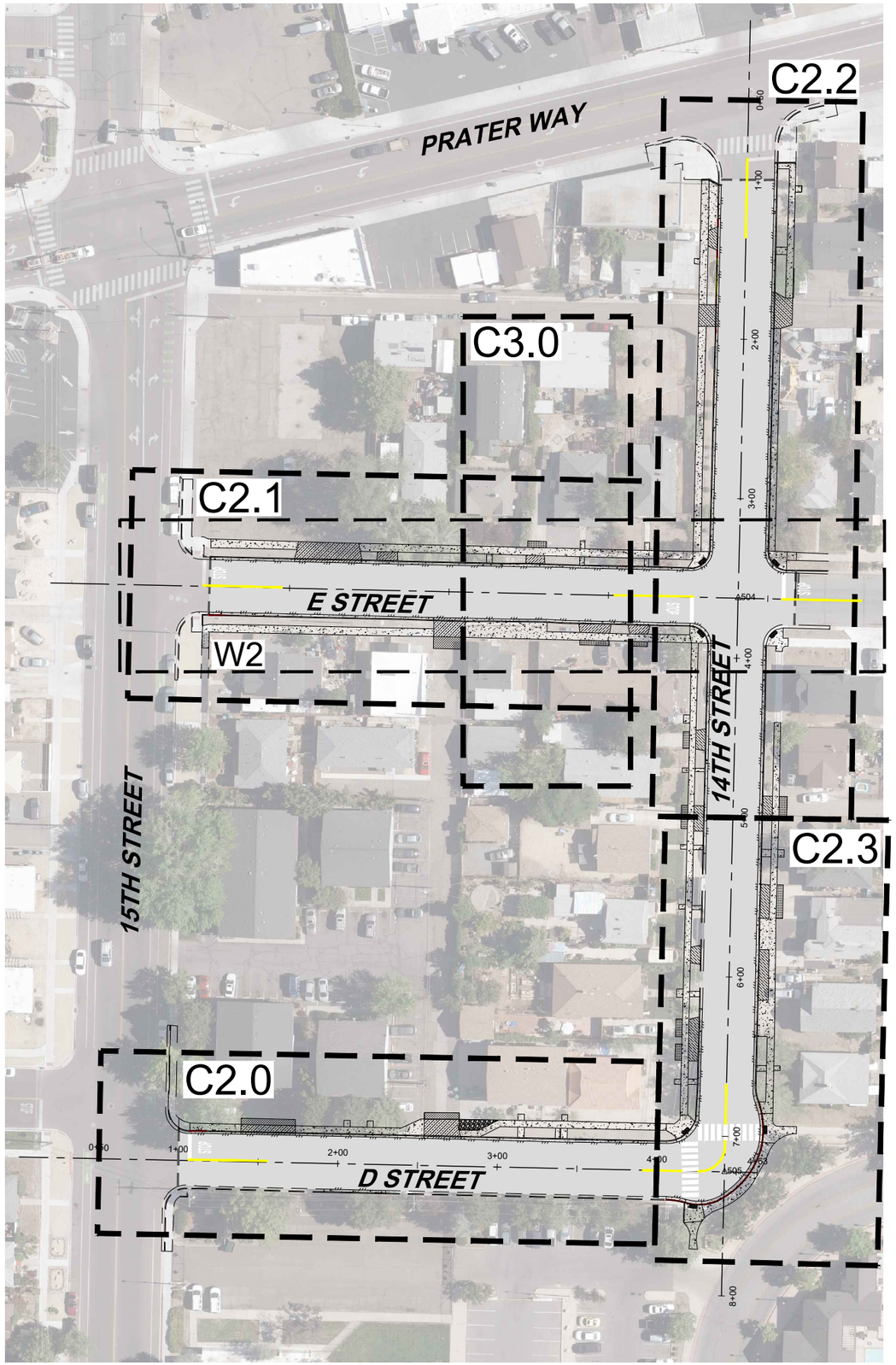

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NOT TO SCALE

BASIS OF BEARINGS

THE BASIS OF BEARINGS FOR THIS SURVEY IS NEVADA STATE PLANE COORDINATE SYSTEM, WEST ZONE NAD83(94) BASED UPON REAL TIME KINEMATIC GPS OBSERVATIONS, OBSERVED 6-9-2021 USING A SURVEY GRADE DUAL FREQUENCY GPS RECEIVER FROM THE WASHOE COUNTY CONTROL NETWORK MODIFIED BY A COMBINED FACTOR OF 1.000197939, SCALED FROM 0.00N ,0.00E AND CONVERTED TO U.S. SURVEY FEET. ALL DIMENSIONS ON THIS MAP ARE GROUND DISTANCES.

BASIS OF ELEVATIONS

DATUM: NAVD 88
PROJECT BENCHMARK = USC&G BM #G374
HAVING AN ELEVATION OF 4426.65'

PROJECT CONTROL

POINT	NORTH	EAST	ELEVATION	DESCRIPTION
504	14871593.75	2293109.42	4422.25	CP 2.5" BRASS CAP
505	14871233.89	2293100.90	4422.16	CP 1.5" BRASS CAP

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CITY OF SPARKS

2022 CDBG ROADWAY IMPROVEMENT
14TH STREET, D STREET & E STREET
PROJECT CONTROL AND SHEET INDEX

SPARKS | WASHOE COUNTY | NEVADA

REV	DATE	DESCRIPTION	BY

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APRIL 26, 2022

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CHECKED BY:	AJG
JOB NO.:	10415.000

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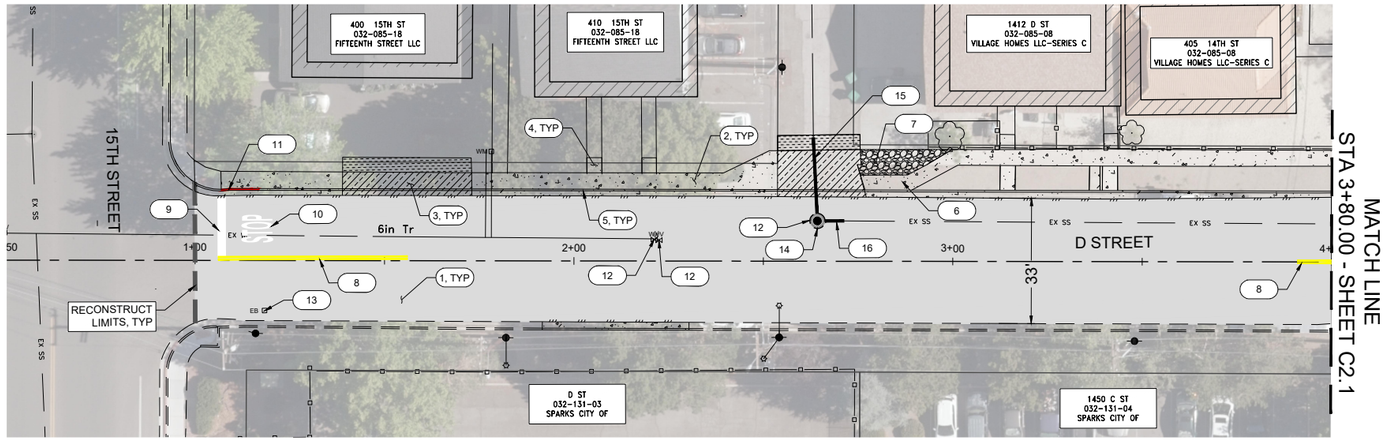

SHEET C2.0 NOTES

NO.	DESCRIPTION
1	RECONSTRUCT ROAD SECTION: PULVERIZE 12" DEPTH, REMOVE TOP 4" OF BLENDED MATERIAL, RECOMPACT 8" RECYCLED BASE MATERIAL, PLACE 4" TYPE II PG64-28NV ASPHALT IN TWO LIFTS.
2	REMOVE AND REPLACE PCC SIDEWALK PER ADA STANDARDS
3	REMOVE AND REPLACE PCC COMMERCIAL DRIVEWAY PER ADA STANDARDS. INSTALL 4' AC PATCH BEHIND BACK OF WALK
4	REMOVE AND REPLACE PCC ENTRY WAY (MATCH WIDTH) PER ADA STANDARDS.
5	REMOVE AND REPLACE TYPE 1 PCC CURB AND GUTTER
6	EXTEND 4' WIDE SIDEWALK AT BFC AND TRANSITION TO PARKWAY SIDEWALK PER ADA STANDARDS
7	REMOVE EXISTING PCC SIDEWALK AND REPLACE WITH TYPE 2 AGGREGATE BASE
8	59 LINEAR FEET OF 4" DOUBLE SOLID YELLOW STRIPING (TYPE 2 WATERBORNE PAINT) (50 LF PER INTERSECTION)
9	16 LINEAR FEET OF 24" STOP BAR (THERMOPLASTIC)
10	1 STOP LEGEND (THERMOPLASTIC)
11	10 LINEAR FEET OF CURB PAINT
12	CONTRACTOR TO PROTECT LOWER, AND ADJUST NEW OR EXISTING MANHOLES/VALVES WITHIN RECONSTRUCT LIMITS TO NEW FINISH GRADE.
13	REMOVE EXISTING ELECTRICAL STANDARD PULL BOX AND INSTALL AND ADJUST NEW TRAFFIC RATED PULL BOX TO NEW FINISH GRADE.
14	REMOVE AND DISPOSE OF EXISTING TYPE I SEWER MANHOLE. FURNISH AND INSTALL NEW TYPE I SEWER MANHOLE. CONTRACTOR TO VERIFY MANHOLE DEPTH. APPROXIMATE RIM TO INVERT DEPTH IS ±4.5'.
15	REMOVE AND DISPOSE OF EXISTING SEWER MAIN. FURNISH AND INSTALL 20 LF OF NEW 8" SDR-35 PVC SEWER MAIN AT EXISTING LINE AND GRADE. CONTRACTOR TO CONNECT TO EXISTING PIPE WITH FERNCO COUPLER, OR APPROVED EQUAL, AND CONCRETE PILLOW TO SPRING LINE OF PIPE.
16	REMOVE AND DISPOSE OF EXISTING SEWER MAIN. FURNISH AND INSTALL 5 LF OF NEW 8" SDR-35 PVC SEWER MAIN AT EXISTING LINE AND GRADE. CONTRACTOR TO CONNECT TO EXISTING PIPE WITH FERNCO COUPLER, OR APPROVED EQUAL, AND CONCRETE PILLOW TO SPRING LINE OF PIPE.

IMPROVEMENT LEGEND

	TYPE 1 CURB AND GUTTER	±282	L.F.
	PCC SIDEWALK	±1212	S.F.
	PCC COMMERICAL DRIVEWAY APRON	±482	S.F.
	PCC RESIDENTIAL DRIVEWAY APRON	±0	S.F.
	PCC DRIVEWAY TRANSITION	±0	S.F.
	AC DRIVEWAY TRANSITION	±219	S.F.
	ROAD RECONSTRUCT SECTION	±9952	S.F.
	AC PERMANENT PATCH	±0	S.F.
2"	TYPE 2 AGGREGATE BASE	±125	S.F.

NOTE: QUANTITIES FOR THIS SHEET ONLY

GENERAL NOTES:

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2. CONTRACTOR TO REMOVE, SALVAGE AND REPLACE OR REPLACE IN-KIND, LANDSCAPING FOR EACH PROPERTY AS IS NECESSARY TO COMPLETE CONSTRUCTION AND PROVIDE POSITIVE DRAINAGE AT NO DIRECT PAYMENT. LANDSCAPING INCLUDES, BUT IS NOT LIMITED TO, KEYSTONE WALLS, LANDSCAPE WALLS, SOD, IRRIGATION, BUSHES, ROCK MULCH, LARGE ROCK, ORNAMENTAL CONCRETE, MAILBOXES, ETC.
3. LANDSCAPING DOES NOT INCLUDE FENCING. FENCING IS PAID FOR AS SPECIFIED IN BID ITEM CLARIFICATIONS. PROTECT ALL EXISTING FENCING IN PLACE UNLESS NOTED OTHERWISE ON PLANS.
4. BUSHES AND TREES SHALL BE TRIMMED OR REMOVED AS NECESSARY FOR CONSTRUCTION BY AN ISA CERTIFIED ARBORIST. NO DIRECT PAYMENT FOR THIS WORK.
5. COORDINATE WITH TMWA FOR WATER METER BOX REPLACEMENTS AND METER SETTER ADJUSTMENTS. CONTRACTOR TO REMOVE, SALVAGE AND REINSTALL EXISTING METER BOX UNLESS DESIGNATED FOR REPLACEMENT. TMWA WILL FURNISH THE WATER METER BOX (STANDARD OR TRAFFIC RATED) IF IT NEEDS REPLACED.
6. FOR STORM DRAIN IMPROVEMENTS REFER TO SHEET C3.0.

N

0 20' 40'

22x34 SHEETS = HORIZONTAL:1"=20'
11x17 SHEETS = HORIZONTAL:1"=40'

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No. 024022
STATE OF NEVADA

04/26/22

CITY OF SPARKS
2022 CDBG ROADWAY IMPROVEMENT
14TH STREET, D STREET & E STREET
D STREET PLAN
WASHOE COUNTY
NEVADA
SPARKS

REV	DATE	DESCRIPTION	BY

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APRIL 26, 2022

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C2.0

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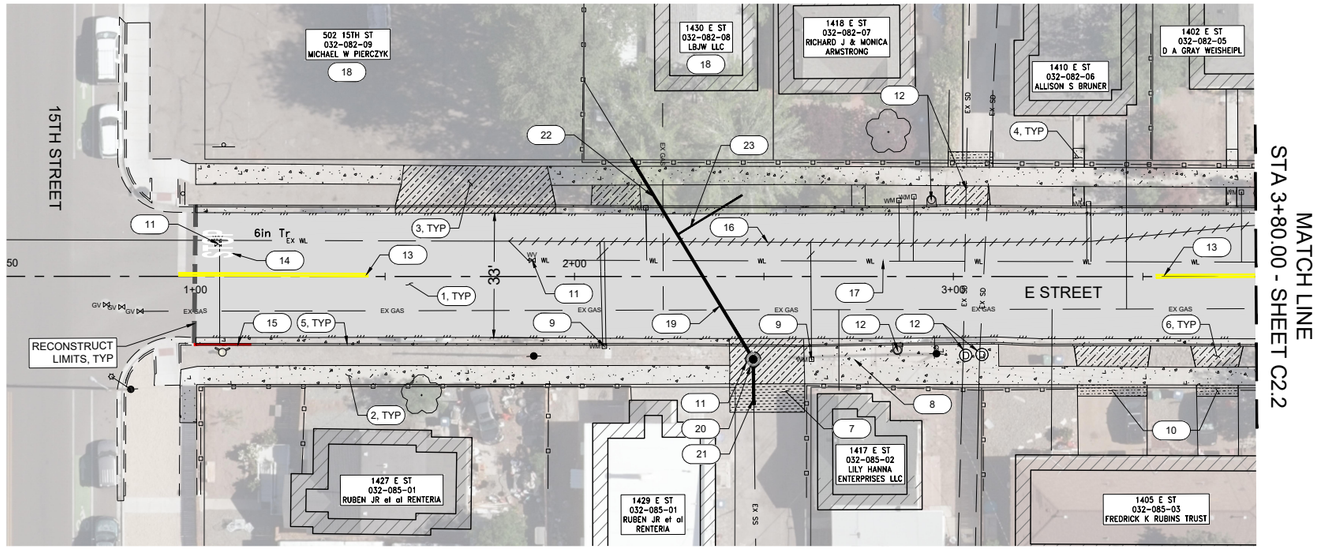

IMPROVEMENT LEGEND

	TYPE 1 CURB AND GUTTER	±497	L.F.
	PCC SIDEWALK	±2905	S.F.
	PCC COMMERICAL DRIVEWAY APRON	±740	S.F.
	PCC RESIDENTIAL DRIVEWAY APRON	±306	S.F.
	PCC DRIVEWAY TRANSITION	±135	S.F.
	AC DRIVEWAY TRANSITION	±148	S.F.
	ROAD RECONSTRUCT SECTION	±9205	S.F.
	AC PERMANENT PATCH	±0	S.F.
	TYPE 2 AGGREGATE BASE	±0	S.F.

NOTE: QUANTITIES FOR THIS SHEET ONLY

SHEET C2.1 NOTES

NO. DESCRIPTION

1 RECONSTRUCT ROAD SECTION: PULVERIZE 12" DEPTH, REMOVE TOP 4" OF BLENDED MATERIAL, RECOMPACT 8" RECYCLED BASE MATERIAL, PLACE 4" TYPE II PG64-28NV ASPHALT IN TWO LIFTS.

2 REMOVE AND REPLACE PCC SIDEWALK PER ADA STANDARDS

3 REMOVE AND REPLACE COMMERCIAL DRIVEWAY. TIE INTO NEW ADA COMPLIANT SIDEWALK.

4 REMOVE AND REPLACE PCC ENTRY WAY (MATCH WIDTH) PER ADA STANDARDS.

5 REMOVE AND REPLACE TYPE 1 PCC CURB AND GUTTER

6 REMOVE AND REPLACE RESIDENTIAL DRIVEWAY. TIE INTO NEW ADA COMPLIANT SIDEWALK

7 INSTALL AC PATCH TRANSITION 5' FROM BACK FROM COMMERCIAL DRIVEWAY LIMITS

8 CONTRACTOR TO RAISE THE SIDEWALK TO SLOPE NORTH FOR ADA COMPLIANCE

9 REMOVE AND REPLACE WATER METER BOX. COORDINATE WITH TMWA

10 INSTALL 3' PCC DRIVEWAY TRANSITION

11 CONTRACTOR TO PROTECT LOWER, AND ADJUST NEW OR EXISTING MANHOLES/VALVES WITHIN RECONSTRUCT LIMITS TO NEW FINISH GRADE.

12 REFERENCE SHEET C3.0 FOR STORM DRAIN IMPROVEMENTS. CONTRACTOR TO DROP ROADWAY/C&G ELEVATIONS AND REGRADE TO FLOW EAST.

13 76 LINEAR FEET OF 4" DOUBLE SOLID YELLOW STRIPING (TYPE 2 WATERBORNE PAINT) (50 LF PER INTERSECTION)

14 1 STOP LEGEND (THERMOPLASTIC)

15 15 LINEAR FEET OF CURB PAINT

16 CONTRACTOR TO ABANDON EXISTING WATER MAIN. REFERENCE TMWA PLAN SHEET W2

17 CONTRACTOR TO INSTALL NEW WATER MAIN. REFERENCE TMWA PLAN SHEET W2

18 CONTRACTOR TO VERIFY ACTIVE SEWER LATERAL CONNECTIONS FOR APN# 032-082-08 AND APN# 032-082-09

19 CONTRACTOR TO VERIFY LOCATION OF EXISTING SEWER MAIN PRIOR TO REMOVAL.

20 REMOVE AND DISPOSE OF EXISTING TYPE I SEWER MANHOLE. FURNISH AND INSTALL NEW TYPE I SEWER MANHOLE. CONTRACTOR TO VERIFY MANHOLE DPETH. APPROXIMATE RIM TO INVERT DEPTH IS ±2.5'.

21 REMOVE AND DISPOSE OF EXISTING SEWER MAIN. FURNISH AND INSTALL 10 LF OF NEW 8" SDR-35 PVC SEWER MAIN AT EXISTING LINE AND GRADE. CONTRACTOR TO CONNECT EXISTING PIPE WITH FERNCO COUPLER, OR APPROVED EQUAL, AND CONCRETE PILLOW TO SPRING LINE OF PIPE.

22 REMOVE AND DISPOSE OF EXISTING SEWER MAIN. FURNISH AND INSTALL 60 LF OF NEW 8" SDR-35 PVC SEWER MAIN AT EXISTING LINE AND GRADE. CONTRACTOR TO CONNECT TO EXISTING PIPE WITH FERNCO COUPLER, OR APPROVED EQUAL, AND CONCRETE PILLOW TO SPRING LINE OF PIPE.

23 REMOVE AND DISPOSE OF EXISTING SEWER LATERAL. FURNISH AND INSTALL 20 LF OF NEW 4" SDR-35 PVC SEWER LATERAL AT EXISTING LINE AND GRADE AND CONNECT TO NEW SEWER MAIN WITH WYE FITTING. CONTRACTOR TO PLACE NEW G5 LID AND COLLAR AT EXISTING CLEANOUT.

GENERAL NOTES:

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4. BUSHES AND TREES SHALL BE TRIMMED OR REMOVED AS NECESSARY FOR CONSTRUCTION BY AN ISA CERTIFIED ARBORIST. NO DIRECT PAYMENT FOR THIS WORK.
5. COORDINATE WITH TMWA FOR WATER METER BOX REPLACEMENTS AND METER SETTER ADJUSTMENTS. CONTRACTOR TO REMOVE, SALVAGE AND REINSTALL EXISTING METER BOX UNLESS DESIGNATED FOR REPLACEMENT. TMWA WILL FURNISH THE WATER METER BOX (STANDARD OR TRAFFIC RATED) IF IT NEEDS REPLACED.
6. FOR STORM DRAIN IMPROVEMENTS REFER TO SHEET C3.0.

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CITY OF SPARKS

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E STREET PLAN

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JOB NO.: 10415.000

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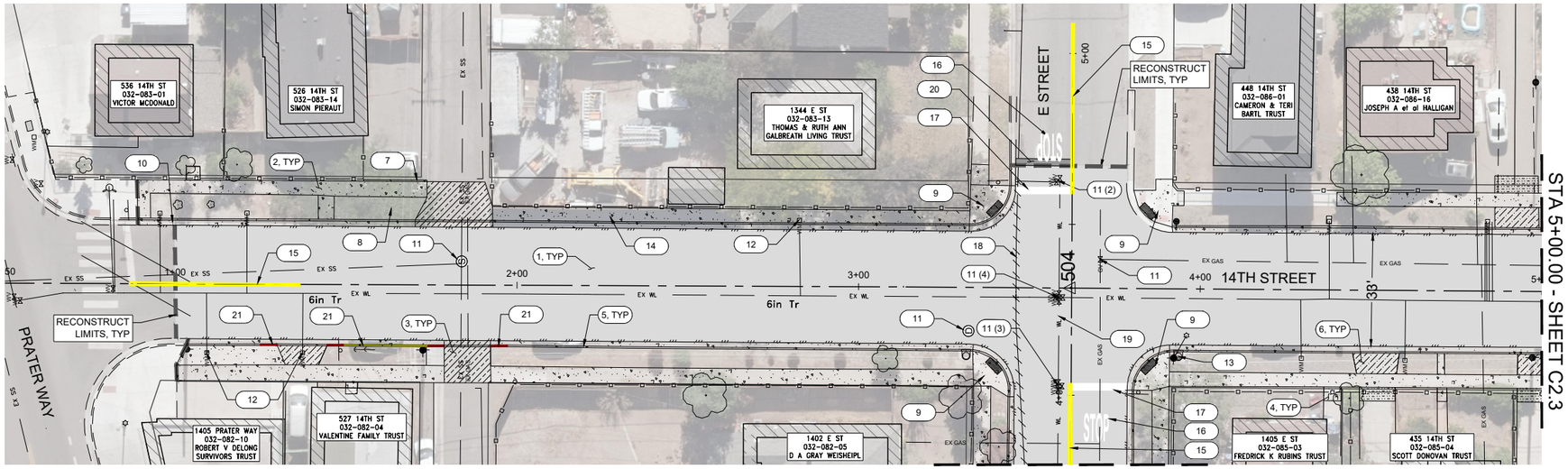

MATCH LINE
STA 5+00.00 - SHEET C2.3

MATCH LINE
STA 3+80.00 - SHEET C2.1

SHEET C2.2 NOTES

NO.	DESCRIPTION
1	RECONSTRUCT ROAD SECTION: PULVERIZE 12" DEPTH, REMOVE TOP 4" OF BLENDED MATERIAL, RECOMPACT 8" RECYCLED BASE MATERIAL, PLACE 4" TYPE II PG64-28NV ASPHALT IN TWO LIFTS.
2	REMOVE AND REPLACE PCC SIDEWALK PER ADA STANDARDS
3	REMOVE AND REPLACE PCC COMMERCIAL DRIVEWAY. INSTALL PCC TRANSITION TO TIE INTO NEW ADA COMPLIANT SIDEWALK IF SHOWN.
4	REMOVE AND REPLACE PCC ENTRY WAY (MATCH WIDTH) PER ADA STANDARDS.
5	REMOVE AND REPLACE TYPE 1 PCC CURB AND GUTTER
6	REMOVE AND REPLACE RESIDENTIAL DRIVEWAY. TIE INTO NEW ADA COMPLIANT SIDEWALK. INSTALL PCC TRANSITION TO TIE INTO NEW ADA COMPLIANT SIDEWALK IF SHOWN.
7	INSTALL 19 LINEAR FEET OF 6" POST CURB TO LOWER SIDEWALK TO MEET ADA AT ALLEY
8	PROTECT EXISTING TREE IN PLACE. ARBORIST EVALUATION AND INSTALLATION OF TREE PLATE IS POSSIBLE
9	REMOVE AND REPLACE PCC PEDESTRIAN RAMP AND TRUNCATED DOMES PER ADA STANDARDS
10	CONTRACTOR TO NEAT LINE POUR NEW CURB AND GUTTER TO MATCH EXISTING AC LIP OUTSIDE RECONSTRUCTION LIMITS
11	CONTRACTOR TO PROTECT LOWER, AND ADJUST NEW OR EXISTING MANHOLES/VALVES WITHIN RECONSTRUCT LIMITS TO NEW FINISH GRADE.
12	REMOVE AND REPLACE WATER METER BOX. INSTALL TRAFFIC RATED WATER METER BOX IF WITHIN DRIVEWAY LIMITS. COORDINATE WITH TMWA.
13	REMOVE EXISTING TYPE 1 CATCH BASIN AND INSTALL NEW 4-R CATCH BASIN. TIE INTO EXISTING LATERAL WITH FERNCO (OR APPROVED EQUAL) AND CONCRETE PILLOW TO SPRING LINE OF PIPE.
14	REMOVE EXISTING DRIVEWAY AND INSTALL PCC SIDEWALK AND FULLY ELEVATED CURB AND GUTTER
15	124 LINEAR FEET OF 4" DOUBLE SOLID YELLOW STRIPING (TYPE 2 WATERBORNE PAINT) (50 LF PER INTERSECTION)
16	2 STOP LEGEND (THERMOPLASTIC)
17	32 LINEAR FEET OF 24" STOP BAR (THERMOPLASTIC)
18	CONTRACTOR TO ABANDON EXISTING WATER MAIN. REFERENCE TMWA PLAN SHEET W2
19	CONTRACTOR TO INSTALL NEW WATER MAIN. REFERENCE TMWA PLAN SHEET W2
20	PERMANENT AC PATCH
21	44 LINEAR FEET OF CURB PAINT

IMPROVEMENT LEGEND

	TYPE 1 CURB AND GUTTER	±696	L.F.
	PCC SIDEWALK	±3217	S.F.
	PCC COMMERICAL DRIVEWAY APRON	±433	S.F.
	PCC RESIDENTIAL DRIVEWAY APRON	±266	S.F.
	PCC DRIVEWAY TRANSITION	±135	S.F.
	AC DRIVEWAY TRANSITION	±0	S.F.
	ROAD RECONSTRUCT SECTION	±15161	S.F.
	AC PERMANENT PATCH	±33	S.F.
	TYPE 2 AGGREGATE BASE	±0	S.F.

NOTE: QUANTITIES FOR THIS SHEET ONLY

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6. FOR STORM DRAIN IMPROVEMENTS REFER TO SHEET C3.0.

N

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CIVIL
No. 024022
STATE OF NEVADA
04/26/22

CITY OF SPARKS

2022 CDBG ROADWAY IMPROVEMENT
14TH STREET, D STREET & E STREET
14TH STREET PLAN STA. 1+00 TO 5+00

WASHOE COUNTY
NEVADA
SPARKS

REV	DATE	DESCRIPTION	BY
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C2.2

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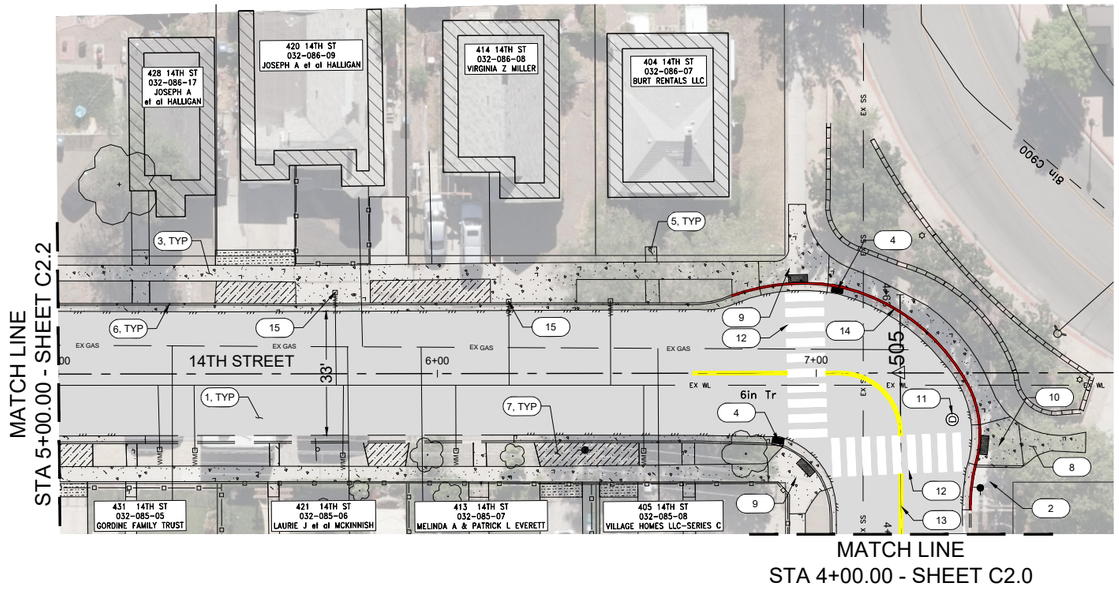
DESIGNED BY:	JWR/MMP
CHECKED BY:	AJG
JOB NO.:	10415.000



SHEET C2.3 NOTES

NO.	DESCRIPTION
1	RECONSTRUCT ROAD SECTION: PULVERIZE 12" DEPTH, REMOVE TOP 4" OF BLENDED MATERIAL, RECOMPACT 8" RECYCLED BASE MATERIAL, PLACE 4" TYPE II PG64-28NV ASPHALT IN TWO LIFTS.
2	REMOVE EXISTING PCC SIDEWALK AND AGGREGATE BASE AND REPLACE WITH TOP SOIL
3	REMOVE AND REPLACE PCC SIDEWALK AT EXISTING WIDTH PER ADA STANDARDS
4	RESET EXISTING 4-R CATCH BASIN
5	REMOVE AND REPLACE PCC ENTRY WAY (MATCH WIDTH) PER ADA STANDARDS.
6	REMOVE AND REPLACE TYPE 1 PCC CURB AND GUTTER
7	REMOVE AND REPLACE RESIDENTIAL DRIVEWAY. TIE INTO NEW ADA COMPLIANT SIDEWALK. INSTALL PCC TRANSITION TO TIE INTO NEW ADA COMPLIANT SIDEWALK IF SHOWN.
8	REMOVE EXISTING AC PATH AND REPLACE WITH PCC SIDEWALK (5'X15')
9	REMOVE AND REPLACE PCC PEDESTRIAN RAMP AND TRUNCATED DOMES PER ADA STANDARDS
10	REMOVE AND REPLACE PCC PEDESTRIAN RAMP AND TRUNCATED DOMES PER ADA STANDARDS. INSTALL PCC POST CURB IN LIEU OF RAMP WING TO THE WEST.
11	CONTRACTOR TO PROTECT LOWER, AND ADJUST EXISTING MANHOLES/VALVES WITHIN RECONSTRUCT LIMITS TO NEW FINISH GRADE.
12	190 LINEAR FEET OF 24" CROSSWALK KEYS (THERMOPLASTIC)
13	71 LINEAR FEET OF 4" DOUBLE SOLID YELLOW STRIPING (TYPE 2 WATERBORNE PAINT)
14	107 LINEAR FEET OF CURB PAINT
15	REMOVE AND REPLACE WATER METER BOX. COORDINATE WITH TMWA.

IMPROVEMENT LEGEND

	TYPE 1 CURB AND GUTTER	±362	L.F.
	PCC SIDEWALK	±2618	S.F.
	PCC COMMERICAL DRIVEWAY APRON	±0	S.F.
	PCC RESIDENTIAL DRIVEWAY APRON	±602	S.F.
	PCC DRIVEWAY TRANSITION	±201	S.F.
	AC DRIVEWAY TRANSITION	±0	S.F.
	ROAD RECONSTRUCT SECTION	±8803	S.F.
	AC PERMANENT PATCH	±0	S.F.
	TYPE 2 AGGREGATE BASE	±0	S.F.

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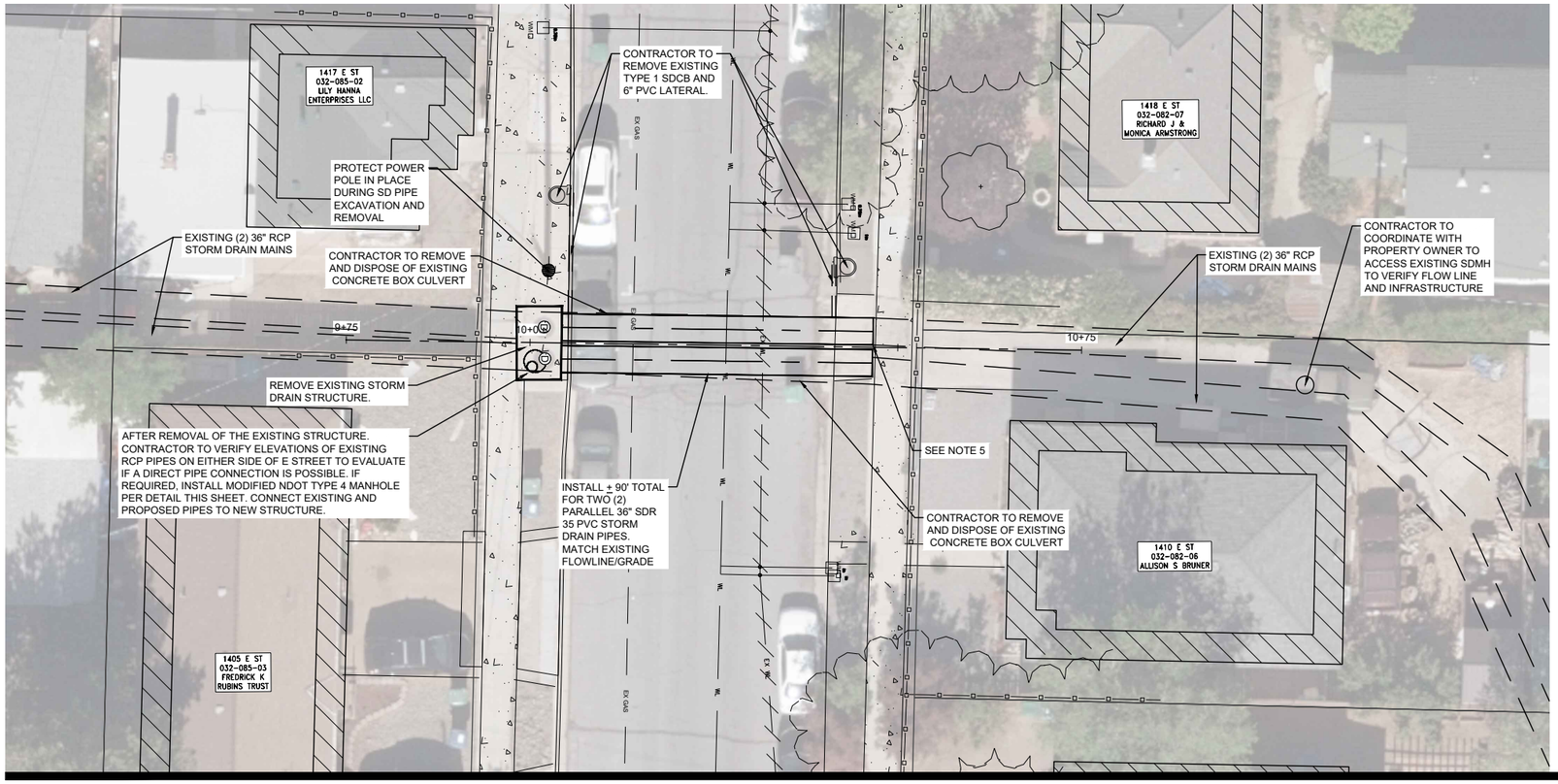
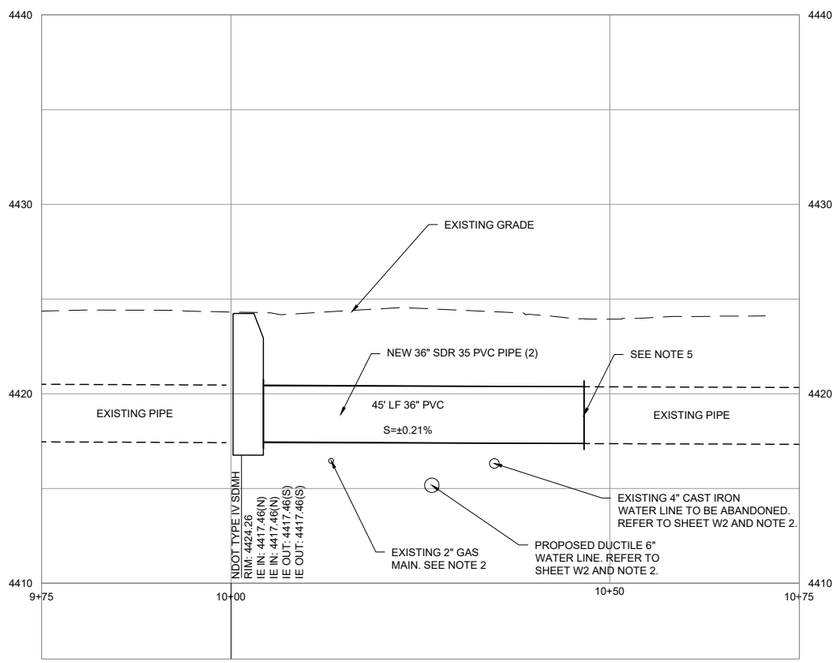
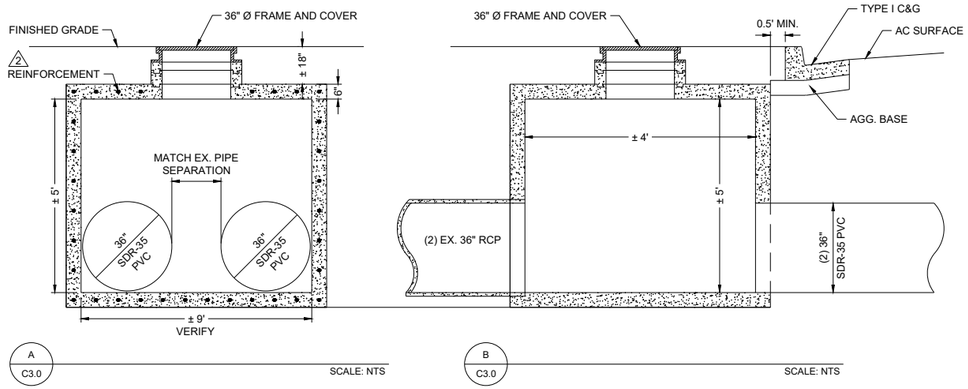


STORM DRAIN NOTES:

1. CONTRACTOR TO POTHOLE AND VERIFY FLOWLINE DEPTH AND GRADE PRIOR TO REMOVAL OF EXISTING STRUCTURE. NEW STORM DRAIN PIPES TO BE INSTALLED AT EXISTING FLOWLINE GRADE
2. PROTECTION OF ALL UTILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR. NOTE THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AND FEATURES SHOWN ON THESE PLANS ARE APPROXIMATE AND NOT TO BE RELIED ON AS EXACT OR COMPLETE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO POTHOLE AND VERIFY THE LOCATIONS AND DEPTH OF EXISTING UTILITY CROSSINGS PRIOR TO CONSTRUCTION. NOTIFY ENGINEER OF ANY POTENTIAL CONFLICTS PRIOR TO INSTALLATION OF STORM DRAIN.
3. CONTRACTOR TO SETUP MEANS OF BYPASS PUMPING FOR EXISTING FLOWS DURING INSTALLATION OF PROPOSED STORM DRAIN.
4. CONTRACTOR TO USE STORM DRAIN INLET PROTECTION IN AND/OR AROUND ALL STORM DRAIN MANHOLES AND CATCH BASINS.
5. CONTRACTOR TO VERIFY EXISTING STORM DRAIN FACILITIES AND CONNECT NEW 36" PIPES WITH EXISTING USING CUSTOM FERNCO CONCRETE TO PLASTIC COUPLING OR APPROVED EQUAL. POUR CONCRETE PILLOW TOP SPRING LINE OF PIPES.

E STREET STORM DRAIN - STA:9+75 TO STA:10+75

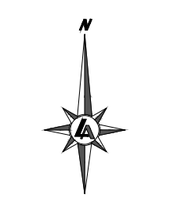




MODIFIED BOX CULVERT MANHOLE (MODIFIED NDOT TYPE 4 MANHOLE)

NOTES:

1. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL VERIFY THE EXISTING BOX CULVERT DIMENSIONS AND THE EXISTING SPACING OF THE ATTACHED STORM DRAIN PIPES.
2. REINFORCEMENT FOR THE MODIFIED MANHOLE STRUCTURE SHALL BE PER THE NDOT TYPE IV MANHOLE DETAIL (R-4.3.2).



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11x17 SHEETS = HORIZONTAL:1"=20'

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04/26/22

CITY OF SPARKS

2022 CDBG ROADWAY IMPROVEMENT
14TH STREET, D STREET & E STREET
E STREET STORM DRAIN IMPROVMENTS

WASHOE COUNTY
SPARKS
NEVADA

REV	DATE	DESCRIPTION	BY

ISSUED FOR BIDDING

APRIL 26, 2022

BAR IS 1 INCH ON ORIGINAL DRAWING
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IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

C3.0

DRAWN BY: MMP
DESIGNED BY: MMP
CHECKED BY: AG
JOB NO.: 10415.000

L:\LAProj\10415.000 - City of Sparks Eng. Services - 2021 CDBG Project\DWG\Civil3D\10415.000 Storm Drain.dwg,C3.0, 04/26/2022 11:15 am mphillips

GENERAL NOTES & SPECIFICATIONS

GENERAL NOTES

1. AT LEAST 3 WORKING DAYS BEFORE CONSTRUCTION, THE CONTRACTOR SHALL CALL UNDERGROUND SERVICE ALERT AT 811 AND REQUEST UTILITY MARKINGS. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE COST OF REPAIRING EXISTING FACILITIES (PUBLIC OR PRIVATE) THAT ARE DAMAGED BY THEIR OPERATIONS.
2. ANY DISCREPANCIES BETWEEN THESE DRAWINGS AND THE ACTUAL FIELD CONDITIONS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE TMWA PROJECT INSPECTOR SUFFICIENTLY AHEAD OF THE WORK AS TO AVOID DELAYS AND STANDBY COST TO TMWA. THE CONTRACTOR SHALL BE REQUIRED TO POTHOLE ALL UTILITIES TO VERIFY SIZE AND DEPTH. THE COST OF POTHOLING SHALL BE INCIDENTAL TO THE WORK NOT SUBJECT TO ADDITIONAL PAYMENTS.
3. CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE, AND TMWA SAFETY REGULATIONS AND SHALL MAINTAIN THE WORK AREA IN A SAFE CONDITION 24 HOURS PER DAY UNTIL THE PROJECT IS COMPLETE. WORKER AND PUBLIC SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR, NOT TMWA.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR MAILING AND/OR POSTING CONSTRUCTION AND OUTAGE NOTIFICATIONS (TYPICALLY DOOR-HANGERS) TO IMPACTED PROPERTIES. NOTIFICATION SHALL BE PROVIDED IN ACCORDANCE WITH CITY OF SPARKS REQUIREMENTS.
5. THE CONTRACTOR SHALL MAINTAIN A NEAT AND LEGIBLE DRAWING SET DENOTING ANY FIELD CHANGES THAT DEVIATE FROM THE APPROVED DESIGN ON A DAILY BASIS. PRIOR TO TMWA'S ACCEPTANCE OF THE IMPROVEMENTS AND FINAL PAVEMENT THE CONTRACTOR IS TO PRESENT THIS DRAWING SET, WHICH REFLECTS ALL FIELD CHANGES TO TMWA'S PROJECT REPRESENTATIVE.
6. THE CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTING AND MAINTAINING STORM WATER POLLUTION PREVENTION BMP'S
7. WATER FOR DUST CONTROL, MOISTURE CONDITIONING OF BACKFILL, AND OTHER CONSTRUCTION PURPOSES (EXCEPT FOR FLUSHING, TESTING, AND DISINFECTING PURPOSES) SHALL BE FURNISHED FROM AN APPROVED CONSTRUCTION WATER SOURCE AT THE EXPENSE OF THE CONTRACTOR.
8. DURING THE PROGRESS OF THE WORK THE CONTRACTOR SHALL KEEP THE ENTIRE SITE IN A CLEAN AND ORDERLY CONDITION. TRASH , BROKEN MATERIAL, WASTE MATERIAL, AND OTHER DEBRIS SHALL BE REMOVED FROM THE SITE ON A DAILY BASIS.
9. SPILLAGE AND TRACKAGE ON STREETS AND ROADWAYS, RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE REMOVED IMMEDIATELY BY THE CONTRACTOR.
10. DUST SHALL BE CONTROLLED AT ALL TIMES IN ACCORDANCE WITH THE REQUIREMENTS OF THE WASHOE COUNTY HEALTH DISTRICT.
11. CLEAN UP AND SITE RESTORATION WORK SHALL BE PERFORMED IN THE PRESENCE OF THE TMWA PROJECT INSPECTOR. THE CONTRACTOR SHALL NOT DEMOBILIZE HIS CREW AND EQUIPMENT UNTIL THE SITE HAS BEEN INSPECTED AND APPROVED BY THE TMWA PROJECT INSPECTOR.
12. BACTERIOLOGICAL TESTING OF MAIN/APPURTENANCES SHALL BE CONDUCTED BY TMWA LABORATORY. ALL MAINS THAT ARE DEPRESSURIZED AS PART OF THIS WORK SHALL REQUIRE A BACT BE TAKEN BY A TMWA INSPECTOR AT AN APPROVED LOCATION. UNLESS STATED OTHERWISE THE OUTAGES SHALL BE KEPT TO AS SHORT A DURATION AS POSSIBLE. THE CONTRACTOR SHALL CHLORINE SWAB ALL NEW PIPE/FITTINGS/APPURTENANCES TO BE INSTALLED AS PART OF THIS WORK. TMWA CAN PROVIDE BACT TESTING AT NO COST TO THE CONTRACTOR WITH A 2 WORKING DAY PRIOR NOTICE, UNLESS SPECIAL ARRANGEMENTS ARE AGREED UPON IN ADVANCE BY THE TMWA INSPECTOR SAMPLING BY TMWA LABORATORY STAFF SHALL BE LIMITED TO NORMAL WORKING HOURS MONDAY THROUGH THURSDAY. ALL MAINLINE SHALL REQUIRE TWO SUCCESSFUL BACT'S TAKEN A MINIMUM OF 24 HOURS APART PRIOR TO PLACING THE MAIN IN-SERVICE.
13. ALL 2" VERTICAL TAPS FOR TEMPORARY FLUSHING/TESTING SHALL BE RETIRED WITH A BRASS PLUG UPON COMPLETION OF TESTING. SERVICE SADDLES AND CORPORATION STOPS USED FOR TEMPORARY FLUSH ASSEMBLIES SHALL BE PER TMWA STANDARDS.
14. TMWA DOES NOT GUARANTEE EXISTING VALVES WILL PROVIDE A COMPLETE SHUTDOWN, NUISANCE WATER IS TO BE ANTICIPATED WITH THE MITIGATION NEEDED INCLUDED IN THE MOST APPROPRIATE BID ITEM. EXCESSIVE WATER AS DEEMED BY THE CONTRACTOR SHALL BE BROUGHT TO THE ATTENTION OF THE TMWA INSPECTOR WHO SHALL COORDINATE WITH THE CONTRACTOR ON THE ACTION NEEDED PRIOR TO PROCEEDING WITH THE WORK AND/OR PAYMENT REQUEST FOR ADDITIONAL WORK.
15. ENGINEER WILL BE PROVIDE CONSTRUCTION STAKING FROM REFERENCE POINTS ON THE IMPROVEMENT PLANS BASED ON BOTH NORTHINGS AND EASTINGS AND STATION AND OFFSETS FOR: WATER MAIN AT CENTERLINE AND AT CRITICAL LOCATIONS, SUCH AS, VALVES, TEES, OR ELBOWS. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR DIMENSIONS AND ELEVATIONS MEASURED FROM SUCH STAKES AND SHALL EXERCISE CARE IN THE PRESERVATION OF ALL STAKES. IF THE CONTRACTOR OR ANY OTHER THIRD PARTY DISPLACES, LOSES, OR REMOVES AT ANY TIME DURING THE COURSE OF THE PROJECT, THEN TMWA'S DESIGN ENGINEER WILL RESET THEM OR PROVIDE ADDITIONAL STAKING REQUESTED BY CONTRACTOR AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL REQUEST STAKING BY NOTIFYING THE OFFICE OF THE ENGINEER AT LEAST FORTY-EIGHT (48) HOURS BEFORE THE STAKING WILL BE REQUIRED.
16. WHEN WORKING WITH ASBESTOS CONCRETE PIPE (ACP) CONTRACTOR SHALL CONFORM TO THE TMWA GENERAL CONDITIONS 4.05.G. & 6.11.I. @ TMWA.COM/ABOUT_US/DOINGBUSINESSWITHTMWA/. CONTRACTOR IS REQUIRED TO HANDLE, DISTURB, AND REMOVE CERTAIN WATER PIPES CONSTRUCTED OF ASBESTOS CONCRETE PIPE AND ASBESTOS CONTAINING MATERIALS REGULATED AS A POTENTIALLY HAZARDOUS MATERIAL AS PART OF THE WORK. ASBESTOS OR ASBESTOS CONCRETE PIPE WHICH IS NOT TAPPED, CUT, DAMAGED OR REMOVED DURING PERFORMANCE OF THE WORK, SHALL NOT BE DEEMED "HAZARDOUS MATERIALS" FOR PURPOSES OF THESE GENERAL CONDITIONS. IF THE CONTRACTOR IS REQUIRED TO CUT, REMOVE OR TAP ASBESTOS CONCRETE PIPE OR ASBESTOS PIPE AS PART OF THE WORK, OR IF THE CONTRACTOR OTHERWISE DAMAGES OR CUTS ASBESTOS CONCRETE PIPE OR ASBESTOS PIPE DURING THE WORK, CONTRACTOR MUST UTILIZE THE SERVICES OF PERSONNEL OR A SUBCONTRACTOR THAT HAS RECEIVED SPECIALIZED OSHA TRAINING IN THE HANDLING AND DISPOSAL OF ASBESTOS TO PERFORM ANY WORK ON SUCH PIPE, INCLUDING CUTTING, TAPPING, REPAIRING OR REMOVING. TMWA MUST BE PROVIDED WITH CHAIN OF CUSTODY FORMS FOR ALL ASBESTOS CONCRETE PIPE OR ASBESTOS PIPE DISPOSED OF BY CONTRACTOR OR ITS SUBCONTRACTORS PRIOR TO TMWA CONTRACT PAYMENT. ANY DISTURBANCE, REMOVAL, DISPOSAL, HANDLING OR WORK ACTIVITY ON ASBESTOS CONCRETE PIPE MUST BE DONE IN STRICT COMPLIANCE WITH APPLICABLE LAWS AND REGULATIONS GOVERNING THE SAFE HANDLING PRACTICES FOR DISTURBANCE, REMOVAL, HANDLING AND DISPOSAL OF ASBESTOS-CONTAINING MATERIAL, AND CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL COSTS AND ACTIONS NECESSARY TO COMPLY WITH SUCH LAWS AND REGULATIONS. CONTRACTOR SHALL PROVIDE THE DISPOSAL MANIFEST TO THE TMWA INSPECTOR SHOWING ALL ASBESTOS CONCRETE PIPE MATERIAL HAS BEEN DISPOSED OF IN ACCORDANCE WITH ALL APPLICABLE LAWS AND REGULATIONS. CONTRACTOR SHALL INDEMNIFY AND HOLD TMWA HARMLESS FROM ANY CLAIMS, INJURIES, DEMANDS OR LIABILITIES ARISING FROM CONTRACTOR'S HANDLING, REMOVAL, DISPOSAL OR WORK ON OR ABOUT ASBESTOS CONCRETE PIPE. CONTRACTOR'S PERSONNEL PERFORMING WORK ON ASBESTOS OR ASBESTOS CONCRETE PIPE, INCLUDING WITHOUT LIMITATION CUTTING, TAPPING, REPAIRING, OR REMOVING, MUST HAVE SUCCESSFULLY COMPLETED SPECIALIZED OSHA TRAINING IN THE HANDLING AND DISPOSAL OF ASBESTOS PRIOR TO THE PERFORMANCE OF ANY SUCH WORK, OR CONTRACTOR SHALL HIRE A SUBCONTRACTOR THAT HAS SUCCESSFULLY COMPLETED SPECIALIZED OSHA TRAINING IN THE HANDLING AND DISPOSAL OF ASBESTOS TO PERFORM SUCH WORK.
17. NO OPEN TRENCHES SHALL BE ALLOWED DURING NON-WORKING HOURS, WHILE VEHICLES ACCESS TO ALL PROPERTIES SHALL BE MAINTAINED AT ALL ITEMS. THE USE OF STEEL PLATES (WITH PLATE LOCKS) SHALL ONLY BE ALLOWED IF NON-INCLEMENT WEATHER IS FORECASTED, WITH PRIOR APPROVAL FROM THE COS REPRESENTATIVE.
18. UTILITY LOCATIONS ARE BASED ON THIRD PARTY INFORMATION AND MAY NOT BE COMPLETE AND/OR ACCURATE. THE CONTRACTOR SHALL USA AND POTHOLE FACILITIES WITHIN THE LIMITS OF WORK TO DETERMINE IF REVISIONS TO THE PROPOSED DESIGN ARE REQUIRED. ONLY UNFORESEEN CONDITIONS THAT COULD NOT HAVE BEEN REASONABLY DETERMINED BY THE CONTRACTOR SUFFICIENTLY AHEAD OF THE WORK MAY BE SUBJECT TO ADDITIONAL PAYMENT IF AGREED UPON IN ADVANCE WITH THE TMWA PROJECT REPRESENTATIVE.
19. SS LATERALS ARE PRIVATELY OWNED AND ARE NOT LOCATED IN A USA DIG REQUEST. SS LATERAL INVESTIGATIONS BY THE CONTRACTOR AND REPLACEMENTS IF NEEDED ARE TO BE INCLUDED IN THE MOST APPROPRIATE BID ITEM. NO ADDITIONAL PAYMENT SHALL BE PROVIDED TO EXPOSE AND/OR MAKE REPAIRS TO A SS LATERAL. IF A SS LATERAL IS DAMAGED THE DAMAGED SECTION OF PIPE SHALL BE REMOVED AND REPLACED WITH A SAME DIAMETER SECTION OF PIPE (PVC SDR35) AND RE-CONNECTED ON BOTH ENDS WITH COUPLINGS (FERNCO OR APPROVED EQUAL).
20. STANDARD DETAIL CALLOUTS ARE NOT PROVIDED IN ALL OCCASIONS, THE CONTRACTOR SHALL COORDINATE THE APPROPRIATE DETAIL FOR THE WORK INCLUDED IN THE CONTRACT DOCUMENTS. ANY QUESTIONS OR DECISION ON THE APPROPRIATE DETAIL TO USE NOT ANSWERED PRIOR TO BID WILL BE AT THE SOLE DISCRETION OF THE TMWA REPRESENTATIVE AS TO WHAT TO UTILIZE DURING CONSTRUCTION.

SPECIFICATIONS

1. SCOPE
THESE MATERIAL SPECIFICATIONS SUPPLEMENT THE TECHNICAL SPECIFICATIONS, THE TRUCKEE MEADOWS WATER AUTHORITY ENGINEERING & CONSTRUCTION STANDARDS, AND SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION "ORANGE BOOK", LATEST EDITION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE TMWA PROJECT REPRESENTATIVE FOR RESOLUTION.

2. MATERIAL COMPLIANCE
ALL MATERIAL IN CONTACT WITH POTABLE WATER SHALL BE NSF 61 CERTIFIED AND CERTIFIED LEAD FREE PER NAC 445A.65825 WHEN APPLICABLE. DOCUMENTATION OF SUCH CERTIFICATION SHALL BE PROVIDED IN ALL SUBMITTALS.

3. SUBMITTALS
PROVIDE SUBMITTALS FOR ALL PIPE, FITTINGS, VALVES, IMPORTED TRENCH BACKFILL, AND BASE MATERIAL. PROVIDE SUBMITTALS ELECTRONICALLY VIA PROCORE CONSTRUCTION MANAGEMENT SOFTWARE. SEE SUPPLEMENTAL PROVISIONS IN THE CONTRACT.

4. DUCTILE IRON PIPE
ALL PIPE MATERIAL AND APPURTENANCES SHALL BE PER THE TMWA ENGINEERING & CONSTRUCTION STANDARDS, UNLESS MODIFIED/AMENDED HEREIN. INSTALLATION, WORKMANSHIP, PRESSURE TESTING AT 150 PSI WITH 0 PSI LOSS IN PRESSURE, AND DISINFECTION SHALL BE PER TMWA ENGINEERING & CONSTRUCTION STANDARDS.

ALL DUCTILE IRON PIPE SHALL BE CLASS 350 AND MEET THE REQUIREMENTS OF AWWA STANDARDS C151, C104, AND C111. ALL DUCTILE IRON PIPE SHALL BE CEMENT MORTAR LINED, POLYETHYLENE ENCASED PER AWWA C105. DUCTILE IRON PIPE SHALL BE EQUIPPED WITH TYTON TYPE BELL AND SPIGOT JOINTS. DUCTILE IRON PIPE SHALL BE TYTON JOINT DUCTILE IRON PIPE AS MANUFACTURED BY U.S. PIPE, OR EQUAL. DUCTILE IRON PIPE SHALL NOT BE DEFLECTED BY MORE THAN 4 DEGREES. ALL DUCTILE IRON PIPE, FITTINGS, AND APPURTENANCES SHALL BE RESTRAINED.

5. GATE VALVES
GATE VALVES FOR SIZES UP TO AND INCLUDING 12 INCHES SHALL MEET AWWA C509 OR C515, NON-RISING STEM, RESILIENT-SEATED VALVES WITH 2 INCH OPERATIONS NUT FOR BURIED SERVICE. VALVES MEETING THE AWWA C515 STANDARDS SHALL HAVE A DUCTILE IRON BODY. 14 INCH AND LARGER GATE VALVES SHALL MEET AWWA C515, DUCTILE IRON BODY AND BONNET, NON-RISING STEM, RESILIENT-SEATED VALVES WITH 2 INCH OPERATING NUT FOR BURIED SERVICE. VALVE ENDS SHALL BE AS SPECIFIED IN THE IMPROVEMENT PLANS. ALL GATE VALVES SHALL BE FUSION EPOXY LINED AND COATED. ALL VALVES SHALL BE POLYETHYLENE ENCASED PER AWWA C105. GATE VALVES UP TO AND INCLUDING 12 INCHES SHALL BE MUELLER 2360 SERIES RESILIENT WEDGE GATE VALVES, AMERICAN AVK COMPANY SERIES RESILIENT WEDGE GATE VALVES, OR EQUAL. GATE VALVES 14 INCH AND LARGER SHALL BE MUELLER A-2361 D.I. RESILIENT WEDGE GATE VALVES, AMERICAN SERIES 2500 RESILIENT WEDGE GATE VALVE, OR EQUAL.

6. FITTINGS
ALL FITTINGS SHALL BE DUCTILE IRON AND MEET THE REQUIREMENTS OF AWWA STANDARDS C110/C153 AND C104 WITH END CONFIGURATIONS AS SPECIFIED IN THE IMPROVEMENT PLANS. ALL FITTINGS SHALL BE POLYETHYLENE ENCASED PER AWWA C105. FITTINGS SHALL BE ASPHALTIC COATED WITH CEMENT-MORTAR LINING PER AWWA C110/C153 AND C104. FOR FITTINGS WHERE CEMENT-MORTAR LINGS ARE NOT NORMALLY SUPPLIED, SUCH AS CAPS, PLUGS, AND SLEEVES, THE INSIDE OF THESE FITTINGS SHALL BE ASPHALTIC COATED PER AWWA C110/C153 CONFORMING TO ALL APPROPRIATE REQUIREMENTS FOR SEAL COAT PER AWWA C104.

7. RESTRAINED JOINT PIPE AND RESTRAINED JOINT FITTINGS
ALL RESTRAINED JOINT PIPING SHALL BE DUCTILE IRON PIPE. BELL AND SPIGOT PUSH-ON TYPE DUCTILE IRON TYTON JOINTS SHALL BE RESTRAINED USING RUBBER GASKETS WITH STAINLESS STEEL LOCKING SEGMENTS VULCANIZED INTO THE RUBBER GASKETS. RESTRAINED JOINT RUBBER GASKETS SHALL BE FIELD LOCK 350 GASKETS AS MANUFACTURES BY U.S. PIPE, THE GRIPPER GASKET AS MANUFACTURED BY GRIPPER GASKET LLC, OR EQUAL. RESTRAINED JOINT FITTINGS SHALL BE MECHANICAL JOINTS (MJ) DUCTILE IRON WITH MECHANICAL JOINT ACTION RESTRAINED GLANDS COMPATIBLE WITH ALL MECHANICAL JOINTS CONFORMING TO ANSI/AWWA C110/A21.10. GLAND BODY, WEDGES, AND WEDGES ACTUATING COMPONENTS SHALL BE CAST FROM GRADE 65-45-12 DUCTILE IRON IN ACCORDANCE WITH ASTM A536. DUCTILE IRON GRIPPING WEDGES SHALL BE HEAT TREATED WITHIN A RANGE OF 370 TO 470 BHN. WEDGE ASSEMBLIES SHALL BE XYLAN FLUOROPOLYMER COATED. CASTING BODIES SHALL BE COATED WITH A POLYESTER BASED POWDER TO PROVIDE CORROSION PROTECTION THAT IS ELECTROSTATICALLY APPLIED AND HEATED CURED. MECHANICAL JOINT WEDGES ACTION RESTRAINT GLANDS SHALL BE MEGALUG SERIES 1100 FOR DUCTILE IRON PIPE ARE MANUFACTURED BY EBAA IRON, INC., STARGRIP SERIES 3000 WITH STARBOND COATING FOR DUCTILE IRON PIPE AS MANUFACTURED BY STAR PIPE PRODUCTS, OR EQUAL.

8. STRAIGHT AND TRANSITION COUPLINGS
STRAIGHT AND TRANSITION COUPLINGS SHALL MEET THE REQUIREMENTS OF AWWA C219. SLEEVE MATERIAL SHALL BE CARBON STEEL OR DUCTILE IRON WITH NSF-61 REGISTERED FUSION-BONDED EPOXY COATING. BOLTS AND NUTS FOR BURIED SERVICE APPLICATION SHALL BE 304 STAINLESS STEEL. COUPLINGS SHALL BE DESIGNED SPECIFICALLY FOR THE PIPE MATERIAL/SIZE AND APPLICATION. COUPLINGS SHALL INSTALL WITH A MAXIMUM OF ONE BOLT AT EACH END. STRAIGHT AND TRANSITION COUPLINGS SHALL BE HYMAX 2000 SERIES AS MANUFACTURE BY TOTAL PIPING SOLUTIONS, INC., ROMAC MACRO TWO-BOLT WIDE RANGE DUCTILE IRON COUPLING AS MANUFACTURED BY ROMAC INDUSTRIES, INC., OR EQUAL.

9. FLANGED COUPLING ADAPTERS
FLANGED COUPLING ADAPTERS SHALL MEET THE REQUIREMENTS OF AWWA C219. SLEEVE MATERIAL SHALL BE CARBON STEEL WITH NSF-61 REGISTERED FUSION-BONDED EPOXY COATING. BOLTS AND NUTS FOR BURIED SERVICES APPLICATIONS SHALL BE ANSI 304 / 303 STAINLESS STEEL. FLANGED COUPLING ADAPTERS SHALL BE DESIGNED SPECIFICALLY FOR THE PIPE MATERIAL/SIZE AND APPLICATION AND SHALL INSTALL WITH MAXIMUM OF ONE BOLD ON THE COMPRESSION END. FLANGED COUPLING ADAPTERS SHALL BE FC400 (CLASS F) FLANGED ADAPTERS AS MANUFACTURED BY ROMAC INDUSTRIES, INC., OR EQUAL. FLANGED GASKETS SHALL BE FULL FACE WITH PROFILE BY ACIPCO (TORUSEAL), US PIPE (FLANGETYTE) OR APPROVED EQUAL.

10. FLANGE AND MECHANICAL JOINT T-HEAD BOLTS AND NUTS
FLANGED BOLTS AND NUTS: BOLTS AND NUTS SHALL BE CARBON STEEL WITH A MINMUM 60,000 PSI TENSILE STRENGTH CONFORMING TO ASTM A307, GRADE A, BOLTS SHALL BE STANDARD ANSI B1.1, CLASS 2A COARSE THREADS. NUTS SHALL CONFORM TO ASTM A563 AND BE STANDARD ANSI B1.1, CLASS 2A COARSE THREADS. ALL BOLT HEADS AND NUTS SHALL BE HEXAGONAL.
IDENTIFICATION ON THE HEAD OF THE BOLT SHALL BE: A 307 A
MECHANICAL JOINT T-HEAD BOLTS AND NUTS: BOLTS SHALL BE ASTM A242 WEATHERING STEEL WITH A MINIMUM YIELD STRENGTH OF 45,000 PSI. ALL T-HEAD BOLTS AND NUTS SHALL BE THREADED IN ACCORDANCE WITH ANSI B1.1, CLASS 2A, COARSE THREADS. HEAVY HEX NUTS SHALL BE USED. BOLT HEADS SHALL BE IN ACCORDANCE WITH THE DIMENSIONS OF ANSI/AWWA C1111/A21.11-95.
FINISH: ALL FLANGED BOLTS AND NUTS AND MECHANICAL JOINT T-HEAD BOLTS AND NUTS SHALL BE FINISHED WITH THE TRIPAC 2000 BLUE COATING SYSTEM TO SIGNIFICANTLY REDUCE THE EFFECTS OF CORROSION, OR EQUAL. A MULTI-STEP PROCESS SHALL BE UTILIZED TO CHEMICALLY CLEAN, ABRASIVE BLAST, AND PRIME WITH ZINC/NICKEL PHOSPHATE PRIMER PRIOR TO APPLICATION OF THE XYLAN FLUOROPOLYMER. WEAR RESISTANCE (K-FACTOR) SHALL BE IN THE RANGE OF 6 TO 8 (EXCELLENT) AND MINIMAL EFFECTS SHOULD BE SEEN AFTER A 3,000 HOUR SALT SPRAY TEST CONFORMING TO ASTM B-117. BOLTS AND NUTS FINISHED WITH THE TRIPAC 2000 BLUE COATING SYSTEM DO NOT REQUIRE COATING WITH MASTIC.

11. CHECK VALVES
CHECK VALVES SHALL BE SILENT TYPE & GLOBE STYLE WITH A PRESSURE RATING OF 150 PSI MINIMUM. VALVE SHALL BE DUCTILE IRON BODY WITH TYPE 316 STAINLESS STEEL SEAT, PLUG, SPRING, AND BUSHING. RESILIENT SEAT SHALL BE CONSTRUCTED OF EPDM. DUCTILE IRON BODY SHALL BE FUSION BONDED EPOXY COATED, AND THE VALVE SHALL BE NSF 61 CERTIFIED.

12. CORPORATION STOPS FOR 2 INCH TEMPORARY FLUSHING AND TESTING ASSEMBLIES
CORPORATION STOPS SHALL BE BALL VALVE, BRASS CONFORMING TO AWWA C800 AND ASTM B-62, AND SUITABLE FOR A WORKING PRESUURE OF 300 PSI. INLET END SHALL BE MALE IRON PIPE THREAD (MP) OR AWWA I.P. THREAD, OUTLET END SHALL BE MALE IRON PIPE THREAD (MP). CORPORATION STOPS FOR 2 INCH TEMPORARY FLUSHING ASSEMLIES SHALL BE FORD BALLCORP CORPORATION STOPS MODEL # FBS00-7 AS MANUFACTURED BY THE FORD METER BOX COMPANY, INC., MUELLER 300 BALL TYPE CORPORATION VALVES MODEL # B2969, OR EQAUL.

13. GASKETS
THE GASKETS SHALL BE OF SUCH SIZE AND SHAPE TO PROVIDE AN ADEQUATE COMPRESSIVE FORCE AGAINST THE PLAIN END AND SOCKET AFTER ASSEMBLY TO AFFECT A POSITIVE SEAL UNDER ALL CONDITIONS OF JOINT AND GASKET TOLERANCES. THE SIZE, MOLD NUMBER, GASKET MANUFACTURE'S MARK, THE TRADEMARK OF THE JOINT, AND YEAR OF MANUFACTURER SHALL BE MOLDED ON THE GASKET. MARKINGS SHALL NOT BE ON THE SEALING SURFACE. A GASKET SHALL BE FURNISHED WITH EACH LENGTH OF PIPE, LUBRICANT, WHERE REQUIRED, SHALL BE NONTOXIC, SHALL NOT SUPPORT THE GROWTH OF BACTERIA, AND SHALL HAVE NOT DETERIORATION EFFECTS ON THE GASKET MATERIAL NOR SHALL IT IMPART TASTE OR ODOR TO WATER IN A PIPE. THE LUBRICANT SHALL BE DELIVERED TO THE SITE IN UNOPENED, SEALED CONTAINERS LABELED WITH THE TRADEMARK OR TRADE NAME AND THE MANUFACTURERS NAME. FLANGED GASKETS: USE FILL FACE TYPE WITH PROFILE BY ACIPCO (TORUSEAL), SU PIPE (FLANGED-TYTE), OR APPROVED EQUAL.

14. POLYETHYLENE ENCASEMENT
POLYETHYLENE ENCASEMENT SHALL COMPLY WITH ISO 8180, ANSI A21.5, AWWA C105, AND ASTM A674, POLYETHYLENE ENCASEMENT SHALL HAVE A THICKNESS OF 4 MIL. MATERIAL SHALL BE HIGH DENSITY, CROSS LAMINATED FILM CONFORMING TO SECTION 4.1.3 OF AWWA STANDARDS C105. TUBE SIZE SHALL BE AS LISTED IN TABLE 1 OF SAME STANDARD. POLYETHYLENE ENCASEMENT SHALL BE V-BIO, AS MANUFACTURED BY AMERICAN, OR APPROVED EQUAL.

15. HOT TAP TAPPING SLEEVES
SERVICE TAPPING SLEEVES SHALL BE ROMAC SST WITH FULL CIRCUMFERENTIAL GASKET, OR TMWA APPROVED EQUAL. CONTRACTOR IS RESPONSIBLE FOR POTHOLING EX. AC PIPE TO VERIFY DIAMETERS. TAPPING SLEEVE SIZE SHALL BE ORDERED ACCORDINGLY, AND IS IN THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

16. DISINFECTION TABLETS
DISINFECTION TABLETS SHALL BE CALCIUM HYPOCHLORITE AS OUTLINED IN AWWA C651, TABLET METHOD, LATEST EDITION, A NSF-61 APPROVED, FOOD-GRADE ADHESIVE (LOCTITE AA H3101, NO EQUAL) SHALL BE USED TO ADHERE CALCIUM HYPOCHLORITE TABLETS TO THE INTERIOR OF THE PIPE LENGTHS AS THE PIPE IS INSTALLED. LOCTITE AA H3101 SHALL BE USED ALONE, AND NOT WITH THE PRIMER 2000 PRODUCTS.

17. PRESSURE TESTING
CONTRACTOR SHALL PRESSURE TEST ALL PIPE AND APPURTENANCES IN ACCORDANCE WITH AWWA C600. PRESSURE TEST SHALL BE AT 150 PSI MIN. FOR 2 HOURS, AND SHALL SHOW 0 PSI PRESSURE LOST OVER THE DURATION OF TEST. CONTRACTOR SHALL COORDINATE WITH TMWA INSPECTOR FOR OBSERVANCE OF ENTIRE PRESSURE TEST.

LEGEND

EXISTING		PROPOSED
4174	CONTOUR LINE	4174
+ 4163.1	GROUND ELEVATION	+ 4163.1
	TREE	
	ROCK	
	EDGE OF PAVEMENT	
	AC PAVING TO BE REMOVED	
	CURB & GUTTER	
	CONCRETE	
	UTILITY POLE	
	LIGHT	
	GUY WIRE	
ET	ELECTRIC TRANSFORMER	ET
ELV	ELECTRIC VAULT	ELV
EP	ELECTRIC PANEL	EP
EC	ELECTRIC CABINET	EC
EB	ELECTRIC BOX	EB
EM	ELECTRIC METER	EM
EG	ELECTRIC GENERATOR	EG
E	ELECTRIC MANHOLE	E
	ELECTRIC OUTLET	
	BOLLARD	
SD	STORM DRAIN MANHOLE / DROP INLET	SD
	CATCH BASIN	
	GATE VALVE	
WV	CHECK VALVE	WV
WM	METER	WM
	HYDRANT	
GV	GAS VALVE	GV
GM	GAS METER	GM
T	TELEPHONE MANHOLE	T
TB	TELEPHONE BOX	TB
TV	TELEPHONE VAULT	TV
S	SEWER MANHOLE	S
SSCO	SEWER CLEANOUT	SSCO
	SIGN	
	RETAINING WALL	
	FENCE	X
	FLOW LINE	
	COMM LINE	
	GAS LINE	GAS
	ELECTRIC LINE	ELEC
	SEWER LINE	SS
	WATER LINE	
	STORM DRAIN	SD

ABBREVIATIONS

AC	ASPHALT CONCRETE
ACP	ASBESTOS CEMENT PIPE
AGG	AGGREGATE
CB	CATCH BASIN
C&G	CURB AND GUTTER
CONC	CONCRETE
DI	DROP INLET
DIA	DIAMETER
EA	EACH
ELEC	ELECTRICAL
ELEV	ELEVATION
EX. (E)	EXISTING
FCA	FLANGE COUPLING ADAPTER
FE	FINISH ELEVATION
FG	FINISH GRADE
FH	FIRE HYDRANT
FL	FLOW LINE
FLG	FLANGE
G	GAS
GV	GATE VALVE
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
INT	INTERSECTION
LF	LINEAR FEET
MAX	MAXIMUM
MDD	MAXIMUM DRY DENSITY
MH	MANHOLE
MIN	MINIMUM
MJ	MECHANICAL JOINT
MMD	MAXIMUM MARSHALL DENSITY
MUTCD	MANUAL FOR TRAFFIC CONTROL DEVICES
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OH	OVERHEAD
(P)	PROPOSED
PL	PROPERTY LINE
PVC	POLYVINYL CHLORIDE
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
R/W, ROW	RIGHT-OF-WAY
S=	SLOPE
SD	STORM DRAIN
SDMH	STORM DRAIN MANHOLE
SS	SANITARY SEWER
SSCO	SANITARY SEWER CLEAN OUT
SSMH	SANITARY SEWER MANHOLE
SSPWC	STANDARD SPEC. FOR PUBLIC WORKS CONSTRUCTION
STA	STATION
TELE	TELEPHONE
TBO	TEMPORARY BLOW OFF VALVE
TYP	TYPICAL
WL	WATER LINE

811
Know what's below.
Call before you dig.

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PROFESSIONAL ENGINEER – STATE OF NEVADA
COLLIN R. STURGE
No. 028879
Exp. 06/30/22
CIVIL
04/26/22

CITY OF SPARKS
2022 CDBG ROADWAY IMPROVEMENT
E STREET WATER IMPROVEMENTS
NOTES, ABBREVIATIONS & LEGEND
WASHOE COUNTY
NEVADA

REV	DATE	DESCRIPTION	BY
	APRIL 26, 2022	ISSUED FOR BIDDING	SPARKS

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W1

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DESIGNED BY:	CRS
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JOB NO.:	10425.000

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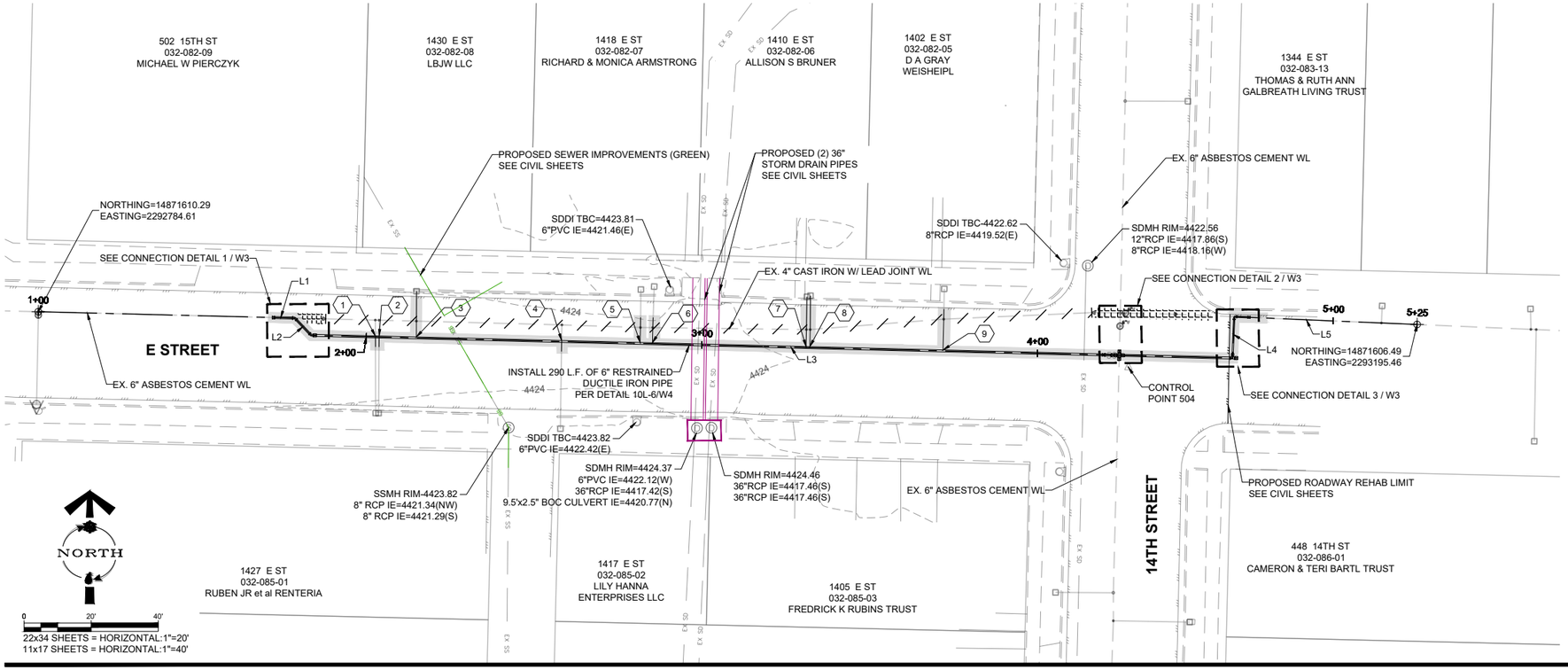


SHEET LEGEND:

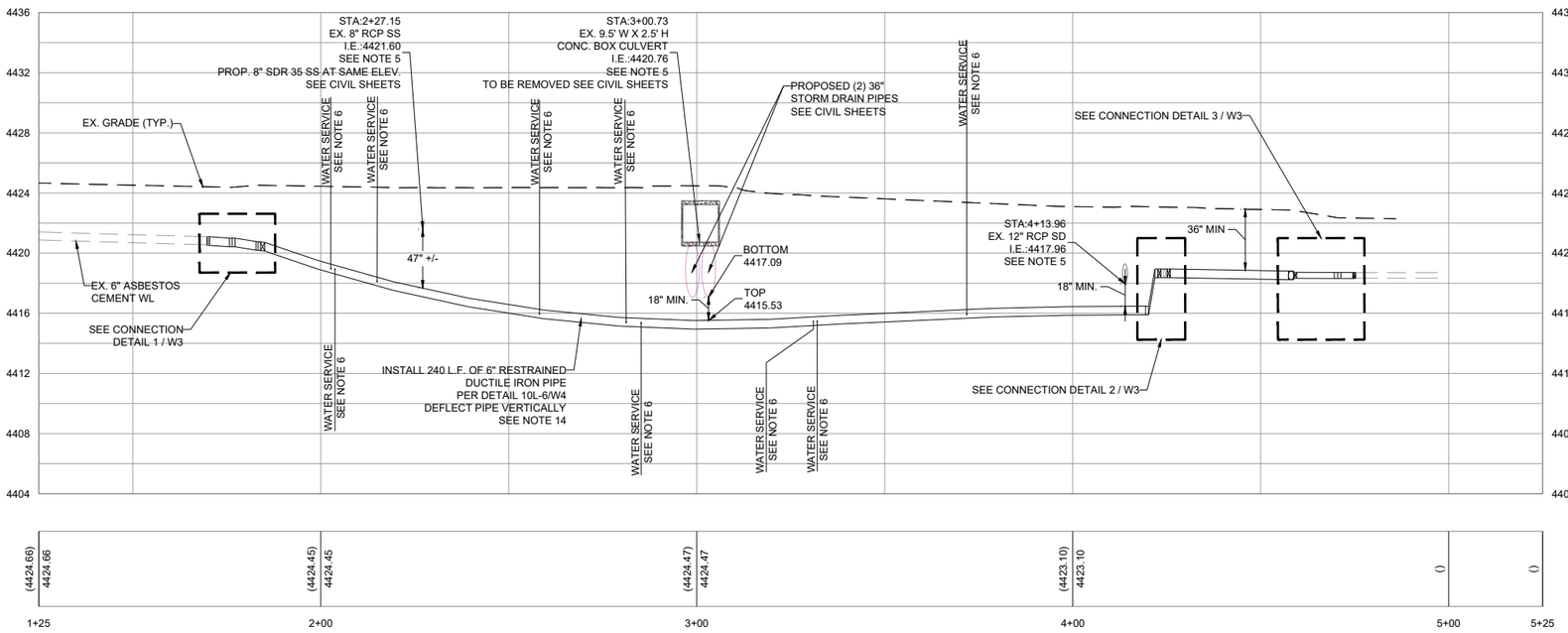
- TEMPORARY PAVEMENT PATCH PER DETAIL S-116 / W5 SEE NOTE 10
- GROUT & ABANDON EX. WATERLINE SEE NOTE 15
- REMOVE & DISPOSE OF EX. WATERLINE - SEE NOTE 4

SERVICE REPLACEMENT SCHEDULE

TAG NO.	EXISTING MATERIAL & SIZE	NEW SERVICE SIZE	FULL REPLACEMENT (Y OR N)
1	1 in. HDPE	1 in.	N
2	1 in. HDPE	1 in.	N
3	0.75 in. Unknown	1 in.	Y
4	0.75 in. HDPE	1 in.	N
5	0.75 in. Copper	1 in.	N
6	1.25 HDPE	1 in.	N
7	0.75 in. Unknown	1 in.	Y
8	0.75 in. Unknown	1 in.	Y
9	0.75 in. HDPE	1 in.	N

22x34 SHEETS = VERTICAL:1"=5'
11x17 SHEETS = VERTICAL :1"=10'

E ST. ALIGNMENT - STA:1+25 TO STA:5+25



GENERAL NOTES:

1. SUBMITTALS FOR ALL WATER PIPE AND APPURTENANCES SHALL BE SUBMITTED AND APPROVED BY TMWA PRIOR TO CONSTRUCTION.
2. PRIOR TO ACCEPTANCE OF THE WATER LINE, THE CONTRACTOR SHALL PERFORM A TRACER WIRE CONTINUITY TEST AFTER BACKFILLING THE WATER PIPE TRENCH TO THE SATISFACTION OF THE INSPECTOR.
3. CONTRACTOR TO MAINTAIN LOCAL ACCESS TO ALL RESIDENCES.
4. WHEN WORKING WITH TRANSITE (ACP) CONTRACTOR SHALL CONFORM TO THE HANDLING REQUIREMENTS IN PROJECT NOTES ON SHEET W1 AND THE SUPPLEMENTAL PROVISIONS IN THE CONTRACT.
5. CONTRACTOR SHALL POTHOLE EXISTING UTILITIES TO VERIFY LOCATION, DEPTHS, AND DIAMETERS PRIOR TO INSTALLATION OF PROPOSED WATER LINE.
6. CONTRACTOR SHALL MAINTAIN SAFE WORKING DISTANCE FROM EXISTING GAS, ELECTRIC AND OVERHEAD UTILITIES.
7. ALL SURVEY MONUMENTS DISTURBED DURING THE COARSE OF CONSTRUCTION ARE TO BE REPLACED BY A LICENSED NEVADA PLS.
8. WATER MAIN OR WATER SERVICE PARALLEL TO SEWER PER 10L-10/W4.
9. TEMPORARY AC PAVEMENT REPAIR LIMITS SHOWN ARE APPROXIMATE AND CONTRACTOR SHALL PROVIDE THEIR OWN TAKE-OFF FOR BIDDING. TEMPORARY AC COST TO BE INCLUDED WITH ALL INCLUSIVE LF PRICE OF COMPLETED WATER MAIN AND TRENCHING.
10. CONTRACTOR IS RESPONSIBLE FOR PURCHASING AND INSTALLING ALL MATERIALS NECESSARY TO PRESSURE TEST, DISINFECT, AND FLUSH PROPOSED WL PER PROJECT SPECIFICATIONS. CONTRACTOR SHALL COORDINATE W/ TMWA INSPECTOR.
11. CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES IN PLACE IF NOT DESIGNATED FOR REMOVAL OR REPLACEMENT. IF ADDITIONAL UTILITIES ARE ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE TMWA ENGINEER AND INSPECTOR IMMEDIATELY.
12. EXACT LOCATIONS, DEPTH, AND MATERIAL OF SEWER LATERALS ARE UNKNOWN. REFER TO NOTE 5 FOR LOCATING LATERALS PRIOR TO CONSTRUCTION. IF A SEWER LATERAL IS DAMAGED DURING CONSTRUCTION, THE CONTRACTOR SHALL REPAIR AT THE CONTRACTOR'S EXPENSE. REPAIR OF A SEWER LATERAL SHALL INCLUDE SDR35 PIPE (MATCH EX. LATERAL SIZE) AND FERNCO COUPLINGS, OR APPROVED EQUAL. CONTRACTOR SHALL FOLLOW DETAIL 10L-12 / W4 AND MEET ALL REQUIRED CLEARANCES. IF SEWER LATERALS ARE NOT LOCATED UNDER OR OVER WATER MAIN BY A MIN. 12" THEY MUST BE SDR 35 PIPE. EXPOSED SS LATERAL JOINTS MUST BE SLURRY ENCASED. SEPARATION MUST BE A MIN. OF 6".
13. EXACT LOCATIONS, DEPTH, AND MATERIAL OF GAS SERVICES ARE UNKNOWN. REFER TO NOTE 5 FOR LOCATING SERVICES PRIOR TO CONSTRUCTION. IF A GAS SERVICE CONFLICTS WITH THE PROPOSED WATER MAIN, THE CONTRACTOR SHALL COORDINATE WITH NV ENERGY BEFORE PROCEEDING WITH CONSTRUCTION.
14. CONTRACTOR SHALL DEFLECT PIPE IN ACCORDANCE WITH TMWA ENGINEERING & CONSTRUCTION STANDARDS AND MANUFACTURER'S RECOMMENDATIONS.
15. CONTRACTOR SHALL UTILIZE ALL NECESSARY EQUIPMENT TO ENSURE PIPE IS COMPLETELY FILLED WITH GROUT INCLUDING BUT NOT LIMITED TO GROUT PUMPS, STAND PIPE, AIR VENTS, ETC.

PROJECT CONTROL

POINT	NORTH	EAST	ELEVATION	DESCRIPTION
502	14871596.5	2292696.77	4425.11	CP 5/8 R/C CONTROL
503	14871937.12	2293837.04	4418.04	CP 2.5" BRASS CAP
504	14871593.75	2293109.42	4422.25	CP 2.5" BRASS CAP
505	14871233.89	2293100.90	4422.16	CP 1.5" BRASS CAP

LINE TABLE

LINE #	LENGTH	DIRECTION
L1	76.45	S88° 35' 08.87"E
L2	7.07	S43° 34' 59.91"E
L3	274.63	S88° 35' 10.08"E
L4	12.32	N2° 19' 57.89"E
L5	54.55	S87° 33' 36.76"E

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PROFESSIONAL ENGINEER — STATE OF NEVADA
COLLIN R. STURGE
No. 028879
Exp. 06/30/22
CIVIL
04/26/22

CITY OF SPARKS

2022 CDBG ROADWAY IMPROVEMENT
E STREET WATER IMPROVEMENTS
PLAN & PROFILE STA 1+25 TO STA 5+25

WASHOE COUNTY
NEVADA
SPARKS

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		APRIL 26, 2022	

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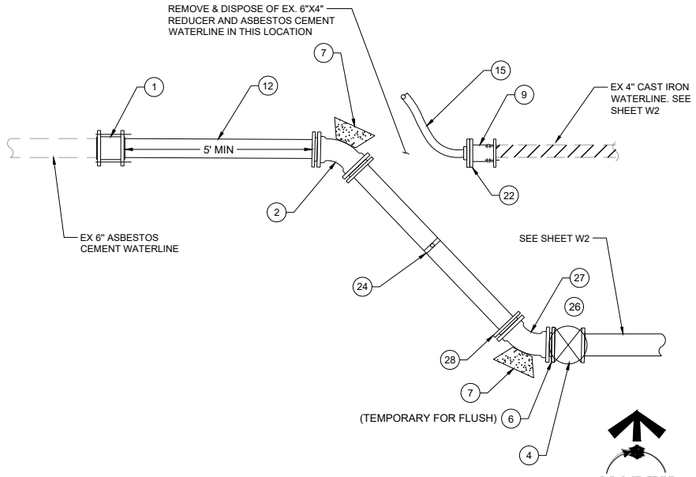
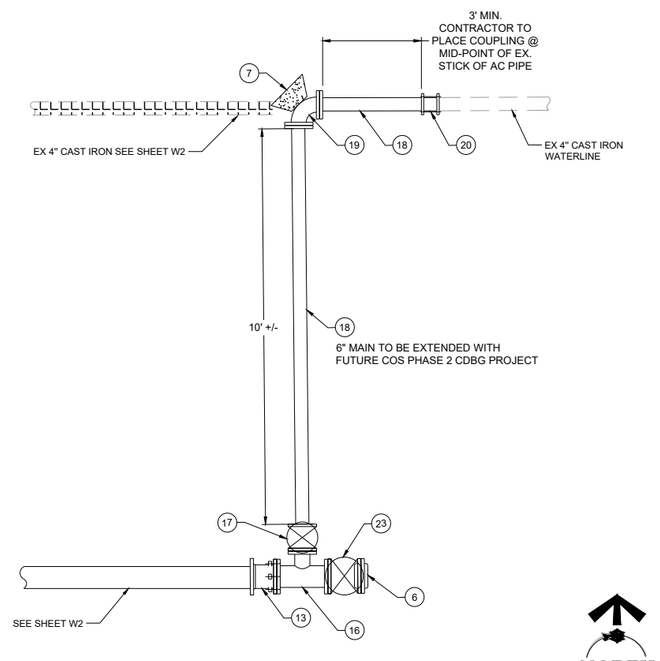
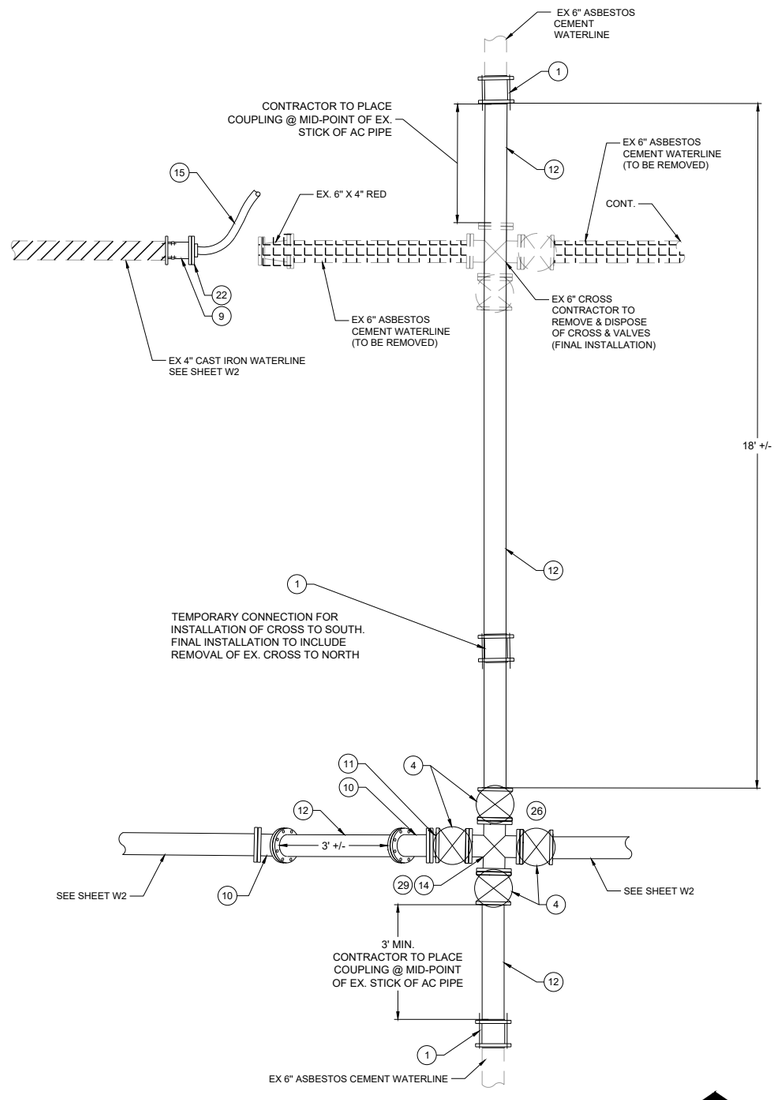


1 / W3 CONNECTION DETAIL 15TH ST. & E. ST.
1" = 2'



3 / W3 CONNECTION DETAIL 14TH ST. & E. ST.
1" = 2'



2 / W3 CONNECTION DETAIL 14TH ST. & E. ST.
1" = 2'

MATERIAL LIST		
TAG NO.	DESCRIPTION	REFERENCE DETAIL
1	6" TRANSITIONING COUPLING	10C-2 / W4
2	6" RMJ X RMJ 45° DI ELBOW	-
3	6" RMJ X RMJ 90° ELBOW	-
4	6" FLG X RMJ DI G.V	10B-2 / W5
5	6" FLG DI TEE	-
6	6" COMPANION FLANGE W/ 2" NPT PORT	-
7	THRUST BLOCK	10L-2 / W5
8	4" DI BLIND FLG	-
9	4" RMJ X FLG ADAPTER	-
10	6" RMJ X RMJ 45° DI ELBOW	-
11	6" FOSTER ADAPTER	-
12	6" RESTRAINED DI PIPE, LENGTH AS REQUIRED	10L-6 / W4
13	6" RESTRAINED FLANGE COUPLING ADAPTER	-
14	6" FLG DI CROSS	-
15	2" GROUT VENT	-
16	6" X 4" FLG DI TEE	-
17	4" FLG X RMJ G.V	-
18	4" RESTRAINED DI PIPE	-
19	4" RMJ X RMJ 90° ELBOW	-
20	4" TRANSITIONING COUPLING	-
21	4" RMJ X FLG ADAPTER	-
22	4" COMP. FLANGE W/ 2' NPT PORT	-
23	6" FLG X FLG DI G.V	-
24	2" TAP FOR FLUSH - LOCATED BY TMWA INSPECTOR	-
25	6" RMJ X RMJ DI G.V.	10J-2 / W4
26	TRACER WIRE TEST STATION	10L-9 / W5
27	6" FLG X FLG 45° ELBOW	-
28	6" RESTRAINED FLANGE ADAPTER	-
29	THRUST BLOCK FOR CROSS	3 / W4

SHEET NOTES:

1. CONTRACTOR MAY SUBSTITUTE RESTRAINED MECHANICAL JOINT FITTINGS FOR FLANGE FITTINGS IF PREFERRED.
2. INSTALL ALL NEW PIPE PER TMWA STANDARD DETAIL 10L-6 / W4. ALL PIPE & FITTINGS SHALL BE MECHANICALLY RESTRAINED.
3. CONTRACTOR SHALL GROUT-FILL AND ABANDON ALL CAST IRON & STEEL WATERLINES, AS INDICATED ON THE PLAN SHEETS.
4. CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL NECESSARY LABOR, MATERIALS, AND EQUIPMENT NEEDED FOR PRESSURE TESTING, DISINFECTION, AND FLUSHING; INCLUDING, BUT NOT LIMITED TO, FOSTER ADAPTERS, COMPANION FLANGES, 2" SADDLE TAPS, ETC.
5. CONTRACTOR SHALL USE HIGH-EARLY CONCRETE MIX ON THRUST BLOCKS THAT ARE INSTALLED ON MAINS THAT WILL BE PUT BACK IN SERVICE SAME-DAY.

SHEET LEGEND:

GROUT FILL & ABANDON EX. WATERLINE

REMOVE & DISPOSE OF EX. WATERLINE

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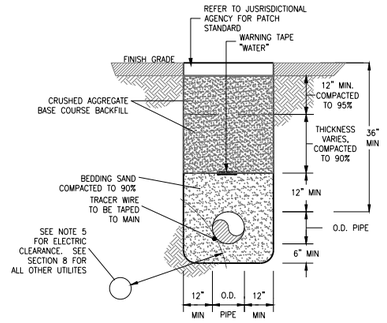
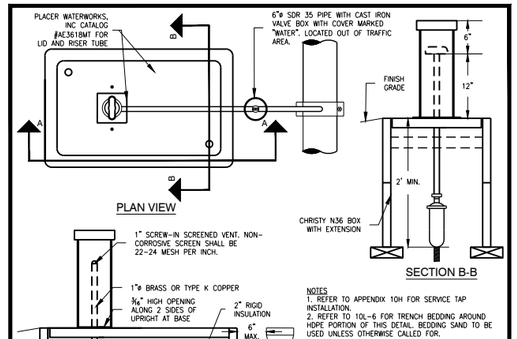


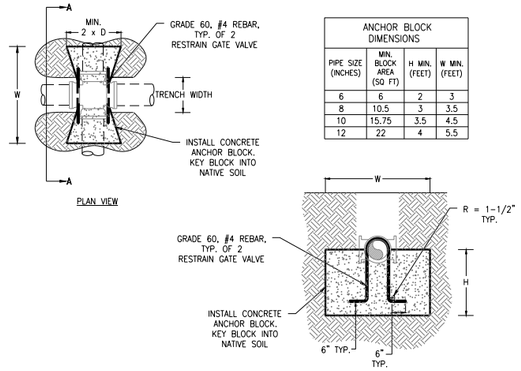
NOTES:
1. ALL TRENCHES MUST CONFORM TO APPLICABLE TMWA, CITY, STATE, COUNTY, AND OSHA SPECIFICATIONS AND REQUIREMENTS. IN THE CASE OF CONFLICT, THE MORE RIGID SPECIFICATION OR STANDARD SHALL APPLY.
2. BEDDING SAND SHALL BE COMPACTED TO 90% MAXIMUM DENSITY PER SECTION 5.05.03 AND SHALL BE A MINIMUM OF 12" ABOVE AND 6" BELOW THE MAIN. PER SECTION 5 OF TMWA STANDARDS.
3. CRUSHED AGGREGATE BASE COURSE BACKFILL SHALL BE PLACED IN 12" MAXIMUM LOOSE LIFTS. THE TOP 12" SHALL BE COMPACTED TO 95% MAXIMUM DENSITY. THE AREA ABOVE THE BEDDING SAND & BELOW 12" FROM FINISH GRADE SHALL BE COMPACTED TO 90% MAXIMUM DENSITY. PER SECTION 5 OF TMWA STANDARDS.
4. NON-METALLIC BLUE WARNING TAPE SHALL BE PLACED IN ALL TRENCHES AT LEAST 12" ABOVE THE WATER MAIN.
5. ELECTRIC UTILITIES MUST BE LOCATED BELOW WATER & MAINTAIN 2' MINIMUM RADIAL CLEARANCE FROM TMWA WATER FACILITIES. IF 2' RADIAL CLEARANCE CAN NOT BE MET ELECTRIC CONDUIT MUST BE CONCRETE ENCASED AT LEAST 18" EACH SIDE OF WATER CROSSING. FIBER OPTIC AND/OR COMMUNICATION CONDUITS SHALL NOT BE PLACE IN THE SAME TRENCH AS WATER.
6. ALL CHANGES MUST BE APPROVED BY THE TMWA INSPECTOR AND/OR THE TMWA ENGINEER.
7. SEPARATION FOR PIPES IN A JOINT TRENCH SHALL BE A MINIMUM OF 12".
8. TRACER WIRE SHALL BE #14 COPPER CLAD STAINLESS STEEL CORE WITH 30 MILS BLUE HDPE INSULATION. ALL WIRE SPLICES SHALL BE MADE USING A SPLIT BOLT CONNECTOR WRAPPED WITH AQUASEAL AND ELECTRIC TAPE. THE CONTRACTOR SHALL INSTALL A 3 POUND ANODE AT EVERY TEST STATION. TEST STATIONS SHALL BE LOCATED ALONG THE MAIN NO MORE THAN 500 FEET APART. REFER TO 10L-9.

	DATE	APPENDIX 10L	DRAWING NUMBER
TRUCKEE MEADOWS WATER AUTHORITY	7/2011	MISCELLANEOUS WATER DETAILS	10L-6
	REV	TRENCH DETAIL WATER ONLY	
	02/2014		



NOTES
1. REFER TO APPENDIX 10H FOR SERVICE TAP INSTALLATION.
2. REFER TO 10L-6 FOR TRENCH BEDDING AROUND HDPE PORTION OF THIS DETAIL. BEDDING SAND TO BE USED UNLESS OTHERWISE CALLED FOR.
3. TOP OF ENCLOSURE AND VALVE CAP SHALL BE SET 0.2 FEET ABOVE HIGHEST FINISHED GRADE SURROUNDING ENCLOSURE WITH LANDSCAPE AREAS.
4. PLACE TYPE 2 CLASS B CRUSHED AGGREGATE BASE WITHIN BOX TO EXTEND HALF WAY UP BODY OF THE ARV AND EXTEND UNDER BOX TO A DEPTH OF 6" BELOW THE BRASS NIPPLE/COPPER TUBE. BASE TO EXTEND FROM THE ARV TO THE CURB VALVE AND BEYOND THE EXTENTS OF THE ENCLOSURE FOR 6-INCHES.

	DATE	APPENDIX 10L	DRAWING NUMBER
TRUCKEE MEADOWS WATER AUTHORITY	7/2005	COMBINATION AIR RELEASE VALVE	10L-4
	REV		
	9/2016		



ANCHOR BLOCK DIMENSIONS			
PIPE SIZE (INCHES)	MIN. BLOCK AREA (SQ FT)	H MIN. (FEET)	W MIN. (FEET)
6	6	2	3
8	10.5	3	3.5
10	15.75	3.5	4.5
12	22	4	5.5

ANCHOR BLOCK DESIGN CRITERIA:

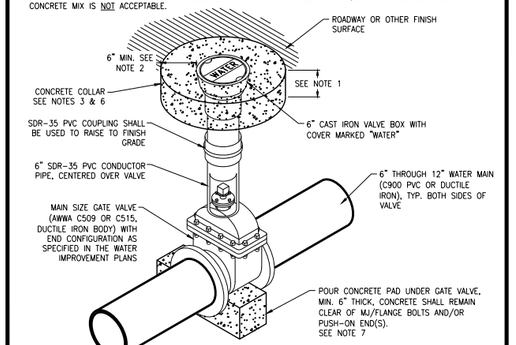
ANCHOR BLOCK SIZES HAVE BEEN CALCULATED USING THE METHOD AND EQUATIONS PUBLISHED IN *THRUST RESTRAINT DESIGN FOR DUCTILE IRON PIPE, SEVENTH EDITION 2016* BY THE DUCTILE IRON PIPE RESEARCH ASSOCIATION (DIPRA) UTILIZING THE FOLLOWING DESIGN PARAMETERS:

DESIGN PRESSURE = 150 PSI (SEE NOTE #4 BELOW), SOIL BEARING CAPACITY = 1,500 PSF (SEE NOTE #4 BELOW), SAFETY FACTOR = 1.5, AND OUTSIDE PIPE DIAMETER

ANCHOR BLOCK NOTES:
1. CONCRETE FOR ANCHOR BLOCKS SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4,000 PSI. REFERENCE SECTION 1.1.12 OF THE TRUCKEE MEADOWS WATER AUTHORITY ENGINEERING & CONSTRUCTION STANDARDS FOR ADDITIONAL REQUIREMENTS. BAG CONCRETE MIX IS NOT ACCEPTABLE.
2. ALL FITTINGS/VALVES SHALL BE WRAPPED WITH POLYETHYLENE WRAP PER AWWA C105. MASTIC (BRUSH-ON) SHALL BE APPLIED TO ALL EXPOSED METAL. WAX TAPE COATING SYSTEMS MAY BE REQUIRED, REFER TO PLANS FOR LOCATIONS.
3. ANCHOR BLOCKS SHALL BE POURED AGAINST UNDISTURBED SOIL. IN CASES WHERE THIS IS NOT PRACTICAL, BACKFILL AREA BEHIND WHERE ANCHOR BLOCK WILL BE POURED WITH TYPE 2, CLASS B AGGREGATE BASE (PER SECTION 200.01.03 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION – ORANGE BOOK) COMPACTED TO 95% MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT AS DETERMINED BY PROCEDURES SET FORTH IN ASTM D 1557, CUT-BACK COMPACTED AGGREGATE BASE TO EXPOSE A FIRM SURFACE, THEN POUR THRUST BLOCK.
4. FOR SOIL BEARING CAPACITY LESS THAN 1,500 PSF AND/OR DESIGN PRESSURE IN EXCESS OF 150 PSI, INCREASE ANCHOR BLOCK BEARING AREAS ACCORDINGLY. REVISED ANCHOR BLOCK SCHEDULE FOR SPECIFIC CONDITIONS SHALL BE SUBMITTED BY THE DESIGN ENGINEER.

3 / W4 THRUST BLOCK DETAIL – CROSS @ E STREET & 14TH STREET

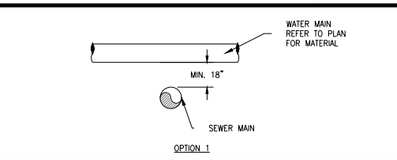
NOTES:
1. CONCRETE COLLAR SHALL BE MINIMUM 6-INCHES THICK OR MATCH PAVEMENT THICKNESS, WHICHEVER IS GREATER, UNLESS OTHERWISE SPECIFIED BY THE JURISDICTIONAL AGENCY RESPONSIBLE FOR THE ROADWAY.
2. FOR MULTIPLE VALVE/RISER BOXES IN CLOSE PROXIMITY, A MONOLITHIC CONCRETE COLLAR MAY BE POURED.
3. CONTRACTOR AND/OR DESIGN ENGINEER SHALL CONSULT WITH THE JURISDICTIONAL AGENCY RESPONSIBLE FOR THE ROADWAY FOR REQUIREMENTS THAT MAY VARY FROM THIS STANDARD PRIOR TO CONSTRUCTION.
4. ALL BOLTS AND EXPOSED METAL SHALL BE COATED WITH BRUSHED-ON MASTIC.
5. GATE VALVE, DUCTILE IRON PIPE, AND OTHER METAL PARTS SHALL BE ENCASED WITH POLYETHYLENE WRAP PER AWWA C105.
6. UNLESS OTHERWISE SPECIFIED BY THE JURISDICTIONAL AGENCY RESPONSIBLE FOR THE ROADWAY, PORTLAND CEMENT CONCRETE (P.C.C.) FOR CONCRETE COLLAR SHALL HAVE THE FOLLOWING CHARACTERISTICS: 4,000 PSI MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS, MINIMUM 6 SACKS OF CEMENT PER CUBIC YARD WITH A MAXIMUM WATER/CEMENT RATIO OF 0.45, AIR ENTRAINMENT 6% ±1.5%, SLUMP AT 1 TO 4 INCHES. BAG CONCRETE MIX IS NOT ACCEPTABLE.
7. CONCRETE FOR PAD SHALL HAVE A COMPRESSIVE STRENGTH OF NOT LESS THAN 3,000 PSI AFTER 28 DAYS. BAG CONCRETE MIX IS NOT ACCEPTABLE.



MATERIAL LIST

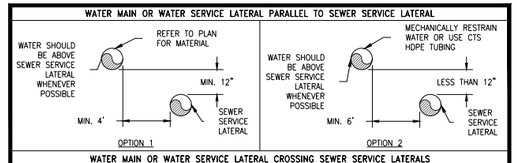
QTY	DESCRIPTION
1	MAIN SIZE GATE VALVE (AWWA C509 OR C515, DUCTILE IRON BODY) WITH END CONFIGURATION AS SPECIFIED IN THE WATER IMPROVEMENT PLANS
1	MASTIC (1 GALLON CAN – BRUSH ON)
1	6" ø SDR-35 PVC CONDUCTOR PIPE SECTION
1	6" ø CAST IRON VALVE BOX WITH COVER MARKED "WATER"
1	FULL FACE GASKET
1	CONCRETE BULK – PAD AND COLLAR

	DATE	APPENDIX 10J	DRAWING NUMBER
TRUCKEE MEADOWS WATER AUTHORITY	1/2002	DISTRIBUTION VLAVE INSTALLATION	10J-2
	REV	IN-LINE GATE VALVE WITH CONCRETE COLLAR	
	7/2011		

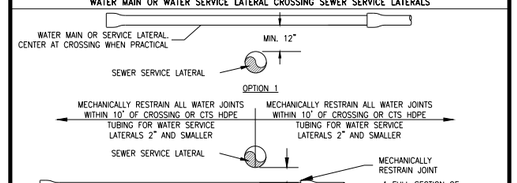


NOTES:
1. OPTION 1 SHOULD BE UTILIZED WHEN POSSIBLE.
2. NON-PRESSURIZED SEWER MAINS SHALL BE SDR 35 PVC. IF SEWER MAINS ARE NON SDR 35 PVC, SEWER MAINS SHALL BE ENCASED IN 4" OF EXCAVATABLE SLURRY, USE EXTERNAL JOINT SEALANT OR OTHER MITIGATION TO ENSURE JOINTS ARE WATERTIGHT. WHERE THE SEWER MAINS ARE PRESSURIZED THE SEWER MAINS SHALL HAVE MECHANICALLY RESTRAINED JOINTS OR SHALL USE WELDED OR FUSED PIPE.
3. ALL MECHANICALLY RESTRAINED WATER PIPES SHALL BE DUCTILE IRON WITH POLYETHYLENE WRAP PER AWWA C105.

	DATE	APPENDIX 10L	DRAWING NUMBER
TRUCKEE MEADOWS WATER AUTHORITY	02/2014	MISCELLANEOUS WATER DETAILS	10L-11
	REV	WATER MAIN CROSSING SEWER MAIN	



WATER MAIN OR WATER SERVICE LATERAL CROSSING SEWER SERVICE LATERALS



NOTES:
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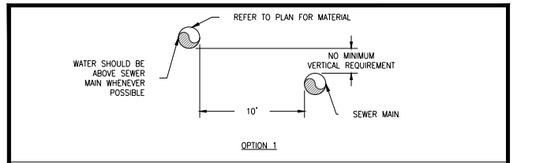
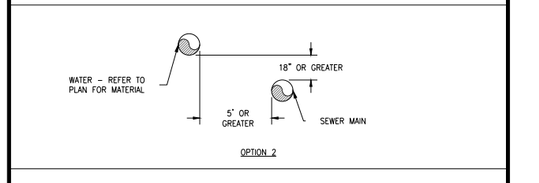
3. ALL MECHANICALLY RESTRAINED WATER PIPES SHALL BE DUCTILE IRON WITH POLYETHYLENE WRAP PER AWWA C105.
4. FOR WATER SERVICE LATERALS 2" AND SMALLER THERE SHALL BE NO JOINTS OR FITTINGS BETWEEN THE WATER MAIN AND THE WATER METER.

	DATE	APPENDIX 10L	DRAWING NUMBER
TRUCKEE MEADOWS WATER AUTHORITY	02/2014	MISCELLANEOUS WATER DETAILS	10L-12
	REV	WATER MAIN OR WATER SERVICE LATERAL PARALLEL TO OR CROSSING SEWER SERVICE LATERAL	





NOTES:
1. IF SEPARATION IS 10 FEET OR MORE USE OPTION 1.
2. NON-PRESSURIZED SEWER MAINS SHALL BE SDR 35 PVC. IF SEWER MAINS ARE NON SDR 35 PVC, SEWER MAINS SHALL BE ENCASED IN 4" OF EXCAVATABLE SLURRY, USE EXTERNAL JOINT SEALANT OR OTHER MITIGATION TO ENSURE JOINTS ARE WATERTIGHT. WHERE THE SEWER MAINS ARE PRESSURIZED, THE SEWER MAINS SHALL HAVE MECHANICALLY RESTRAINED JOINTS OR SHALL USE WELDED OR FUSED PIPE.
3. FOR STORM SEWER MAINS WITH A DIAMETER OF 24" OR LARGER, THE SEWER MAINS SHALL BE INSTALLED WITH WATER TIGHT JOINTS THAT USE JOINT SEALANTS OR JOINT GASKETS.

	DATE	APPENDIX 10L	DRAWING NUMBER
TRUCKEE MEADOWS WATER AUTHORITY	02/2014	MISCELLANEOUS WATER DETAILS	10L-10
	REV	WATER MAIN OR WATER SERVICE LATERAL PARALLEL TO SEWER MAIN	

NOTES:
1. COUPLINGS SHALL BE HYMAX 2000 SERIES COUPLINGS AS MANUFACTURED BY TOTAL PIPING SOLUTIONS, INC. OR TMWA APPROVED EQUIVALENT.
2. SNAP MACHINED END OFF TRANSITE (AC) PIPE TO EXPOSE ROUGH BARREL. INSTALL COUPLING ON ROUGH BARREL SECTION OF TRANSITE PIPE.
3. FIELD MEASURE ACTUAL PIPE O.D. PRIOR TO ORDERING COUPLING. FOR OTHER TYPES OF PIPE NOT LISTED IN THE CHARTS BELOW AND/OR PIPE O.D.'S WHICH MAY DIFFER FROM THOSE LISTED BELOW, CONSULT MANUFACTURER'S SIZING CHART.

TYPE OF PIPE	6" C900 PVC (C900) 6" DUCTILE IRON (DI)		6" TRANSITE (AC) ROUGH BARREL CLASS 150/150/200	
6" C900 PVC (C900) 6" DUCTILE IRON (DI)	HYMAX COUPLING PART NO. 2000-0768-260	LOW RANGE (C900, DI) 6.42 – 7.05 LOW RANGE (C900, DI) 6.42 – 7.05	HYMAX COUPLING PART NO. 2000-0768-260	HIGH RANGE (AC) 7.01 – 7.68 LOW RANGE (C900, DI) 6.42 – 7.05
6" TRANSITE (AC) ROUGH BARREL CLASS 100/150/200	HYMAX COUPLING PART NO. 2000-0768-260	LOW RANGE (C900, DI) 6.42 – 7.05 HIGH RANGE (AC) 7.01 – 7.68	HYMAX COUPLING PART NO. 2000-0768-260	HIGH RANGE (AC) 7.01 – 7.68 HIGH RANGE (AC) 7.01 – 7.68

TYPE OF PIPE	8" C900 PVC (C900) 8" DUCTILE IRON (DI)		8" TRANSITE (AC) ROUGH BARREL CLASS 100/150/200	
8" C900 PVC (C900) 8" DUCTILE IRON (DI)	HYMAX COUPLING PART NO. 2000-0984-260	LOW RANGE (C900, DI) 8.54 – 9.17 LOW RANGE (C900, DI) 8.54 – 9.17	HYMAX COUPLING PART NO. 2000-0984-260	HIGH RANGE (AC) 9.13 – 9.84 LOW RANGE (C900, DI) 8.54 – 9.17
8" TRANSITE (AC) ROUGH BARREL CLASS 100/150/200	HYMAX COUPLING PART NO. 2000-0984-260	LOW RANGE (C900, DI) 8.54 – 9.17 HIGH RANGE (AC) 9.13 – 9.84	HYMAX COUPLING PART NO. 2000-0984-260	HIGH RANGE (AC) 9.13 – 9.84 HIGH RANGE (AC) 9.13 – 9.84

TYPE OF PIPE	10" C900 PVC (C900) 10" DUCTILE IRON (DI)		10" TRANSITE (AC) ROUGH BARREL CLASS 100/150		10" TRANSITE (AC 200) ROUGH BARREL – CLASS 200	
10" C900 PVC (C900) 10" DUCTILE IRON (DI)	HYMAX COUPLING PART NO. 2000-1226-260	LOW RANGE (C900, DI) 10.96 – 11.63 LOW RANGE (C900, DI) 10.96 – 11.63	HYMAX COUPLING PART NO. 2000-1226-260	LOW RANGE (AC) 10.96 – 11.63 LOW RANGE (C900, DI) 10.96 – 11.63	HYMAX COUPLING PART NO. 2000-1226-260	HIGH RANGE (AC 200) 11.59 – 12.26 LOW RANGE (C900, DI) 10.96 – 11.63
10" TRANSITE (AC) ROUGH BARREL CLASS 100/150	HYMAX COUPLING PART NO. 2000-1226-260	LOW RANGE (C900, DI) 10.96 – 11.63 LOW RANGE (AC) 10.96 – 11.63	HYMAX COUPLING PART NO. 2000-1226-260	LOW RANGE (AC) 10.96 – 11.63 LOW RANGE (AC) 10.96 – 11.63	HYMAX COUPLING PART NO. 2000-1226-260	HIGH RANGE (AC 200) 11.59 – 12.26 LOW RANGE (AC) 10.96 – 11.63
10" TRANSITE (AC 200) ROUGH BARREL CLASS 200	HYMAX COUPLING PART NO. 2000-1226-260	LOW RANGE (C900, DI) 10.96 – 11.63 HIGH RANGE (AC 200) 11.59 – 12.26	HYMAX COUPLING PART NO. 2000-1226-260	LOW RANGE (AC) 10.96 – 11.63 HIGH RANGE (AC 200) 11.59 – 12.26	HYMAX COUPLING PART NO. 2000-1226-260	HIGH RANGE (AC 200) 11.59 – 12.26 HIGH RANGE (AC 200) 11.59 – 12.26

TYPE OF PIPE	12" C900 PVC (C900) 12" DUCTILE IRON (DI)		12" TRANSITE (AC) ROUGH BARREL CLASS 150/150/200	
12" C900 PVC (C900) 12" DUCTILE IRON (DI)	HYMAX COUPLING PART NO. 2000-1441-260	LOW RANGE (C900, DI) 13.15 – 13.78 LOW RANGE (C900, DI) 13.15 – 13.78	HYMAX COUPLING PART NO. 2000-1441-260	HIGH RANGE (AC) 13.74 – 14.41 LOW RANGE (C900, DI) 13.15 – 13.78
12" TRANSITE (AC) ROUGH BARREL CLASS 100/150/200	HYMAX COUPLING PART NO. 2000-1441-260	LOW RANGE (C900, DI) 13.15 – 13.78 HIGH RANGE (AC) 13.74 – 14.41	HYMAX COUPLING PART NO. 2000-1441-260	HIGH RANGE (AC) 13.74 – 14.41 HIGH RANGE (AC) 13.74 – 14.41

	DATE	APPENDIX 10C	DRAWING NUMBER
TRUCKEE MEADOWS WATER AUTHORITY	7/2011	DISTRIBUTION TRANSITION FITTINGS	10C-2
	REV	HYMAX 2000 SERIES COUPLING CHART TRANSITE, C900 PVC, DUCTILE IRON PIPE FOR MAIN SIZES 6" TO 12"	

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INFO@LUMOSINC.COM

04/26/22

CITY OF SPARKS

2022 CDBG ROADWAY IMPROVEMENT
E STREET WATER IMPROVEMENTS
GENERAL WATER DETAILS

SPARKS

WASHOE COUNTY

NEVADA

REV	DATE	DESCRIPTION	BY
		ISSUED FOR BIDDING	
		APRIL 26, 2022	

BAR IS 1 INCH ON ORIGINAL DRAWING
0 1
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

W4

DRAWN BY: CRS
DESIGNED BY: CRS
CHECKED BY: AG
JOB NO.: 10425.000

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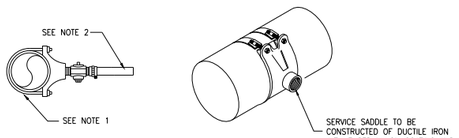
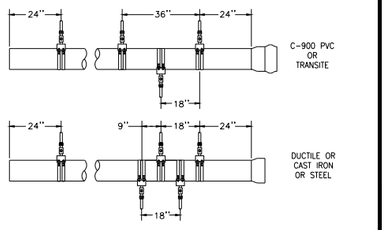
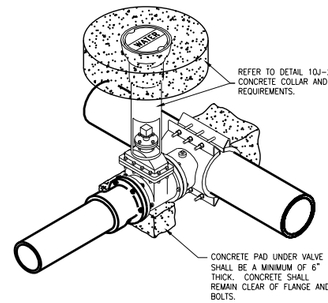
NOTES:
1. SERVICE CLAMP SIZE IS DEPENDENT UPON THE SIZE AND TYPE OF MAIN.
2. SDR-9 CTS HDPE TUBING, LENGTH AND DIAMETER TO BE DETERMINED BY ENGINEER. REFER TO APPROVED PLAN.
3. STOP CORP IP THREAD INLET, COMPRESSION OUTLET, DIAMETER TO MATCH TAP SIZE AS SHOWN ON PLAN.
4. INSERT RIGID STAINLESS STEEL LINER TO SDR-9 CTS HDPE TUBING.
5. SERVICE TAPS OFF OF EXISTING PVC MAINS SHALL USE TAPPED FULL CIRCLE REPAIR CLAMP, MINIMUM LENGTH: 15". MANUFACTURER SHALL BE APPROVED BY TMWA.





DATE	APPENDIX 10H	DRAWING NUMBER
7/2001 REV 9/2016	SERVICE TAP INSTALLATIONS FOR 1", 1.25", 1.5" AND 2" SERVICE TAPS	10H-2

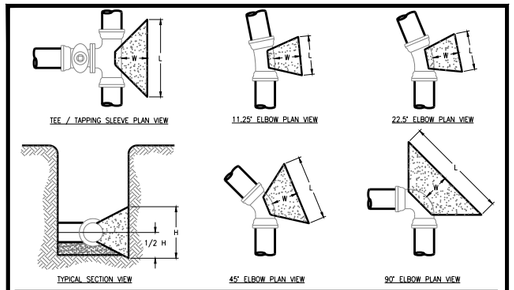


NOTES:
1. REQUIRES ONE (1) TAPPING SLEEVE. REFER TO 10D-2.
2. WHEN TAPPING STEEL OR OD STEEL BACKING PLATE MUST BE DESIGNED BY ENGINEER. WHEN TAPPING OD STEEL SIZE ON SIZE, REDUCE TAP ONE SIZE THEN BELL UP AFTER TAP.
3. REFER TO DETAIL 10L-2 FOR THRUST BLOCK SIZING. BAG CONCRETE IS NOT ACCEPTABLE FOR PAD OR THRUST BLOCK. CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3,000 PSI.
4. ALL EXPOSED METAL MUST BE COATED WITH BRUSH ON MASTIC.
5. REMOVE TEST PLUG AND HYDROSTATICALLY PRESSURE TEST TAPPING SLEEVE NOT TO EXCEED MANUFACTURER'S PRESSURE RATING, APPLY PIPE COMPOUND, AND REINSERT PLUG.
6. VALVE SHALL BE BLIND FLANGED AND PRESSURE TESTED AT TIME OF TAPPING SLEEVE PRESSURE TEST.
7. TAP SHALL BE A MINIMUM OF 24" FROM THE CUT OR SPIGOT END OF THE PIPE OR THE PIPE TO BELL TRANSISTION.

MATERIAL LIST

QTY	DESCRIPTION
1	FL x FL RESILIENT WEDGE GATE VALVE WITH 2" OPERATING NUT (SIZE TO MATCH TAP DIAMETER)
1	TAPPING SLEEVE (STAINLESS STEEL FLANGE)
1	FL x PO ADAPTER
1	6" ø SDR-35 PVC CONDUIT PIPE SECTION
1	6" ø CAST IRON VALVE BOX WITH COVER MARKED "WATER"
1	FULL FACE GASKET
1	CONCRETE BULK
1	MASTIC (1 GALLON CAN – BRUSH ON)

DATE	APPENDIX 10D	DRAWING NUMBER
7/2001 REV 7/2011	DISTRIBUTION TAP INSTALLATIONS STANDARD TAP 4" TO 12"	10D-3



THRUST BLOCK DIMENSIONS

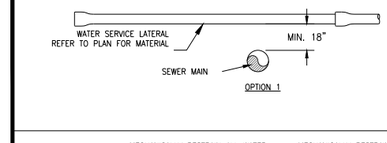
TEE, TAP, OR DEAD END				11.25° ELBOW			22.5° ELBOW			45° ELBOW			90° ELBOW		
BRANCH I SIZE (INCHES)	L (FEET)	H (FEET)	W MIN. (FEET)	ELBOW SIZE (INCHES)	L (FEET)	H (FEET)	W MIN. (FEET)	L (FEET)	H (FEET)	W MIN. (FEET)	L (FEET)	H (FEET)	W MIN. (FEET)	L (FEET)	H (FEET)	W MIN. (FEET)
4	1.5	1	1	4	1	1	1	1	1	1	1.5	1	1	2	1	1
6	2	2	1	6	1	1	1	1.5	1	1	2	1.5	1	2.5	2	1
8	3	2	1	8	1.5	1	1	1.5	1.5	1	2.5	2	1	4	2	1
10	3.5	2.5	1	10	2	1	1	2	2	1	3	2.5	1	5	2.5	1
12	4.5	3	1	12	2	1.5	1	2.5	2	1	4	2.5	1	6	3	1

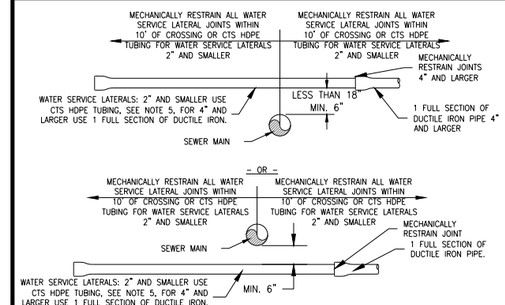
THRUST BLOCK DESIGN CRITERIA:

THRUST BLOCK SIZES HAVE BEEN CALCULATED USING THE METHOD AND EQUATIONS PUBLISHED IN *THRUST RESTRAINT DESIGN FOR DUCTILE IRON PIPE, SIXTH EDITION 2006* BY THE DUCTILE IRON PIPE RESEARCH ASSOCIATION (DIPRA) UTILIZING THE FOLLOWING DESIGN PARAMETERS: DESIGN PRESSURE = 150 PSI (SEE NOTE #4 BELOW), SOIL BEARING CAPACITY = 2,000 PSF (SEE NOTE #4 BELOW), SAFETY FACTOR = 1.5, AND NOMINAL PIPE DIAMETER

THRUST BLOCK NOTES:
1. CONCRETE FOR THRUST BLOCKS SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3,000 PSI. REFERENCE SECTION 1.1.13 OF THE TRUCKEE MEADOWS WATER AUTHORITY ENGINEERING & CONSTRUCTION STANDARDS FOR ADDITIONAL REQUIREMENTS. BAG CONCRETE MIX IS NOT ACCEPTABLE.
2. ALL FITTINGS SHALL BE WRAPPED WITH POLYETHYLENE WRAP PER AWWA C105. MASTIC (BRUSH-ON) SHALL BE APPLIED TO ALL BOLTS, ETC.
3. THRUST BLOCKS SHALL BE POURED AGAINST UNDISTURBED SOIL. IN CASES WHERE THIS IS NOT PRACTICAL, BACKFILL AREA BEHIND WHERE THRUST BLOCK WILL BE POURED WITH TYPE 2, CLASS B AGGREGATE BASE (PER SECTION 200.01.03 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION – ORANGE BOOK) COMPACTED TO 95% MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT AS DETERMINED BY PROCEDURES SET FORTH IN ASTM D 1557. CUT-BACK COMPACTED AGGREGATE BASE TO EXPOSE A FIRM SURFACE, THEN POUR THRUST BLOCK.
4. FOR SOIL BEARING CAPACITY LESS THAN 2,000 PSF AND/OR DESIGN PRESSURE IN EXCESS OF 150 PSI, INCREASE THRUST BLOCK BEARING AREAS ACCORDINGLY. REVISED THRUST BLOCK SCHEDULE FOR SPECIFIC CONDITIONS SHALL BE SUBMITTED BY THE DESIGN ENGINEER.

DATE	APPENDIX 10L THRUST BLOCKS TEES, TAPPING SLEEVES, DEAD ENDS 11.25, 22.5, 45 AND 90 DEGREE ELBOWS 4" TO 12"	DRAWING NUMBER
7/2011 REV		10L-2





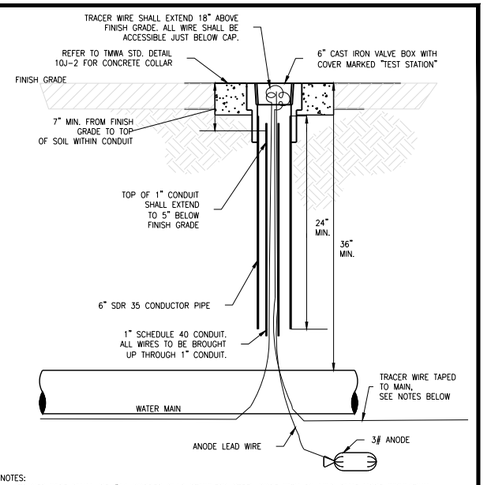
NOTES:
1. OPTION 1 SHOULD BE UTILIZED WHEN POSSIBLE.
2. NON-PRESSURIZED SEWER MAINS SHALL BE SDR 35 PVC. IF SEWER MAINS ARE NON SDR 35 PVC, SEWER MAINS SHALL BE ENCASED IN 4" OF EXCAVATABLE SLURRY, USE EXTERNAL JOINT SEALANT OR OTHER MITIGATION TO ENSURE JOINTS ARE WATERTIGHT. WHERE THE SEWER MAINS ARE PRESSURIZED, THE SEWER MAINS SHALL HAVE MECHANICALLY RESTRAINED JOINTS OR SHALL USE WELDED OR FUSED PIPE.
3. ALL MECHANICALLY RESTRAINED WATER PIPES SHALL BE DUCTILE IRON WITH POLYETHYLENE WRAP PER AWWA C105.
4. FOR WATER SERVICE LATERALS 2" AND SMALLER THERE SHALL BE NO JOINTS OR FITTINGS BETWEEN THE WATER MAIN AND THE WATER METER.

DATE	APPENDIX 10L MISCELLANEOUS WATER DETAILS WATER SERVICE LATERAL CROSSING SEWER MAIN	DRAWING NUMBER
02/2014 REV		10L-13

TAP SIZE – FLANGED BRANCH							
MAIN SIZE	VENDOR	MAIN TYPE	4"	6"	8"	10"	12"
4"	SM ROM	DI/CI PVC	663-04800400-200 SST-4.90 x 4" FL				
6"	SM ROM	DI/CI PVC	663-06630400-000 SST-7.00 x 4" FL	663*06630600-200 SST-7.00 x 6" FL			
	SM ROM	TR	663-(OD)0400-000 SST-(OD) x 4" FL	663-(OD)0600-200 SST-(OD) x 6" FL			
8"	SM ROM	DI/CI PVC	663-09050400-000 SST-9.06 x 4" FL	663-09050600-000 SST-9.06 x 6" FL	663-09050800-200 SST-9.06 x 8" FL		
	SM ROM	TR	663-(OD)0400-000 SST-(OD) x 4" FL	663-(OD)0600-000 SST-(OD) x 6" FL	663-(OD)0800-200 SST-(OD) x 8" FL		
	SM ROM	SCH 40 STEEL	663-08630400-000 SST-8.63 x 4" FL	663-08630600-000 SST-8.63 x 6" FL	663-08630800-200 SST-8.63 x 8" FL		
10"	SM ROM	DI/CI PVC	663-11100400-000 SST-11.45 x 4" FL	663-11100600-000 SST-11.45 x 6" FL	663-11100800-000 SST-11.45 x 8" FL	663-11101000-200 SST-11.45 x 10" FL	
	SM ROM	TR	663-(OD)0400-000 SST-(OD) x 4" FL	663-(OD)0600-000 SST-(OD) x 6" FL	663-(OD)0800-000 SST-(OD) x 8" FL	66.-(OD)1000-200 SST-(OD) x 10" FL	
	SM ROM	SCH 40 STEEL	663-10750400-000 SST-11.13 x 4" FL	663-10750600-000 SST-11.13 x 6" FL	663-10750800-000 SST-11.13 x 8" FL	663-10751000-200 SST-11.13 x 10" FL	
12"	SM ROM	DI/CI PVC	663-10750400-000 SST-13.30 x 4" FL	663-13200600-000 SST-13.30 x 6" FL	663-13200800-000 SST-13.30 x 8" FL	663-13201000-000 SST-13.30 x 10" FL	663-13201200-200 SST-13.30 x 12" FL
	SM ROM	TR	663-(OD)0400-000 SST-(OD) x 4" FL	663-(OD)0600-000 SST-(OD) x 6" FL	663-(OD)0800-00004 SST-(OD) x 8" FL	663-(OD)1000-000 SST-(OD) x 10" FL	663-(OD)1200-200 SST-(OD) x 12" FL
	SM ROM	SCH 40 STEEL	663-12750400-000 SST-12.85 x 4" FL	663-12750600-000 SST-12.85 x 6" FL	663-12750800-000 SST-12.85 x 8" FL	663-12751000-000 SST-12.85 x 10" FL	663-12751200-200 SST-12.85 x 12" FL

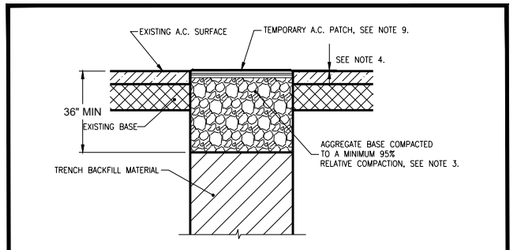
NOTES:
1. MAXIMUM TEST PRESSURE IS 300 PSI FOR LISTED MANUFACTURERS.
2. FLANGES (FL) SHALL BE STAINLESS STEEL ASTM A 240, TYPE 304.
3. VENDOR (MANUFACTURER): SM = SMITH-BLAIR, ROM = ROMAC INDUSTRIES
4. (OD) = PIPE OUTSIDE DIAMETER. CHECK WITH MANUFACTURER FOR CATALOG NUMBER FOR OTHER SIZES.
5. FOR TAPS ON TRANSITE MAINS OD MUST BE FIELD MEASURED PRIOR TO ORDERING PARTS.

DATE	APPENDIX 10D	DRAWING NUMBER
7/2011 REV	DISTRIBUTION TAP INSTALLATION WATER TAPPING SLEEVES	10D-2



NOTES:
1. TRACER WIRE SHALL BE #14 COPPER CLAD STAINLESS STEEL CORE WITH 30 MILS BLUE HDPE INSULATION.
2. ALL WIRE SPLICES SHALL BE MADE USING A SPLIT BOLT CONNECTOR WRAPPED WITH AQUASEAL AND ELECTRIC TAPE.
3. CONTRACTOR SHALL INSTALL A 3 POUND ANODE AT EVERY TEST STATION.
4. TEST STATIONS SHALL BE LOCATED ALONG THE MAIN NO MORE THAN 500 FEET APART UNLESS OTHERWISE SPECIFIED ON THE PLANS.
5. PRIOR TO ACCEPTANCE OF WATER MAIN, THE CONTRACTOR SHALL PERFORM A CONTINUITY TEST ON THE INSTALLED TRACER WIRE SYSTEM.
6. WHERE DIRECTED, TRACER WIRE SHALL BE PLACED WITH ALL SERVICE LINES AND SHALL BE EXTENDED INTO THE METER BOX. TRACER WIRE SHALL BE ACCESSIBLE FROM METER BOX AND SHALL EXTEND 12 INCHES ABOVE GROUND. CONNECT TO MAIN TRACER WIRE AS SPECIFIED IN NOTE 2.

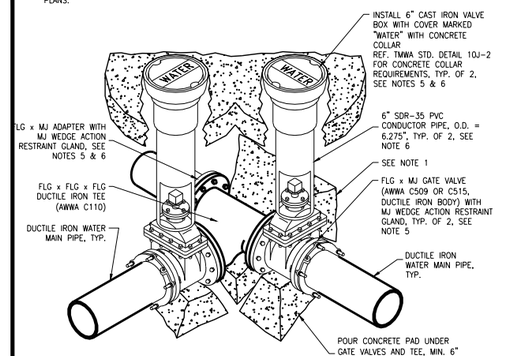
DATE	APPENDIX 10L MISCELLANEOUS WATER DETAILS TEST STATION	DRAWING NUMBER
02/2014 REV		10L-9



NOTES:
1. PRIOR TO EXCAVATION, THE OUTLINE OF THE TRENCH SHALL BE VERTICALLY CUT FULL DEPTH THROUGH THE EXISTING ASPHALT SURFACE.
2. CARE SHALL BE EXERCISED TO PREVENT SLOUGHING AND OVERBREAK. IF THE TRENCH SLOUGHS, THE SURFACE SHALL BE WIDENED TO ELIMINATE THE UNDERMINED SECTION OF ASPHALT.
3. AGGREGATE BASE UNDER TEMPORARY PATCH SHALL BE A MINIMUM THICKNESS OF 36 INCHES BELOW THE EXISTING AC SURFACE. AGGREGATE BASE MATERIAL UNDER TEMPORARY PATCH SHALL BE TYPE 2, CLASS B CRUSHED AGGREGATE BASE. MATERIALS SHALL CONFORM TO SSPWC SECTION 200, AS ADOPTED BY CITY COUNCIL.
4. TEMPORARY PATCHES SHALL BE PLACED AND COMPACTED. THE COMPACTED PATCH SHALL BE APPROXIMATELY 1/8" TO 1/4" ABOVE THE LEVEL OF THE ADJACENT PAVEMENT. IF NOT PATCHED WITHIN 24 HOURS AFTER BACKFILLING, THE CITY MAY PATCH AND BACK-CHARGE THE PERMITTEE FOR ALL COSTS.
5. COMPACTION OF BACKFILL, BASE AND A.C. TEMPORARY PATCH SHALL BE PERFORMED WITH APPROVED MECHANICAL TAMPERS. EQUIPMENT WHEEL ROLLING IS NOT PERMITTED.
6. ENTIRE AREA SHALL BE CLEANED OF ALL DIRT, DUST, DEBRIS, ETC. BEFORE LEAVING SITE. ANY SITE LEFT UNCLEANED WILL BE CLEANED BY THE CITY AND ALL COSTS BACK-CHARGED TO THE CONTRACTOR.
7. ALL EXCAVATIONS SHALL BE COMPLETE OR BACKFILLED AT THE END OF THE SHIFT, INCLUDING TEMPORARY PATCH.
8. TEMPORARY PATCH WORK AND PATCH MAINTENANCE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
9. ALL TEMPORARY PATCHES ON ALL STREETS SHALL BE HOT-MIX ASPHALT A MINIMUM OF 3" THICK.
10. PLATES MAY BE USED UPON APPROVAL FROM THE CITY ENGINEER.

STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	DRAWING No.
City of Sparks TEMPORARY A.C. TRENCH PATCH	S-116
	APPROVED BY/JE DATE:1/2020

NOTES:
1. REFERENCE TMWA STANDARD DETAIL 10L-2 FOR THRUST BLOCK SIZING AND REQUIREMENTS.
2. ALL BOLTS AND EXPOSED METAL SHALL BE COATED WITH BRUSHED-ON MASTIC.
3. TEE, VALVES, FITTINGS, DUCTILE IRON PIPE AND OTHER METAL PARTS SHALL BE ENCASED WITH POLYETHYLENE WRAP PER AWWA C105.
4. CONCRETE FOR PADS SHALL HAVE A COMPRESSIVE STRENGTH OF NOT LESS THAN 3,000 PSI AFTER 28 DAYS. BAG CONCRETE MIX IS NOT ACCEPTABLE.
5. POSITION OF FLG x MJ VALVE (RUN) AND FLG x MJ ADAPTER MAY SWITCH, REFERENCE WATER IMPROVEMENT PLANS.
6. AN ADDITIONAL FLG x MJ VALVE MAY BE REQUIRED IN LIEU OF FLG x MJ ADAPTER, REF. WATER IMPROVEMENT PLANS.



MATERIAL LIST

QTY.	DESCRIPTION
1	FLG x FLG x FLG DUCTILE IRON TEE (AWWA C110)
2	FLG x MJ GATE VALVE WITH DUCTILE IRON BODY (AWWA C509 OR C515)
1	FLG x MJ ADAPTER
3	MJ WEDGE ACTION RESTRAINT GLAND
2	6" CAST IRON VALVE BOX WITH COVER MARKED "WATER"
2	6" SDR-35 PVC CONDUCTOR PIPE SECTION, O.D. = 6.275"
–	CONCRETE BULK – THRUST BLOCKS, PADS, COLLARS

DATE	APPENDIX 10B	DRAWING NUMBER
7/2011 REV	DISTRIBUTION BRANCH INSTALLATIONS FLANGED TEES FLG x MJ GATE VALVES - RESTRAINED -	10B-2

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PROFESSIONAL ENGINEER – STATE OF NEVADA
COLLIN R. STURGE
No. 028879
Exp. 06/30/22
CIVIL
04/26/22

CITY OF SPARKS
2022 CDBG ROADWAY IMPROVEMENT
E STREET WATER IMPROVEMENTS
GENERAL WATER DETAILS
WASHOE COUNTY NEVADA

REV	DATE	DESCRIPTION	BY
		ISSUED FOR BIDDING	SPARKS

APRIL 26, 2022

BAR IS 1 INCH ON ORIGINAL DRAWING
0 1
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

W5

DRAWN BY: CRS
DESIGNED BY: CRS
CHECKED BY: AG
JOB NO.: 10425.000

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